HUNTER WATER CORPORATION

Submission to IPART on prices to apply from 1 July 2013

SEPTEMBER 2012

Hunter Water Corporation

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14 September 2012

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HW2010-1007

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14 September 2012

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Hunter Water Corporation (Hunter Water) is recognised as one of the lowest-cost water utilities in Australia. The combined residential water and sewerage bill for a Hunter Water customer using 200 kilolitres per year is among the three lowest-priced utility bills for any of the 21 water utilities in Australia having more than 50,000 connected services.[1]

This pricing submission has been developed within a period of profound change for Hunter Water. It represents a significant departure from the basis on which the previous price submission to the Independent Pricing and Regulatory Tribunal (IPART) was made in 2008. Since January 2011, Hunter Water has undergone substantial changes to its governance arrangements and leadership structure, specifically:

- appointment of a new Chairman to the Board of Directors
- appointment of new Directors to the Board
- appointment of a new Managing Director
- appointment of a new senior executive team
- a comprehensive business-wide restructure, and
- development of a new 5-year business plan (Statement of Corporate Intent).

In formulating this submission, Hunter Water has been guided by four core principles:

- customer affordability
- operating fundamentals
- financial sustainability, and
- IPART's requirements on submission contents and price structures.

Hunter Water is conscious of the growing financial pressure being placed on its customers through a general increase in household costs such as energy, as well as the need to maintain the standards of service expected from a modern water utility.

Hunter Water is not immune to rising input costs and other external factors. Over the last 4 years, operating costs have increased from $96 million in 2009-10 to $122 million in 2012-13. The main drivers of increases have included electricity price increases; the introduction of the carbon price and the impact of other regulatory and legislative changes.

This submission proposes that Hunter Water will limit average real price increases to its customers to approximately 2.1 per cent each year.

[1] National Water Commission and Water Services Association of Australia, 2012

Over recent years, Hunter Water has been undertaking considerable investment in its capital infrastructure in order to meet customer growth demands, comply with regulatory obligations in relation to wastewater treatment operations and to improve water security for the region.

With many of these projects now completed, this submission proposes that Hunter Water will substantially reduce its capital expenditure from an amount of $666.8 million ($2012-13), excluding Tillegra Dam costs, allowed by IPART in the 2009 price determination to $329 million ($2012-13) for the next price period from July 2013 to June 2017.[2]

While a larger capital expenditure program could be justified to maintain standards and improve performance, Hunter Water acknowledges that, in the context of customer affordability, this is not the right time for a larger program. Accordingly the program has been scaled back and is the minimum that can be spent to meet customer expectations and regulated standards.

By making such a significant change to its capital program, Hunter Water recognises that there may be upward pressure on its operating expenditures through a likely increase in maintenance activities. Notwithstanding these risks, Hunter Water proposes to maintain overall service standards within the parameters prescribed in its operating licence and to absorb any increases in maintenance costs arising from a reduced capital program.

Hunter Water is also constraining its operating expenditure. It already has the lowest operating cost per property of the metropolitan water utilities for which IPART sets prices and therefore has significantly less capacity to absorb further cost reductions than these utilities.

Between 2008-09 and 2011-12, free cash flow from operations has averaged -$122 million per year. While Hunter Water has managed to maintain an investment grade credit rating (BBB) over this same period, any further deterioration of the credit metrics will likely result in Hunter Water being downgraded. As the NSW Government requires State-owned Corporations to maintain a minimum of an investment grade credit rating, this represents an unsustainable financial position which, in the absence of any significant increase in revenues, strengthens the need to eliminate all activities and associated costs that are not considered to be part of a core water, sewerage or stormwater undertaking.

This submission proposes that Hunter Water will not undertake any material discretionary spending that is not essential for the provision of core water, sewerage or stormwater services to the standards required by the operating licence or by other regulatory instruments.

The final guiding principle underpinning this submission is a restructure of prices in accordance with the requirements set by IPART. IPART's proposed changes to price structures seek to ensure that those customers who impose a similar cost burden on Hunter Water pay a similar price through the removal of cross-subsidies between customer groups.

The principles behind these new structures were published by IPART in March 2012 and are intended to provide greater consistency in price structures across the four utilities serving the greater Sydney area (including the Illawarra and Blue Mountains), the central coast and the lower Hunter region.[3] The pricing structures put forward in the submission will mean that some customers may incur a greater increase in prices than others. However these changes, in themselves, do not result in any increase to the total revenue to Hunter Water.

The guiding principles as outlined above have produced the most wide-ranging changes to Hunter Water's pricing for many years and are a significant feature of this submission.

[2] IPART, 2009 (a), Tables 7.10 and 7.11 show approved capital expenditure, excluding Tillegra Dam, as $594.2 million in $2008-09.
[3] IPART, 2012 (b)

Proposed prices

When formulating this submission Hunter Water invited customers to have their say about the future pricing of Hunter Water's services. Customers participated in surveys and in face-to-face meetings to provide their views about the fairness and structure of water prices and their willingness to pay for maintaining and/or changing service standards. Around 60 per cent of customers believe that Hunter Water's bills are affordable when compared with those of other utility services.

The prices proposed in this submission will result in the average residential bill being equal to around 1.8 per cent of mean household disposable income in 2013-14. This proportion is unchanged from 2009-10 and is still well below the levels of 2.7 per cent that prevailed in the early 1990s.

Hunter Water also recognises that some customers may not always have the financial means to pay their bills when they fall due. A range of measures have been introduced to assist such customers and these are outlined in detail in Chapter 11 of the submission, along with more information on the impact of bills on different household types (owners of houses and home units, pensioner customers etc) and on a range of non-residential businesses.

The main features of the proposed prices are:

- **Water service charges for most customers will be reduced by around 11.8 per cent and held constant in real terms for the next 4 years.**

- **Water service charges for apartments will increase marginally in 2013 to align with IPART's principles.** In most cases these increases will be less than $12 for the year or $4 per bill in $2012-13.

- **Water service charges for customers in the Dungog Shire will be reduced and aligned with water service charges of all other customers from 1 July 2013.**

- **Water usage charges will increase approximately 2.1 per cent each year in real terms.** This small increase to the variable component of the water bill aligns with customer feedback seeking a greater variable proportion within their combined water and sewer bills. This was a strong theme emerging from 2012 pricing consultation.

- **Sewer service charges for households will increase in real terms by 2.3 per cent each year and 5.8 per cent each year for apartments.** These changes take into account the cost-to-serve and the removal of some cross-subsidies between customers.

- **Stormwater charges for apartments to be reduced by $55 in July 2013 with further real reductions averaging 9.7 per cent in subsequent years.**

- **Stormwater charges for all other customers to be reduced by an average of 7.5 per cent each year in real terms.**

- **The Clarence Town special levy to be reduced by $43 per year in $2012-13.** This levy helps fund the town's recently-completed sewerage scheme.

The effect on overall prices proposed in this submission are modest and are designed to ensure that Hunter Water is able to maintain the delivery of water and sewerage and drainage services in accordance with its operating licence at prices that remain affordable to

its customers. Hunter Water's ability to achieve this outcome is based on a bold restructuring of its activities, accompanied by dramatic reductions in capital expenditure and identified efficiencies in labour costs.

Any further reduction to the prices proposed in this submission would further impact on Hunter Water's ability to invest in the maintenance, refurbishment and expansion of its infrastructure and may adversely impact on the standard of service provided to customers.

Pricing of water services

To maintain a strong water conservation signal, Hunter Water's charging structure is based on a pay-for-use philosophy with most of the Corporation's water business revenue coming from usage charges.

Hunter Water has proposed higher usage prices to cover the increasing costs of the water supply part of its business.

Three-quarters of respondents to the 2012 pricing consultation wanted more control over their bill through the water usage price. This is best achieved by ensuring that price increases are confined mostly to the usage price rather than the fixed water service charge.

The proposed price adjustment, before inflation, will see the water usage price increase from $2.08 per kilolitre today to $2.26 in 2016-17.

The fixed service charge for a house will fall from $18.92 per year in 2012-13 to $16.69 per year 2013-14 and remain constant at that level in real terms throughout the price period. Apartment owners will see a small, once only, real increase in water service charges in 2013-14 but, in most cases, this will be less than $12 ($2012-13).

This will ensure a stronger emphasis on usage charges in the coming period so that around 40 per cent of the combined water and sewer bill of a customer using 185 kilolitres of water per year is within their control.

Pricing of wastewater (sewer) services

Hunter Water proposes to adopt IPART's recommended pricing structures for residential customers whereby sewerage service charges are no longer calculated on water meter size. This means that all houses, regardless of water meter size, will pay the same sewerage service charge.

The sewerage service charge for a house will increase from $555.23 in 2012-13 to $573.82 in 2013-14 and to $607.11 in 2016-17 before inflation.

In line with IPART's new pricing principles, apartments (home units and flats) each will pay a service charge equal to a fixed proportion of the service charge applying to a stand-alone house. Adopting a lower service charge for apartments was supported by customers in Hunter Water's 2012 pricing consultation. Fifty-seven per cent of house and apartment owners supported the idea of apartments paying a proportionate service charge.[4]

The proportion to be paid by apartments will be increased progressively over the next four years from 65 per cent today to 75 per cent in 2016-17.

Pricing for stormwater drainage services

Stormwater charges will be reduced for the coming period if IPART adopts Hunter Water's proposals.

[4] This result differs from the overall result reported in Chapter 12 of the submission because it weights the views of house and apartment owners equally.

Hunter Water only collects stormwater drainage charges from around 25 per cent of its customers, whose properties are in the areas where the Corporation owns the major stormwater channels and related structures like detention basins. These charges enable Hunter Water to maintain and refurbish these drains and structures as required.

Hunter Water proposes to reduce stormwater charges for most customers. Houses and non-residential customers will see reductions of 30 per cent over the next four years.

Home unit owners will see a significant price reduction of $55 in 2013-14. This is the result of aligning Hunter Water's price structure for residential customers with that introduced by IPART in July for Sydney Water customers. In subsequent years, apartment owners will see reductions of around 9.7 per cent per year.

Price reductions for Dungog Shire residents

Dungog Shire residents currently pay higher water service charges to fund upgrading of the water supply and sewerage infrastructure in the Shire. When introduced in 2008, these higher charges were to be phased out by mid-2017. IPART has reduced the Dungog water service charge every year since 2009 to the point where the additional charges now make little contribution to the cost of upgrading the infrastructure. Hunter Water therefore proposes that Dungog residents pay the same water service charge as other customers from 1 July 2013.

This will mean a reduction of around $36 in 2013-14 for Dungog residents when compared with the original 2008 proposal.

Hunter Water also proposes to reduce the special levy paid by Clarence Town residents to help fund the recently-completed sewerage scheme for the town. With the completion of the scheme and costs and payments finalised, Hunter Water has reassessed the level of contribution required over the next price period. This assessment has shown that the contribution can be reduced by around $43 per year in $2012-13.

Trade wastewater charges and miscellaneous fees

The current trade wastewater charge structure will continue with only minor changes. Most charges will only increase in line with inflation and some charges for receival of waste by road tanker at Hunter Water's wastewater treatment plants are being reduced. Proposals for trade wastewater charges are provided in Chapter 13.

Hunter Water offers a range of non-contestable, miscellaneous services to customers on a direct cost-recovery basis. These services are used by a very small number of customers and, generally, only occasionally and one at a time.

Hunter Water has reviewed its business processes to ensure costs of these services are aligned with the service provided. Price increases are proposed for 14 services, reductions for 21 services.

Three existing charges will be discontinued due to the reconfiguration of a range of charges brought about by the introduction of new plumbing legislation and the transfer of inspection services to NSW Fair Trading. Proposals for miscellaneous charges are provided in Chapter 14.

Typical bills from 2013-14 to 2016-17

The average combined water and sewer bill for a single residential house using 185 kilolitres of water per year will increase by $82.95 ($2012-13) or 8.3 per cent between July 2013 and June 2017. This $82.95 bill increase is made up of:

Water/sewer bill in 2012-13	$994.84
Increase in operating costs	$34.84
Increases water capex	$21.70
Increase in sewerage capex	$21.33
Other	$5.08
Water/sewer bill in 2016-17	$1,077.79
Increase from 2012-13 to 2016-17	$82.95

All values in the table are in 2012-13 dollars.

IPART's requirements to adopt new price structures will see water and sewerage service charges levied on each occupied residence, rather than according to water meter size as has been the case since the early 1990s. This means that houses, home units and flats will all be charged the same water service charges.

Hunter Water proposes that sewerage service charges for apartments (home units and flats) increase from the current 65 per cent of the charge for a house to 75 per cent by 2016-17. This change will be phased in progressively from 2013-14. This proposal will increase bills for sewerage services for most apartments. For properties containing flats, these changes will not alter the current billing arrangements. The property owner will still receive a single bill for the entire property – residents of individual flats will not be billed separately or directly by Hunter Water.

The tables below show how residential bills for houses and separately-billed home units will move over the next four years.

Bill for residential house using 185 kilolitres per year. Without stormwater ($2012-13)

	2012-13	2013-14	2014-15	2015-16	2016-17
Water service	18.92	16.69	16.69	16.69	16.69
Water usage	384.80	392.20	401.45	408.85	418.10
Sewer service	555.23	573.82	584.74	595.85	607.11
EIC	35.89	35.89	35.89	35.89	35.89
Total	**994.84**	**1,018.60**	**1,038.77**	**1,057.28**	**1,077.79**
Change %		**2.4%**	**2.0%**	**1.8%**	**1.9%**

Bill for strata title unit using 125 kilolitres per year. Without stormwater ($2012-13)

	2012-13 [a]	2013-14	2014-15	2015-16	2016-17
Water service	6.31	16.69	16.69	16.69	16.69
Water usage	260.00	265.00	271.25	276.25	282.50
Sewer service	363.20	387.33	409.32	431.99	455.33
EIC	35.89	35.89	35.89	35.89	35.89
Total	**665.40**	**704.91**	**733.15**	**760.82**	**790.41**
Change %		**5.9%**	**4.0%**	**3.8%**	**3.9%**

a) Block of 12 units with a 40 mm common meter.

Around one quarter of Hunter Water's customers also pay for stormwater services.

The average residential house will see reductions of 7.5 per cent per year in stormwater drainage bills resulting in reductions of $26.10 or 30.2 per cent in stormwater charges by 2016-17.

Bill for residential house using 185 kilolitres per year. With stormwater ($2012-13)

	2012-13	2013-14	2014-15	2015-16	2016-17
Water service	18.92	16.69	16.69	16.69	16.69
Water usage	384.80	392.20	401.45	408.85	418.10
Sewer service	555.23	573.82	584.74	595.85	607.11
Stormwater	86.42	83.58	74.95	67.22	60.32
EIC	35.89	35.89	35.89	35.89	35.89
Total	**1,081.26**	**1,102.18**	**1,113.72**	**1,124.50**	**1,138.11**
Change %		**1.9%**	**1.0%**	**1.0%**	**1.2%**

In line with IPART's recent changes to stormwater charges for Sydney Water, Hunter Water is proposing to reduce stormwater charges for strata title home units. This will see reductions of around $55 per year in the stormwater charges paid by unit owners from 1 July 2013.

Bill for strata title unit using 125 kilolitres per year. With stormwater ($2012-13)

	2012-13 [a]	2013-14	2014-15	2015-16	2016-17
Water service	6.31	16.69	16.69	16.69	16.69
Water usage	260.00	265.00	271.25	276.25	282.50
Sewer service	363.20	387.33	409.32	431.99	455.33
Stormwater	86.42	30.92	27.73	24.87	22.08
EIC	35.89	35.89	35.89	35.89	35.89
Total	**751.82**	**735.83**	**760.88**	**785.69**	**812.49**
Change %		**(2.1%)**	**3.4%**	**3.3%**	**3.4%**

a) Block of 12 units with a 40 mm common meter.

Since 2009, the bill rebate for eligible pensioners has increased each year as bills have increased. This linking of the value of the rebate to the size of typical bills will continue. The following table shows how bills for pensioners receiving this rebate are expected to change over the next four years.

Bill for a pensioner customer using 140 kilolitres per year ($2012-13)

	2012-13	2013-14	2014-15	2015-16	2016-17
Water service	18.92	16.69	16.69	16.69	16.69
Water usage	291.20	296.80	303.80	309.40	316.40
Sewer service	555.23	573.82	584.74	595.85	607.11
Rebate	(258.00)	(264.00)	(269.00)	(274.00)	(280.00)
Total	**607.35**	**623.31**	**636.23**	**647.94**	**660.20**
Change %		**2.6%**	**2.1%**	**1.8%**	**1.9%**

Reductions in stormwater charges will see the pensioner bills in the table fall by a further $26.10 by 2016-17 and, like other unit owners, those pensioners owning home units will see an initial reduction of $55 in stormwater charges in 2013-14.

Bills for non-residential customers

It is difficult to define a typical non-residential customer. Bills for non-residential customers are influenced by the nature of the individual customer's business and their demand for water and sewer services. The water component of the bill can vary with the size of the water connection and the volume of water used. Sewer bills vary according to the volume of waste the business typically discharges to the sewer. Additional tradewaste charges may also apply when the waste includes a range of specified contaminants and is more costly to treat than normal household waste. Stormwater charges may also apply and these are charged according to the land area occupied by the business.

Bill changes for non-residential customers under the proposed prices range from reductions from 20 to 30 per cent for small businesses that benefit from the sewer service charge revisions for small non-residential customers. These changes will also increase sewerage bills for a small number of customers that currently have very low discharge factors assigned to their service charges. Large non-residential customers have increases ranging from 4.5 to 10 per cent over the four-year period.

1 This submission

1.1 Submission structure

This submission is designed to meet IPART's requirements as set out in its April 2011 guidelines for water agency pricing submissions[5] and the information requested in IPART's June 2012 issues paper. Appendix R includes a list showing where the specific information items requested in the issues paper are addressed in the submission.

The submission is structured to logically progress through the steps of IPART's price setting process, starting with an introductory outline of Hunter Water's role and functions and operating performance in Chapters 2 and 3.

This is followed by information about the physical and financial data inputs to the price setting process.

- Chapter 4 provides information about the growth in customer numbers, connections to the water supply, sewer and drainage systems and forecast water sales.
- Chapter 5 details the operating costs incurred over the current price period and the projected operating costs for the next five years. It provides commentary on the factors behind expected increases in operating costs.
- Chapter 6 provides information on the actual capital investment over the current price period and the projected capital expenditure for the next determination period. It supports the projected expenditure with a detailed overview of the business justifications for the proposed program. It also provides information sought by IPART about capital investment decision making, prioritisation and procurement.
- Chapter 7 assembles the information from the previous three chapters into the total revenue requirements to be covered by future prices. Separate revenue requirements are presented for water services, sewerage services and stormwater drainage for the next five years, as required by IPART's submission guidelines.

Proposed water, sewer and drainages prices for the next five years are the subject of the next three chapters. For water and sewerage services, the structure of prices largely follows the principles for price structures published by IPART in March 2012.[6]

- Chapter 8 provides details of Hunter Water's water pricing proposals for residential and non-residential customers. The chapter also proposes new prices for sales between the Hunter and the central coast using the calculation methodology adopted by IPART for the 2009 price determination.
- Chapter 9 details the proposed sewer prices for the coming price period.

[5] IPART, 2011 (a)
[6] IPART, 2012 (b)

- Chapter 10 outlines the proposed stormwater drainage charges including a proposal to adopt different prices for houses and strata title units.
- Chapter 11 provides information about how these price proposals affect different customers. It also provides an overview of the various programs Hunter Water has in place to assist customers in financial hardship. This chapter finishes with an overview of Hunter Water's financial position under the proposed pricing arrangements and the connections and sales forecasts presented in Chapter 4.
- Chapter 12 outlines the ways Hunter Water has informed the community about its activities that affect the prices it charges (e.g. its construction program), the process for this price review and how it has consulted the community in the preparation of this submission.

The last two chapters of the submission outline Hunter Water's proposals for tradewaste charges and the miscellaneous charges that apply to the services that are used on an occasional basis by a relatively small number of customers.

1.2 Quality assurance

IPART's 2011 guidelines for water agency submissions require that the submission, information returns and other materials provided by the water agency be subject to an external quality assurance check (QA). Section 2.15 of the guidelines sets out IPART's specific requirements for the QA check.

Hunter Water engaged Danu Consulting to carry out a QA check for consistency between the submission, Hunter Water's modelling inputs and the data provided in the 2012 Annual Information Return and Special Information Return. These returns are provided to IPART with the submission.

This review was carried out between 16 August and 14 September 2012 and the consultant's certification letter is provided at Appendix S.

1.3 Reader notes

- In general, past values and prices in this submission are provided in nominal terms – that is, in the dollars of the year to which they apply. Where past values are provided in real terms, this is indicated by the notation showing the relevant year (e.g. "$2008-09" for values in 2008-09 terms). This practice is in line with IPART's submission guidelines.
- Projected prices and values are mostly quoted in 2012-13 terms, indicated by the notation "$2012-13". Exceptions are noted as explained above.
- Annual inflation of 2.5 per cent per year is used for indexed nominal projections beyond 2011-12.
- Some totals in tables may not appear to add precisely due to rounding of the component terms in the table.
- As required by IPART's submission guidelines, tables providing information about future costs, revenue requirements and prices show five years of projected data to June 2018 even though Hunter Water is seeking a four-year price determination to 30 June 2017. Columns containing data for the additional year are shaded.
- Footnotes show abbreviated references. A full reference list is provided at the end of the submission.

2 Hunter Water's operating context

Main Points

- *Hunter Water's primary purpose is to supply dependable and high quality water and wastewater services to the people of the lower Hunter region.*
- *Hunter Water serves a population of 546,000 and operates across eight local government areas.*
- *Customers are billed three times per year and the average residential bill comprises a fixed water service charge and a water usage charge, a fixed sewerage service charge and an environmental improvement charge. Some customers also pay stormwater charges.*
- *Hunter Water is governed by a number of regulators and the overarching regulatory instrument is the operating licence, which sets out operating responsibilities, system and service standards and customer rights. Hunter Water will continue to meet operating licence requirements and mandated standards for the 2013 determination period.*
- *There are a number of external factors that significantly affect Hunter Water's operating context.*

2.1 Overview of role, operations and structure

Role

Hunter Water is a State-owned Corporation providing water and wastewater services to over half a million people in the Lower Hunter region. Hunter Water was established in 1992 under the *State Owned Corporations Act 1989*, arising from the Hunter Water Board, which had origins in the 19th Century. The *Hunter Water Act 1991* details the specific roles and responsibilities of Hunter Water. Hunter Water also manages the trunk stormwater channels in the Newcastle, Lake Macquarie and Cessnock local government areas.

Hunter Water Corporation's primary purpose is to supply dependable and high quality water and wastewater services to the people of the lower Hunter region. Hunter Water's role involves the collection, treatment and delivery of drinking water in accordance with the guidelines set by the National Health and Medical Research Council (NHRMC). Hunter Water also transports, treats, recycles or disposes of the wastewater of the region in accordance with the guidelines set by the Environment Protection Agency. Treated wastewater is reused where it is economically and environmentally beneficial.

Operations

The scope of Hunter Water's area of operation is 5,366 square kilometres serving a population of 546,000. Hunter Water covers the local government areas of Cessnock, Dungog, Lake Macquarie, Maitland, Newcastle, Port Stephens and a small part of Singleton Shire. Services are also supplied to MidCoast Water for the township of North Karuah in the Great Lakes Shire.

In 2011-12 there are 232,310 properties connected to the water network and 220,579 to the wastewater network. Hunter Water supplies an average of 184 megalitres of water each day, drawing on assets of with a value of approximately $3.5 billion.

Hunter Water's water sources include Grahamstown Dam (190,000 megalitre capacity), Chichester Dam (21,500 megalitres), Tomago Sandbeds (60,000 megalitres) and Anna Bay Sandbeds (16,000 megalitres). The water is delivered via an extensive network of 4,930 kilometres of pipes, 85 reservoirs and 123 pumping stations. Hunter Water also has the capacity to supply up to an average of 35 megalitres per day to the central coast.

Wastewater is collected through 4,792 kilometres of pipes and 404 wastewater pumping stations, delivered for treatment at one of 19 wastewater treatment plants, then recycled where possible. Hunter Water supplies just over 3,000 megalitres of recycled water for direct sale each year.

Hunter Water's area of operations is illustrated below Figure 2.1

Figure 2.1 Hunter Water area of operations

Structure

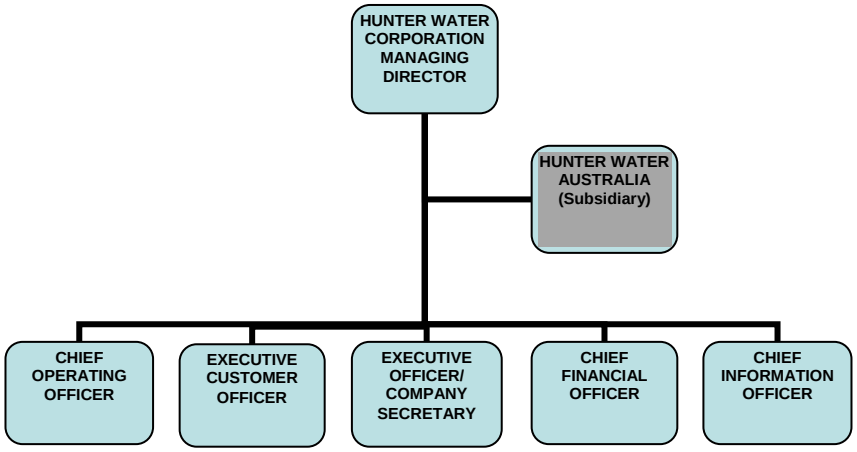
Hunter Water Corporation has two nominated shareholders, namely, the NSW Premier and NSW Treasurer.

Hunter Water Corporation is structured across five divisions: Planning and Operations, Customer Services, Information Technology Services, Strategy Governance and Corporate and Finance. This structure supports the efficient coordination of over 480 employees across key functional areas.

Hunter Water Australia Pty Ltd (HWA) was established in 1998 as a subsidiary of Hunter Water Corporation. HWA provides specialist technical and operational services to water agencies, local government and industry, primarily in Australia. As well as successfully marketing its services to external parties, HWA is also a key supplier of services to the Corporation, managing both the wastewater treatment works and water treatment plants.

Hunter Water's structure is shown in Figure 2.2.

Figure 2.2 Hunter Water's organisation structure



2.2 Current prices and charges

Today, both Hunter Water's residential customers, and the majority of non-residential customers, are billed three times a year. Residential customers pay a fixed service charge and variable usage charge for water and a fixed service charge only for sewerage services. Non-residential customers pay a fixed service charge and a usage charge for both water and sewerage services.

Water Service Charge

The water service charge is a fixed charge that varies only according to meter size. Most domestic customers have a standard 20 mm diameter meter and therefore currently pay a uniform water service charge. Customers with larger meters, mainly commercial and industrial customers, pay higher service charges determined by the size of their water meter.

Water usage charge

The water usage charge is applied to the volume of water used by an individual customer. Usage charges are measured in kilolitres. Two rates apply:

- A basic rate for all consumption up to 50,000 kilolitres. To put this volume into perspective, it is equivalent to the annual consumption of 270 houses.
- A location-based rate for consumption greater than 50,000 kilolitres per year in specific areas only. The location-based charge only applies to consumption in excess of 50,000 kilolitres by eligible customers – all consumption under 50,000 kilolitres is charged at the rate applying to all other customers. The location-based rate was introduced from 1 July 2001 onwards and passes on to some very large industries the economies of using less of Hunter Water's substantial water distribution infrastructure.

Sewerage service charge

Sewerage service charges are a fixed charge to meet the capital and fixed operating costs of the sewerage system. For residential customer's this is the only sewer charge paid for their use of the sewerage system.

Sewerage usage charge

Sewerage usage charges apply to non-residential customers and are based on water usage volume and a sewer discharge factor. The discharge factor calculates the proportion of metered water consumption that is discharged by the customer into Hunter Water's sewerage system. Discharge factors depend on the nature of the individual customer's business. Businesses that typically discharge most of their water use to the sewer (such as commercial office buildings) have high discharge factors while businesses that use most of their water for uses like irrigation (such as a garden nursery) have low discharge factors.

The usage charge is a small variable component to non-residential customer's bills. It is intended to cover variable costs associated with sewage treatment, such as power and chemicals.

Environmental improvement charge

The Environmental Improvement Charge (EIC) is an annual charge levied on all sewered properties in Hunter Water's area of operations and on properties where there is a commitment to make sewerage services available. This charge contributes to the cost of providing sewerage to established, but unsewered, areas in the Lower Hunter. These are often referred to as sewerage "backlog" areas.

Clarence Town sewer levy

This annual charge is only applied to customers who have properties in the Clarence Town area. It contributes to the cost of the recently-completed sewerage scheme for Clarence Town. Clarence Town residents have been able to connect to the sewerage scheme since 2011. More information about this levy, including its sunset provisions, is provided in Chapter 9 of this submission.

Stormwater drainage charge

Stormwater drainage charges only apply to customers whose property is located in the catchments of Hunter Water's stormwater drains. The stormwater drainage networks are in parts of Newcastle, Lake Macquarie and Cessnock council areas.

Charges currently comprise a service charge for residential customers and a land-area-based service charge for non-residential customers.

Current water, sewer and drainage charges

The current prices charged by Hunter Water are listed below in Table 2.1. In addition to the charges below, IPART sets a range of charges for miscellaneous services that are not used by all customers.

Table 2.1 Water, sewer and drainage prices 2012-13

Water		
Service	20mm meter (base) [a]	18.92
	Dungog shire only	69.55
Usage ($/kL)	Up to 50,000 kilolitres per year	2.08
	Over 50,000 kilolitres per year (location prices)	
	Kurri Kurri	2.06
	Lookout	1.90
	Newcastle	1.85
	Seaham –Hexham	1.61
	South Wallsend	1.94
	Tomago – Kooragang	1.56
	Dungog – (excluding Gresford)	1.56
	All other locations	2.08
	Unfiltered water	1.60
Sewer		
Service	Residential house [b]	555.23
	Base – all other customers (100% discharge) [c]	1110.46
Usage ($/kL)	Non Residential	0.67
Stormwater Drainage		
Service	Residential	86.42
	Non-residential area < 1,000m^2 or low impact	86.42
	Non-residential area 1,001m^2 to 10,000m^2	156.20
	Non-residential area 10,001m^2 to 45,000m^2	993.59
	Non-residential area > 45,000m^2	3,156.84

Source: HWC

a) This is the base water service price. Prices for larger meter sizes are calculated as *base charge X (meter size)^2/400*.

b) Residential houses with a 20 mm water meter pay a flat sewer service charge of $555.23. No discharge factor applies to this charge.

c) c. This is the base sewer service charge for all other customers. Charges applying to individual customers are calculated according to water meter size using the relationship in note (a) and applying the customer's discharge factor. The above mentioned service charge of $1110.46 is based on a 20 mm meter size.

These services are generally paid up front and cover a wide range of services such as initial connection to the water or sewer system, disconnection from the system, standpipe hire, meter testing and special meter reads. These charges are only incurred by customers who

require these miscellaneous services from time to time. These charges do not affect the majority of customers.

2.3 Regulatory arrangements

Hunter Water is governed by the *State Owned Corporations Act 1989* and *Hunter Water Act 1991.* The NSW Government regulates Hunter Water's operations through a number of regulatory bodies and instruments.

Operating Licence

Hunter Water's operating licence is administered by the Independent Pricing and Regulatory Tribunal of NSW (IPART) and is issued by the portfolio Minister responsible for State-owned water utilities. At the time of this submission, the portfolio Minister is the Minister for Finance and Services.

The operating licence is Hunter Water's overarching regulatory instrument and sets out operating responsibilities, system and service standards and customer rights. It also establishes frameworks for drinking water quality, infrastructure performance, environmental management and water supply and demand management. A standard customer contract also forms part of the operating licence. This contract was reviewed by IPART in early 2011 and a revised contract came into force from 1 July 2011.

The operating licence covering most of the current price determination period came into effect on 1 July 2007 and was replaced by a new licence on 1 July 2012. Over this period, the NSW Government made some administrative amendments to the licence. These include the incorporation of Dungog Shire in the Corporation's area of operations with the transfer of Dungog Council's water and sewer business to Hunter Water in 2008 and the introduction of new system performance standards from July 2010, following extensive review by IPART. Additional amendments were made in July 2011 to enhance customer hardship protection provisions and to include the revised the customer contract.

IPART conducts an annual independent audit to assess Hunter Water's compliance with the operating licence. The audit assesses performance in meeting the service standards and other conditions of the licence. The results of audits and reviews are made available on IPART's website on completion.

During 2011and early 2012, IPART carried out a periodic review of the operating licence and a new licence took effect on 1 July 2012. A full copy of this new operating licence is available on Hunter Water's website and details of IPART's review of the licence can be accessed from IPART's website.

Pricing

Hunter Water's pricing structure is periodically reviewed by IPART. The current price determination came into effect in July 2009. This submission is Hunter Water's formal proposal to the next price review and determination, which will lead to new prices to come into effect from 1 July 2013. Specific information about current prices and charges is detailed in Table 2.1.

Wastewater systems

The Environment Protection Agency (EPA) is responsible for the issue of licences under the *Protection of the Environment Operations Act 1997,* which covers Hunter Water's wastewater pipe network, pumping stations and treatment systems.

The licence covers the quality and quantity conditions for discharge from the Corporation's wastewater treatment works. These conditions are reviewed every three years under the legislation. The licences also specify operational controls and performance reporting for the wastewater pipe network and pumping stations.

Access to water sources

Hunter Water extracts water from the Williams, Paterson and Allyn Rivers as well as groundwater sources under conditions specified in the licences issued under the *Water Management Act 2000.*

Additional conditions are set out in the NSW Government's Water Sharing Plans covering unregulated rivers in the Hunter River catchment, the Paterson River and the coastal sandbed groundwater sources.[7]

In addition to this legislation Hunter Water operates and manages its dams in accordance with the *NSW Dams Safety Act 1978*. This Act exists to protect the safety, welfare and interests of the community from dam failure by ensuring the risks from prescribed dams are tolerable and ensure that the security of dams and their stored waters are protected.

Drinking water quality

Hunter Water supplies high quality drinking water to customers. The drinking water supply is regularly tested throughout the water supply system. The quality of water supplied to customers consistently complies with the latest National Health and Medical Research Council's Australian Drinking Water Quality Guidelines.

Under the operating licence, Hunter Water is required to comply with the guidelines to provide a solid foundation for managing and assessing drinking water quality.

Hunter Water also works closely with the NSW Department of Health (NSW Health) through a Memorandum of Understanding (MoU) to ensure that all current and emerging issues associated with drinking water quality are identified and assessed.

An overview of regulatory arrangements by area of regulation is provided in Table 2.2

Table 2.2 Regulatory areas snapshot

Area of regulation	Regulator/Stakeholder	Regulatory instrument/s
Pricing, operations, service and standards, customer protections	Independent Pricing and RegulatoryTribunal of NSW (IPART)	Price determination Operating licence Customer Contract
Obligation to shareholders	NSW Treasury	Statement of Corporate Intent
Wastewater Licensing	Environment Protection Agency	Environment Protection Licences
Access to water sources	NSW Office of Water	Licences and approvals issued under the *Water Management Act 2000* and Water Sharing Plans
	NSW Dams Safety Committee	Operation and management of dams under the *NSW Dams Safety Act*

[7] The relevant water sharing plans are listed in the references to this submission.

Area of regulation	Regulator/Stakeholder	Regulatory instrument/s
		1978
Drinking water quality	NSW Health	Memorandum of Understanding
	IPART	Operating licence

Source: HWC

Service levels for the 2013 determination period

Hunter Water will continue to deliver high-quality water and wastewater services to its customers in 2013 and beyond. Compliance with mandated standards has been a primary consideration in developing this price submission and this is discussed further in Chapters 5 and 6 in relation to operating and capital expenditure proposals. Hunter Water is not planning to intentionally exceed mandated service levels and therefore there is no additional cost being passed on to customers. Regulatory standards will continue to be achieved as set out in the operating licence and by other regulatory bodies as detailed in Table 2.2.

2.4 Operating context to 2017 and beyond

Global financial crisis

The global financial crisis (GFC) continues to impact on consumer uncertainty in Australia and continues to be felt by the property development industry.

The consequence of consumer uncertainty on Hunter Water's operations are difficult to quantify but are likely to result in reduced consumption particularly by industrial customers, the potential for non-residential customer's to significantly reduce or cease operations and increases in the cost of managing customers in hardship. Consumer uncertainty is also constraining connection growth in parts of the area of operations while other parts continue to see strong growth due to the presence of the coal mining industry. This has been apparent with strong residential and light industrial growth in the western parts of the area of operations, particularly around Maitland.

In early 2012 Hunter Water has seen the GFC impact on the operations of a number of major industrial customers, particularly in the aluminum and chemical industries. These recent developments have been taken into account in the demand projections outlined in Chapter 4 of this submission.

Affordability

As a service provider, Hunter Water's prime purpose is to provide a high quality and affordable service to its customers

The increases in input costs over the past four years have resulted in significant implications for Hunter Water's operating environment. Specifically, increased energy costs have had a large impact on household costs. Hunter Water has not been exempt from these price increases and the challenge now lies in balancing the effects of this increase with the interests of customers. To address this challenge, Hunter Water will continue to look for and demonstrate operating and capital cost efficiencies across all levels of business.

Hunter Water is developing monitoring systems that will help predict customers who may be in hardship. These systems will identify changes in payment behavior and will provide the

opportunity to contact customers and provide payment options before unmanageable debts accrue. More information on these programs is provided in Chapter 11.

Water demand and supply - the Lower Hunter Water Plan

The Metropolitan Water Directorate[8] is currently leading the development of the Lower Hunter Water Plan (LHWP) in collaboration with Hunter Water and in consultation with the community to determine options for the future water security of the lower Hunter region's growing population.

The lower Hunter region was fortunate to escape the recent drought that affected most of the State, but it is not immune. Water supply in the lower Hunter is highly vulnerable to drought. Water levels can drop faster than most other major Australian urban centres during drought because storages are small, or shallow, and have high evaporation rates.

All options, other than the previously-rejected Tillegra Dam, will be investigated in developing solutions to ensure that the lower Hunter region can withstand periods of drought. The plan will also meet the needs of a growing community, a necessity as future demands increase the strain on water sources.

The methodology for determining future demands and demand projections is discussed in Chapter 4.

The approach to the LHWP is consistent with the National Urban Water Planning Principles recently adopted by the Council of Australian Governments.

Productivity Commission Review of the Australian Urban Water Sector

The Productivity Commission's final report, report released in October 2011, identified potential areas for reform in Australia's urban water sector[9].

A number of the Commission's findings and recommendations are relevant to this submission and, where this is the case, they are referenced in the discussion.

Competition

Hunter Water's operations will continue to be exposed to the impacts of the *Water Industry Competition Act 2006 (*WIC Act*)*. There is evidence to suggest that, over the next price period and beyond, there is a possibility that private companies will obtain licences to provide water, wastewater and recycling services and, consequently, change the nature of the market in which Hunter Water operates. Hunter Water identifies the most likely area of competition to be in wastewater and recycling, particularly in greenfield development areas.

Hunter Water will continue to be proactive in its approach to ensure that the business is able to adapt and integrate with this changing industry structure. It will focus on demonstrating to customers and decision makers that Hunter Water provides value for money.

A review of the WIC Act is underway and is expected to result in further obligations on public water utilities in retailer/operator of last resort roles.[10] This change to the Act may potentially impose additional, as yet unquantifiable, costs on businesses such as Hunter Water.

[8] The Metropolitan Water Directorate reports to the NSW Minister for Finance and Services. The Directorate leads a whole-of-government approach to water planning for greater Sydney and the lower Hunter and provides policy advice on water industry competition and reform.
[9] Productivity Commission, 2011
[10] Department of Finance and Services (NSW), 2011

Technology

The continual development of technologies will offer new challenges and opportunities to Hunter Water. For example, across the water industry, trials of intelligent networks and smart meters are occurring and these developments will result in continuous changes to the operating context. Hunter Water recently completed a 12-month trial of smart meters with a number of major customers. This trial demonstrated significant benefits, including leakage management, water consumption reporting, sub metering opportunities, benchmarking, water conservation opportunities re-use opportunities and real-time data that allowed customers visibility of daily/weekly and monthly usage. A follow up strategy and cost benefit analysis is currently being worked through.

Hunter Water is committed to improving the quality and efficiency of its systems. The Corporation will continue to assess and implement new technologies across the organisation and work with other industry players to trial new technologies such as smart metering and intelligent networks.

2.5 Customer input in decision making

Hunter Water acknowledges customers' expectations to input into decision making and the impacts this will have on the operating environment. Customers now expect a higher level of involvement in decision making and Hunter Water understands the benefit of this to its business operations.

Hunter Water is addressing these expectations through additional customer engagement strategies, in particular, on local planning and construction activities, environmental considerations and around affordability and willingness to pay. Findings will be used to build business strategies and further develop the relationship that exists between Hunter Water and the community.

Hunter Water's commitment to customer engagement is ongoing. The specific engagement activities undertaken as part of the 2012 price consultation and its findings are detailed in Chapter 12.

3 Performance 2010 to 2013

Main Points

- *Hunter Water's performance is reported annually to key regulators, including IPART, Environment Protection Authority and the NSW Office of Water.*
- *Hunter Water's performance is also reported publically each year.*
- *New system performance standards were included in the operating licence in 2010. Hunter Water has comfortably met these standards over 2010-11 and 2011-12.*
- *In order to ensure real price increases are limited to ensuring water services remain affordable, Hunter Water's proposed operating and capital programs will result in a reduction in headroom between current operating performance and licence limits.*
- *Continued compliance with the operating licence and other regulated standards has been a primary consideration in developing this price submission.*

This chapter provides an overview of Hunter Water's performance during the current price determination period from 17 July 2009 to 30 June 2013. The following sections report on:

- operating licence and service level performance
- performance against other regulatory requirements
- other performance assessments
- sales and customer connections compared to those forecast by IPART at the 2009 price determination
- revenue performance compared to IPART's 2009 forecasts, and
- implementation of the 2009 price determination.

Chapter 2 of this submission outlined the various regulatory arrangements governing Hunter Water's operations. This chapter reports on performance against those regulatory arrangements over the current price determination period.

Hunter Water's performance also is also reported publically each year in:

- A series of operating licence performance reports submitted to IPART each September and December. These reports are publicly available from Hunter Water's website or in

printed form by request. Reports for the period 2011-12 are available on Hunter Water's website.

- An annual independent audit of Hunter Water's operating licence performance. This audit is commissioned by IPART and the results are published on IPART's website, usually in November or December each year.
- The National Water Commission's (NWC) annual report on the performance of urban water utilities in Australia. This report presents annual performance data for Hunter Water in comparison with the 10 other major Australian utilities serving more than 100,000 connected properties. IPART coordinates the data collection from NSW urban utilities for this report and the NWC's report is published in April each year and is available from the NWC's website.
- IPART's annual report of the performance of NSW water utilities. IPART has produced this report for the last two years. In addition to reporting similar non-financial performance indicators to those in the national performance report, IPART's report includes operating and capital expenditure consistency with expenditure allowed in the last price determination This report is available from IPART's website.

In addition, in 2010, IPART completed a review of the productivity of State-owned corporations. This report examined the productivity performance of a range of corporations including Hunter Water Corporation.[11]

Performance measures from these reports are used in the following sections of this chapter to illustrate Hunter Water's performance over the current determination period.[12] Because these reports are publicly available and IPART is either the recipient or originator of the reports, this chapter only presents some of the main features of Hunter Water's performance for the benefit of readers not familiar with Hunter Water's recent performance and the performance reporting outlined above.

3.1 Overview of performance

Hunter Water Corporation operates under a licence, issued by the NSW Government, which enables it to lawfully provide services within its area of operations. The operating licence includes system performance standards (SPS) that define levels of service that customers can expect for the price they pay. SPS cover three major areas – water continuity, water pressure and sewage overflows. Licence compliance is independently audited and penalty provisions may be invoked for licence contravention, including exceeding SPS targets (which are considered to be prescriptive minimum standards).

The operating licence also sets out conditions relating to community consultation, customer and consumer rights, customer complaint and dispute handling, managing water demand and supply, environmental management, publication of environmental and ecologically sustainable development (ESD) indicators.

In July 2010, the NSW Government adopted new SPS and targets for Hunter Water. These new SPS and targets were recommended to the Government by IPART in February 2010 after extensive review over a period of years.[13]

The current operating licence came into effect on 1 July 2012 and moves to a systems-based approach to licensing. A separate Reporting Manual is a new companion document that outlines all reporting obligations under the current licence.

[11] IPART, 2010 (a)
[12] The current determination period is the four year period from 2009-10 to 2012-13 inclusive.
[13] IPART, 2010 (b)

Hunter Water performs consistently well against key performance indicators (KPIs) and prides itself in providing quality and reliable water and wastewater services to its customers, prudently and efficiently. IPART recognises Hunter Water's productivity performance as being of a high standard.[14]

3.2 Operating Licence and service level performance

Hunter Water's operating licence sets the service levels that the organisation must deliver. These include:

- water pressure standards
- water continuity standards
- sewer overflow standards, and

} System performance standards (SPS)

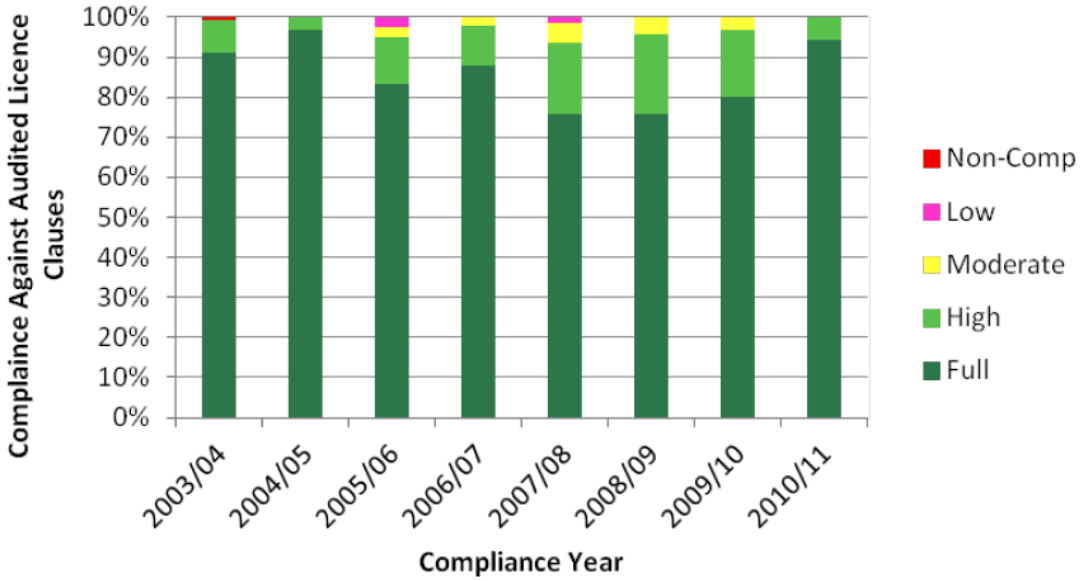
- drinking water quality requirements.

An audit of Hunter Water's operating licence performance is undertaken annually to assess performance against the service levels as well as other components of the operating licence. The audit is commissioned by IPART.

Audit results have been steadily improving over the past number of years.

As outlined in Figure 3.1 Hunter Water's new operating licence came into effect on 1 July 2012. However, the new operating licence did not amend the SPS introduced in July 2010, following an extensive review overseen by IPART and independent consultants.

Figure 3.1 Overview of Hunter Water's operating licence compliance history



Source: IPART, 2011(e), Figure 3.1, page 17

The SPS were derived from a statistical analysis of previous performance. Hunter Water's analysis of performance provided to IPART for setting the standards recognised that Hunter Water would be likely to meet the SPS targets in 19 out of every 20 years based on current technologies, business practices and expenditures continuing.

[14] See IPART, 2010 (a)

Hunter Water has now been operating for two years under the revised SPS - i.e. 2010-11 and 2011-12. Hunter Water's performance over this period against the SPS is presented in Table 3.1 below. A more detailed analysis of performance is presented in Hunter Water's operating licence performance report titled "System Quality and System Performance Report Annual Operating Licence Report, 2011-12".[15]

Table 3.1 Performance against system performance standards

Indicator	2010-11	2011-12	Licence limit
Number of properties affected by low pressure	2,334	1,171	4,800
Number of properties affected by an unplanned water interruption greater than five hours	5,845	1,855	10,000
Number of properties affected by three or more unplanned water interruptions greater than one hour	2,200	1,836	5,000
Number of private properties affected by a dry weather uncontrolled sewage overflow	3,723	2,799	5,000
Number of private properties affected by three or more dry weather uncontrolled sewage overflow	26	14	45

Source: HWC

As can be seen from the two years of actual results presented, Hunter Water has comfortably met the SPS targets. However, the lower Hunter region has experienced relatively mild weather and higher than average rainfall across this reporting period, which has a recognised bearing on this performance.

IPART's issues paper notes that Hunter Water has maintained considerable headroom against IPART-determined SPS and that there is room for Hunter Water to reduce its expenditure on meeting this performance.[16] This may mean that in more adverse weather than those that have prevailed over the last two years, Hunter Water's performance will be closer to, or possibly exceed, the licence limits set out in Table 3.1

Hunter Water is acutely aware of the affordability challenges faced by many of its customers and the pricing proposals put forward in this submission reflect this understanding. The submission has been developed balancing the principles of customer affordability with operating fundamentals and financial sustainability.

In order to limit the size of real price increases, Hunter Water has substantially reduced its proposed capital expenditure program and attempted to absorb operating cost increases, while at the same time aiming to comply with regulatory requirements. Adopting the capital and operating programs presented within Chapter 5 and 6 of this submission will see a reduction in Hunter Water's performance against the SPS contained within the operating licence. While, therefore, it is proposed to reduce the perceived headroom (the difference between actual performance and the licence limit), Hunter Water remains focused on complying with the limits contained within the operating licence. To further reduce the

[15] Hunter Water Corporation, 2012 (b)
[16] IPART, 2012 (d), section 3.4

proposed capital and operating programs beyond that proposed by Hunter Water could potentially lead to Hunter Water breaching its operating licence.

Hunter Water has continued to produce high quality drinking water for its customers. Hunter Water again achieved full compliance with its operating licence requirements for the 2010-11 year for both microbiological and physical/chemical parameters. Hunter Water remains committed to working closely with NSW Health to maintain a cooperative and consultative approach to the regulation of drinking water quality for the lower Hunter region.

3.3 Performance against other regulatory requirements

Wastewater systems

Hunter Water's wastewater discharges to receiving waters[17] are closely regulated by the NSW Environment Protection Authority, through licences granted for each wastewater system. Hunter Water is required to report annually on the performance of each of its 19 wastewater systems in addition to incident-based reporting.

As outlined in Chapter 2, the system licences cover the quality and quantity conditions for discharges from the Corporation's wastewater treatment works as well as specifying operational controls and performance reporting for the wastewater pipe network and pumping stations.

The quality conditions prescribed for each individual treatment plant contain concentration limits and for the majority of plants also include load limits.

A major treatment plant upgrade is in progress at Farley wastewater treatment plant, which will address current load limit non-compliances. Studies are in progress at Burwood Beach wastewater treatment plant in order to identify long-term upgrade requirements to address load-limit compliance matters.

Access to water sources

Hunter Water holds a water licence and approvals package issued by the NSW Office of Water. The licence facilitates the extraction of water from the Williams, Paterson and Allyn Rivers as well as groundwater. A requirement of the licence is for Hunter Water to report annually on compliance against licence conditions. Hunter Water has completed the compliance reports as required to the NSW Office of Water. Overall Hunter Water has complied with the majority of licence requirements. Where there have been instances of non-compliance, the NSW Office of Water has been notified and corrective actions have been taken.

3.4 Sales, revenue and connections compared to IPART forecasts

Appendix A contains detailed information on actual sales, revenue and connections realised during the current determination period compared to the corresponding projections used for setting prices in 2009.

Actual water sales for the period from 2009-10 to 2011-12 were almost 10,000 megalitres in total lower than the 2009 IPART determination report while sales in 2012-13 are projected to be around 2,100 megalitres lower than the projections contained within the determination report.

[17] "Receiving waters" are defined as streams, rivers, lakes or the ocean that receives stormwater or wastewater discharges.

Actual water customer connections have been less than the IPART determination projections for the entire period of the current determination.

The combined effect of these lower water sales and connections has meant Hunter Water has not achieved IPART's revised revenue expectations following the adjustment of prices after the cancellation of the Tillegra Dam project in 2010. Over the price period, revenue is expected to fall short of the revised target revenue by around $50 million in nominal terms. The details are shown in Table A.3 in Appendix A.

3.5 Implementation of the current determination

Hunter Water has fully implemented the current determination since it came into effect on 17 July 2009. Hunter Water has implemented the annual changes to prices required by the determination each year on 1 July. An updated price schedule has been provided to IPART for checking each year after the March quarter consumer price was released by the Australian Bureau of Statistics. IPART has not reported any issues with the implementation or annual updating of the determination.

Following the NSW Government's decision not to approve the proposed Tillegra Dam in November 2010, the Government asked IPART to calculate a refund of amounts paid by customers toward the cost of Tillegra Dam. The Government instructed Hunter Water to refund or credit this amount to customer's accounts on bills issued between March and June 2011.[18] The Government also asked IPART to set new water prices to apply from March 2011, removing any further costs associated with Tillegra Dam. IPART provided the then NSW Minister for Water with a report on 24 January 2011 on the appropriate refund/rebate amount and new water service charges to apply from 1 March 2011 to 30 June 2013.[19] Hunter Water provided the rebates and refunds during the March 2011 to June 2011 billing period and applied the reduced water service change from 1 March 2011 and in the remaining years of the price determination period.

Further minor adjustments are being made to some miscellaneous charges from 1 July 2012 to remove plumbing inspection costs from these charges. This coincides with the transfer of plumbing inspection responsibilities from Hunter Water to NSW Fair Trading as part of the NSW Government's reforms to the regulation of the plumbing industry. These adjustments have been carried forward into the proposed miscellaneous charges outlined in Chapter 14 of this submission.

[18] Customers were given a rebate for the period from 17 July 2009 to 28 February 2011 or a pro-rata rebate if they had not owned the property for the whole period. Customers who had owned property during that period, but were no longer the owner, were invited to contact Hunter Water for a pro rata refund for the period that they had owned the property.
[19] IPART, 2011(d)

4 Customer profile, demand for services and growth

Main Points

- *This chapter provides information about the water demand and connection projections used in developing future prices.*
- *Hunter Water has adopted the Integrated Supply–Demand Planning model for forecasting future water demand. This model is the most contemporary approach to urban water demand forecasting in Australia. Its development was funded by the National Water Commission for use by Australian water utilities.*
- *Hunter Water expects average demand over the four years starting in July 2013 to be around 57,000 megalitres per year. This is around 4,000 megalitres per year lower than the average annual demand adopted by IPART in 2009.*
- *Connection forecasts have been developed to match the new pricing structures proposed by IPART in its March 2012 report on price structures for metropolitan water utilities.*

4.1 Background

Revenue is a function of both the quantities sold and the price. Therefore, projecting future sales is an important element of developing the price requirements for the coming price period. This chapter describes Hunter Water's demand projection for the proposed price period as well as developments in the forecasting methodology used.

IPART has also sought information on how the actual demand and revenue projections during the current determination period compare to the projected sales and revenue used for setting prices in 2009. This information is provided in Appendix A.

4.2 Customer profile and trends

Hunter Water services a wide range of customers, meeting their needs for water (potable, unfiltered, recycled), wastewater (sewer, trade waste) and stormwater (run-off and harvesting) services. There are also customers requiring development and trade-related services, ranging from individual households, to plumbers and large commercial developers.

In recent years, the urban water industry has seen a rapid increase in supply, through rainfall and supply augmentations. In return, demand has decreased due to a reduction in outdoor water usage and increased water efficiency awareness.[20]

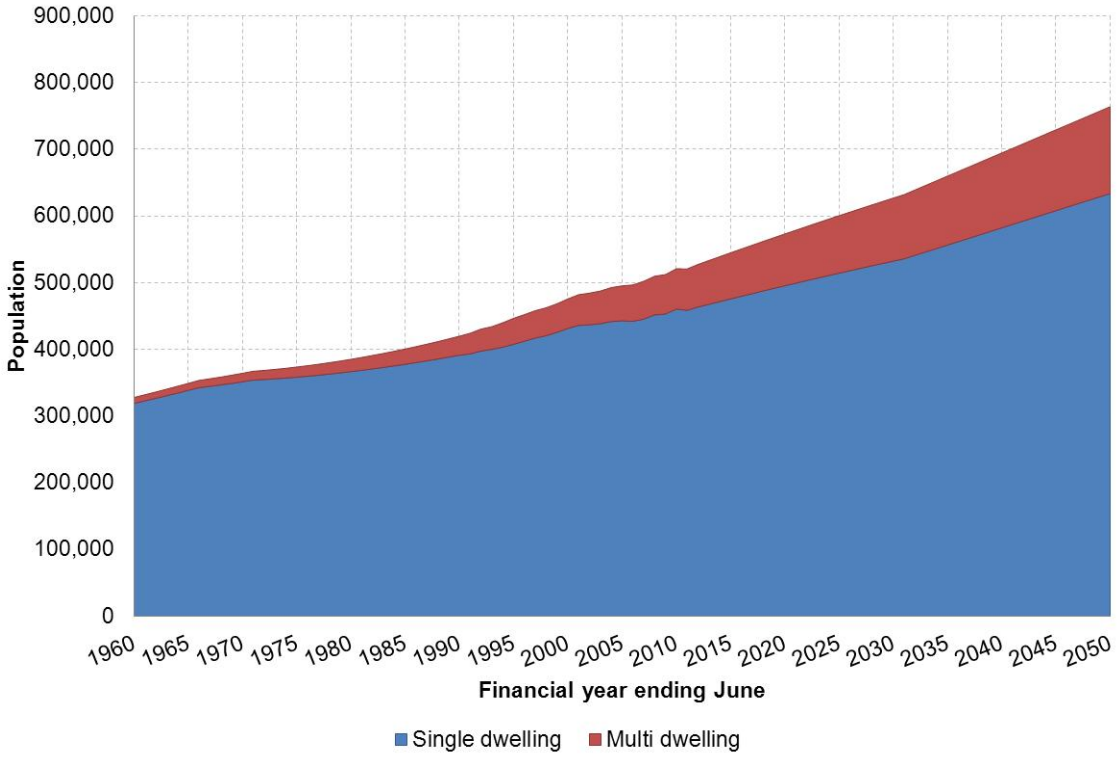
[20]National Water Commission and Water Services Association of Australia, 2012, pp 2 and 28

Hunter Water has seen the direct effects of this trend on its demand levels over the past five years, with a five per cent reduction in demand since 2006-07. Consequently, sales volumes have declined, despite operating costs increasing.

4.3 Population projections

The residential population in the lower Hunter region has grown at a reasonably consistent rate ranging from 1.00 to 1.12 per cent per year over the last 25 to 30 years. The residential population is expected to increase from around 546,000 persons in June 2013 to 568,000 persons in June 2017.[21] The projected population growth is shown below in Figure 4.1

Figure 4.1 Projected population served



Source: HWC

4.4 Demand model and consumption forecast

Demand model used in this submission

Until 2011, Hunter Water used a spreadsheet model to project future water demand. This model was based on a highly disaggregated analysis of consumption trends from individual customer categories. The objective of the model was to estimate the total supply requirement, which was determined from factors such as the growth in customer connections, customer usage patterns, demand management programs and the impact of recycling schemes in both residential and industrial contexts.

[21] This is a population estimate of customers supplied with water services and is less than the total population in Hunter Water's area of operations. It includes estimated population for private (houses, flats and units) and non-private (education facilities, boarding houses, gaols, etc) dwellings.

While the disaggregated model proved to be fairly reliable over time, there have been recent developments in demand forecasting methods that offer approaches more suited to contemporary circumstances, particularly to changes in use patterns by residential customers. In addition, recommendations for improvements to Hunter Water's demand forecast model and methodology have been made through consultant reviews over the last four years. The reviews were undertaken by consultants, Sinclair Knight Merz, in 2008 as part of the IPART price review and by the Institute for Sustainable Futures (ISF) in their review of Tillegra Dam.[22] The key recommendation of the latter review was that the methodology could be strengthened by greater use of statistical analysis and reduced reliance on quantitative estimates of future customer behaviour.

The National Water Commission recently funded an Integrated Resource Planning (IRP) for Urban Water project.[23] The project was led by the ISF and involved collaboration with the Water Services Association of Australia (WSAA), the CSIRO and several councils. The project comprises a series of resource papers, case studies and development of an Integrated Supply–Demand Planning (iSDP) model. The resource paper "Complementary analytical techniques for urban water forecasting in IRP" states that emerging national and international best practice is a hybrid residential end-use analysis combined with a sector-based approach for the non-residential and non-revenue water sectors.

The iSDP model is a type of end-use model. End-use modelling is based on a disaggregated analysis of consumption in individual customer categories (e.g. residential, industrial, commercial and unaccounted-for water). Individual customer categories can be broken down further into individual end uses (e.g. toilets, showers, taps, washing machines, gardens, etc for residential). For each of the end uses, region specific information is required on the stock (number of households with each type of water using appliance), water intensity (how much water each type of appliance uses) and frequency of usage (number of times and/or duration of each use).

The existing model was fully migrated into the iSDP format and populated with locally relevant information by February 2012. The new model treats the non-residential forecast similarly to the previous model, as a compilation of disaggregated sectors (e.g. industrial, municipal). The previous residential forecast was based on usage per property whereas the new model is based on end-use – that is, where the water is used in the home (e.g. showering, toilet flushing). This is more transparent and useful as a predictive tool to assess the realistic impacts of water efficiency programs.

In February 2012, Hunter Water sought a preliminary external review of its demand forecasts in order to identify high-priority improvements prior to independent reviews that might be procured by IPART and/or the Metropolitan Water Directorate.[24] The external review found that the demand forecast model was successfully applied and previous review comments have been adequately addressed.

Consumption projections

The projected residential water demand presented in Table 4.1 includes demand from all residential end-use components and sectors. The demand in this sector is expected to continue to increase as the number of connected dwellings and population increase.

[22] Sinclair Knight Merz, 2008

[23] National Water Commission, 2011

[24] The Metropolitan Water Directorate (MWD) is a division of the NSW Department of Finance and Services. It leads a whole-of-government approach to water planning for Sydney and the lower Hunter. The MWD is leading the development of the Lower Hunter Water Plan – see Chapter 2 and section 6 of this chapter.

Non-residential demand historically has been a key component of the overall demand in the lower Hunter. While the proportion of water supply to non-residential customers has reduced, it will still represent 33 per cent of the projected water demand in 2017-18. The non-residential demand has significantly decreased as a result of decreases in production and/or closures and the increase in recycled water usage. Both these influences are difficult to forecast. However, the significant historical reduction observed during the past decade, was related to large usage reductions/closures by Hunter Water's biggest customers (12,000 megalitres). With a reduced large customer base, potential reductions from customers switching to recycled water or plant closures in future will have only a marginal impact to the overall supply requirements.

The Hunter Water iSDP model consumption projections for residential and non-residential customers for the proposed price period are shown in Table 4.1

Table 4.1 Consumption projections (megalitres)

	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Residential	37,607	37,671	37,743	37,823	37,913	38,015
Non-residential	20,518	20,784	19,459	18,498	19,030	19,218
Total	**58,125**	**58,454**	**57,203**	**56,321**	**56,943**	**57,233**

Source: HWC

4.5 Connection and meter projections

Following extensive review over the last few years, IPART has proposed new pricing structures for the four metropolitan water utilities.[25] The background to the review and principles underpinning these new pricing structures can be found in a report published by IPART in March 2012.[26] Details of the changes are also discussed more fully in the later chapters of this submission, which cover Hunter Water's proposals for water prices (Chapter 8), sewer prices (Chapter 9) and drainage prices (Chapter 10).

The information in the following tables (Table 4.2 to Table 4.4) provides the connection data relevant to these new pricing structures. The meter equivalent[27] projections for non-residential sewer connections have been adjusted to take account of the sewer discharge factors applying to the customers with each meter size shown in Table 4.2.

Table 4.2 Projected water connections

	Unit	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Residential							
Houses	No	178,693	180,769	182,846	184,923	186,999	189,076
Flats/Units	No	40,127	41,245	42,363	43,481	44,599	45,717
Vacant Land	No	1,169	1,169	1,169	1,169	1,169	1,169
Other	No	356	361	365	370	375	380
Total residential	No	**220,344**	**223,544**	**226,743**	**229,943**	**233,142**	**236,342**

[25] The four metropolitan water utilities are Sydney Water, Hunter Water, Gosford City Council and Wyong Shire Council.
[26] IPART, 2012 (b)
[27] "Meter equivalent" means the relationship between a particular meter size and a 20 mm meter. It expresses larger meter in terms of an equivalent number of 20 mm meters. For example, a 40 mm meter is equivalent to four 20 mm meters. For pricing purposes, a property with 40 mm meter would therefore pay a water service charge equal to four times the 20 mm service charge.

	Unit	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Non-Resdential							
20mm individual	No	6,681	6,785	6,889	6,994	7,100	7,206
20 mm meter	ME	132	134	136	138	140	142
25 mm meter	ME	3,902	3,962	4,023	4,084	4,146	4,209
32 mm meter	ME	1,021	1,037	1,055	1,070	1,085	1,103
40 mm meter	ME	4,664	4,736	4,812	4,884	4,956	5,032
50 mm meter	ME	5,138	5,219	5,294	5,375	5,456	5,538
65 mm meter	ME	21	21	21	21	21	21
80 mm meter	ME	2,256	2,288	2,336	2,368	2,400	2,432
100 mm meter	ME	2,175	2,225	2,250	2,275	2,325	2,350
150 mm meter	ME	1,013	1,069	1,069	1,069	1,069	1,125
200 mm meter	ME	200	200	200	200	200	200
250 mm meter	ME	938	938	938	938	938	1,094
300 mm meter	ME	1,575	1,575	1,575	1,575	1,800	1,800
350 mm meter	ME	306	306	306	306	306	306
600 mm meter	ME	900	900	900	900	900	900
Total [a]	ME	**24,240**	**24,610**	**24,914**	**25,203**	**25,743**	**26,252**

Source: HWC

a) Totals may not add precisely due to rounding.

Table 4.3 Projected sewer connections

	Unit	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Residential							
Houses	No	170,061	171,868	173,672	175,471	177,267	179,059
Flats/Units	No	39,801	40,926	42,053	43,179	44,307	45,436
Vacant Land	No	192	192	192	192	192	192
Other	No	347	380	395	417	434	445
Total residential	No	**210,402**	**213,368**	**216,311**	**219,260**	**222,200**	**225,132**
Non Residential [a]							
20mmindividual	No	5,644	5,758	5,873	5,990	6,108	6,227
20 mm meter	ME	82	84	86	87	89	90
25 mm meter	ME	2,638	2,692	2,746	2,801	2,855	2,911
32 mm meter	ME	695	711	724	737	753	768
40 mm meter	ME	2,871	2,929	2,986	3,044	3,105	3,166
50 mm meter	ME	2,925	2,980	3,040	3,100	3,165	3,225
65 mm meter	ME	11	11	11	11	11	11
80 mm meter	ME	1,166	1,196	1,216	1,236	1,267	1,287

	Unit	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
100 mm meter	ME	909	924	953	968	983	1,012
150 mm meter	ME	229	229	250	250	250	250
200 mm meter	ME	10	10	10	10	10	10
Total [b]	**ME**	**11,536**	**11,765**	**12,022**	**12,244**	**12,488**	**12,730**

Source: HWC

a) The meter equivalents (ME) in this table have been adjusted by the discharge factors applying to the customers with each meter size.

b) Totals may not add precisely due to rounding.

Table 4.4 Stormwater connections

	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Residential						
Stand alone residential	49,522	49,689	49,856	50,023	50,190	50,357
Strata units	7,935	8,155	8,375	8,595	8,815	9,035
Non Residential						
Small property (<1,000m^2)	2,722	2,734	2,747	2,759	2,772	2,784
Medium property (<1,001 - 10,000m^2)	922	924	927	929	932	934
Large property (<10,001 - 45,000m^2)	70	68	67	65	64	62
Very large property (>45,000m^2)	14	14	15	15	16	16

Source: HWC

4.6 Lower Hunter Water Plan

As mentioned in Chapter 2, the Metropolitan Water Directorate within the Department of Finance and Services is leading development of the Lower Hunter Water Plan (LHWP) in close collaboration with Hunter Water, other government agencies and the lower Hunter community.

It is essential that consistent demand projections are used in both resource planning and financial forecasts. The iSDP model used to provide the demand projections for this price submission is the same model that Hunter Water is using to provide demand projections for the Lower Hunter Water Plan.

4.7 Inter-region demand

Hunter Water provides treated water supply to some adjacent councils and water supply authorities. The bulk supply provided to these areas is used to provide water services to properties that are geographically closer to the Hunter Water supply network or to supplement the quantity of water available to these areas. Bulk supply is currently provided to the Gosford Wyong Water Authority (GWWA) and MidCoast Water.

Gosford Wyong Water Authority

Hunter Water began supplying water to the Central Coast in 2004-05 due to extremely low levels in the Gosford Wyong Water Authority (GWWA) storages. In December 2006, the link to Central Coast was augmented to be able to supply up to 27 megalitres per day and again in January 2008 up to 35 megalitres per day.

A combined source model (HWC/GWWA) has been developed by GWWA and is used to determine the annual volume of transfers. The source model uses the current storage levels, proposed infrastructure upgrades and transfer rules as inputs. The amount transferred in any given year is extremely dependent on the prevailing weather conditions. The model outputs are updated once a year.

GWWA's storage levels have improved from 13 per cent of capacity in 2007 to 49.6 per cent in September 2012, due to significant rainfall and transfers from HWC. GWWA completed the Mardi Dam to Mangrove Creek Dam pipeline link in July 2012 and this will help secure the central coast's water supply in future. The link will substantially reduce the reliance on transfers from Hunter Water.

The most likely scenario is that no bulk supply transfers will be made to GWWA during the coming price period.

MidCoast Water

A small number of mostly residential customers (approximately 90) in the Great Lakes Council area are supplied from the Hunter Water water supply. The area in North Karuah is connected Hunter Water's water and wastewater services.

Dungog Local Government Area

Dungog Shire Council's water supply and sewerage business was transferred to Hunter Water on 1 July 2008. From this date, the approximate 2,100 individually metered customers became Hunter Water customers and bulk supply to Dungog Council ceased. The change, while it has affected the accounting for water demands, has not affected the total demand from the water supply system.

Singleton Local Government Area

Hunter Water held discussions in 2008 with Singleton Council in the Upper Hunter about a long-term supply agreement. Opportunities to transfer up to 1500 megalitres per year to provide security to the Singleton supply system were being investigated. Due to significant rainfall, and the resulting improvement to storage levels in Glennies Creek Dam which supplies the Singleton area, it is now unlikely that these transfers will occur in the short to medium term. At June 2012, there is a possibility that Hunter Water may supply the Singleton area with 200 megalitres per year from 2014-15. Potential revenue from these sales has not been included in the price modelling for this submission.

5 Operating expenditure

Main Points

- *Over the current four-year price period, Hunter Water's regulated operating costs are 7.4 per cent (in real terms) above the level determined by IPART in 2009. This reflects additional expenditure on electricity and the impacts of regulatory changes.*
- *Future regulated operating costs are proposed to decrease by 2.4 per cent over the next price period relative to the 2012-13 base year. However, if the Lower Hunter Water Plan expenditure in the base year is excluded due to its "one-off" nature, there is a small increase of 1.8 per cent over the four years (or less than 0.5 per cent per year on average). This is less than the projected growth in connected properties.*
- *The additional costs in the next four years reflect the impact of upward cost pressures (e.g. for electricity, chemicals and other major contracts) as well as Hunter Water's response to a range of challenges including increasing regulatory and operating standards, servicing growth, legislative changes, increasing customer expectations and the dynamics of the labour market, including skills shortages.*
- *The impact of the carbon price on operating costs is estimated to be $3.3 million in 2012-13. Over the next four years, the carbon price is expected to further increase by $1.3 million representing 15.7 per cent of the total expected increase in costs over this period.*
- *Less than half of the total operating spend is considered controllable by Hunter Water, with limited scope to change this even in the medium term.*
- *Efficiencies of $19.6 million have been factored in to the projected cost base and compared to previous shareholder approved SCI projections, a total of $32.3 million of costs have been removed. These efficiencies have been incorporated in consideration of customer affordability in the current economic climate.*

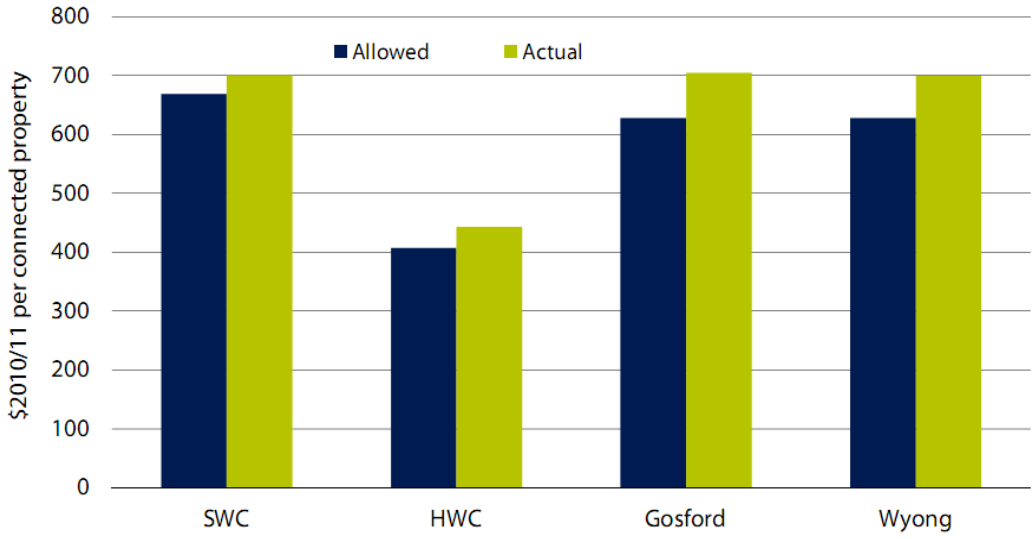
5.1 Introduction

Hunter Water is a low operating cost water utility. The 2012 National Performance Report published by the National Water Commission shows that for 2010-11, Hunter Water had the fourth lowest operating cost per property of the 11 Australian water utilities with more than 100,000 connections, with Hunter Water's costs being 12 per cent lower than the median operating cost of all utilities.[28] Hunter Water's operating costs per property were also lower than those of all 11 of the mid-range Australian utilities serving between 50,000 and 100,000 connections.

[28] National Water Commission and Water Services Association, 2012, page 52

Hunter Water's operating cost per property is also well below that of the other NSW utilities for which IPART sets prices. Not only are the actual operating costs well below that of the other utilities, so is IPART's "allowed" operating expenditure. Allowed expenditure is that on which the current prices are set. Figure 5.1 shows the actual operating costs per property for Hunter Water as well as the IPART-allowed expenditure. For 2010-11, Hunter Water's actual operating cost was 35 per cent lower than the next highest actual and allowed operating cost utilities.

Figure 5.1 Metro utilities average operating cost per property ($2010-11)



Source: Reproduced from IPART, 2012(c), Figure7.2, page 52

These comparisons with other interstate and IPART-regulated utilities indicate that Hunter Water is successfully containing its operating costs, while performing similar functions, delivering similar standards and facing the same upward input-cost pressures. Relative to Sydney Water and the larger interstate utilities, Hunter Water faces material diseconomies of size due to its relatively small number of customers, extensive service area and topography.[29]

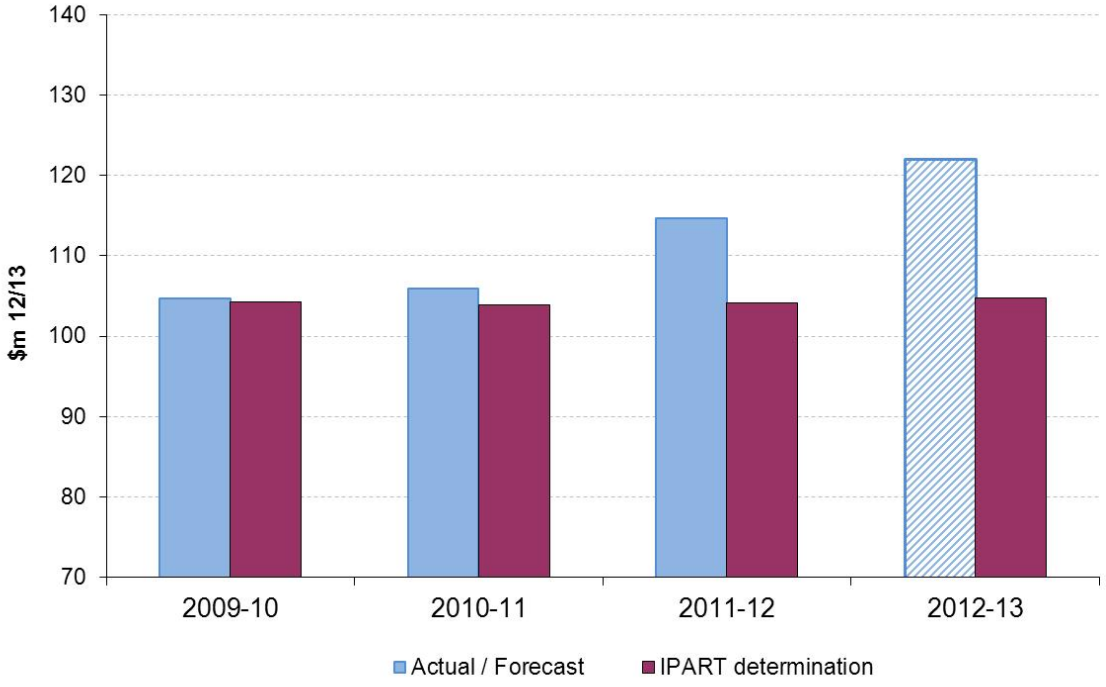
This context clearly illustrates that Hunter Water is delivering services at very low relative operating costs and has less capacity than other utilities to absorb unforeseen increases in costs, less potential to achieve further operating cost efficiencies and generally faces greater challenges than other comparable agencies in containing operating costs while maintaining service levels.

Figure 5.2 shows that actual operating expenditure for the current determination period (2009-10 to 2012-13) is higher than that determined by IPART in 2009. The shaded bar for 2012-13 represents the forecast for that period. The increased level of expenditure is mainly driven by changes outside of the control of Hunter Water including the costs associated with the development of a Lower Hunter Water Plan (LHWP), IPART-approved electricity network price increases, higher IPART-determined Office of Water charges and regulatory requirements regarding the disposal of spoil and water treatment residuals (refer Box 5.2).

[29] Hunter Water's extensive area and the geography mean Hunter Water has longer water and wastewater main lengths requiring maintenance. The relatively flat topography of Hunter Water's service area means that pumping is required for all water supplied and for much of the wastewater delivered to treatment plants. The water and wastewater networks together have over 500 pumping stations.

With the exception of the expenditure on the LHWP, these expenditures are embedded in Hunter Water's cost base in future years.

Figure 5.2 Regulated operating expenditure 2009-10 to 2012-13 ($m 2012-13)



Source: HWC

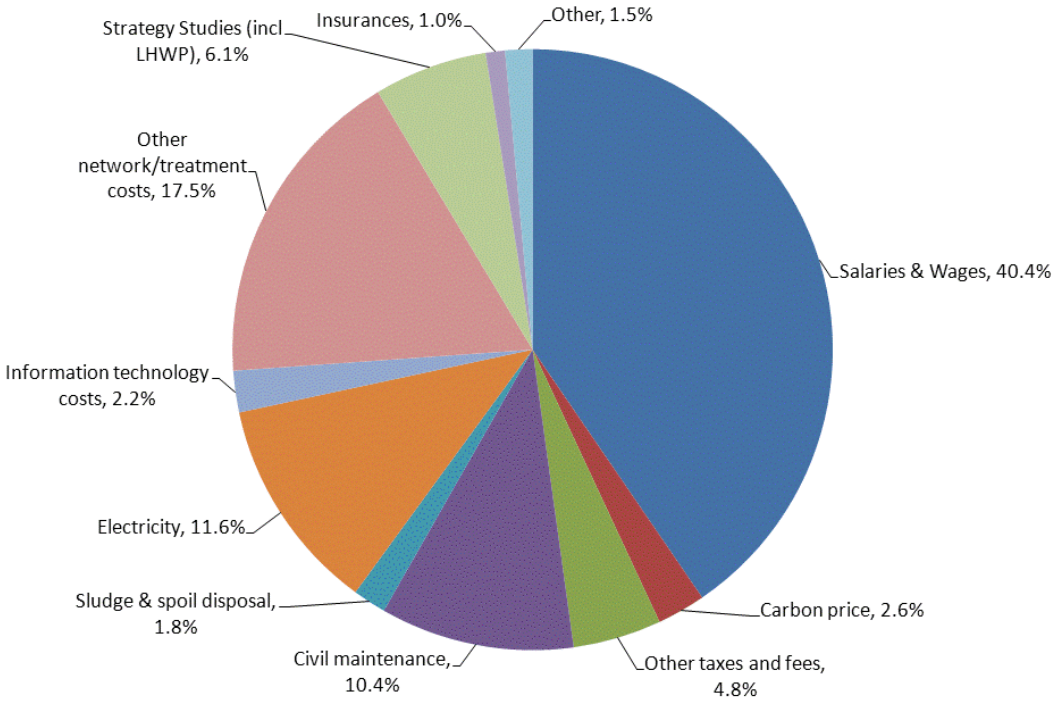
5.2 Major components of Hunter Water's operating expenditure

Hunter Water's operating expenditure can be broken into a number of major components allowing an understanding of the key areas of the business and how these can be impacted by external factors.

To understand the "controllability" of Hunter Water's operating cost base, the degree to which cost categories are subject to external markets and have already been targeted for cost minimisation must be considered. Figure 5.3 provides an overview of the major cost categories within the $123 million total operating expenditure budget for 2012-13.

A large proportion of Hunter Water's costs are not controllable, that is Hunter Water has minimal or no ability to reduce them. These costs include items such as electricity, chemicals, regulatory licence fees, taxes (carbon price, land tax, council rates etc), information technology licences (such as software licences) and insurances.

Figure 5.3 Major operating cost components ($m 2012-13)



Source: HWC

While Hunter Water has some control over items such as labour costs, the potential to materially reduce such costs without impacting unfavourably on service delivery is limited.

Procurement processes are continually reviewed in order to provide the lowest optimal costs for any particular product or service. For example, around $50 million of Hunter Water's major purchase contracts[30] issued in the last 12 months were reviewed to ensure that purchase processes minimise the costs for a significant proportion of contracts covering the coming price period.[31] Where Hunter Water has already pursued and implemented cost minimisation opportunities such as locking in contract arrangements, then that cost category is considered "uncontrollable". That is, there is little or no scope to extract further efficiency gains during the coming price period.

In general terms, labour-related costs comprise 40 per cent of the 2012-13 budget and are controllable to a degree in the medium to long term. Where there are other items of expenditure that are partly controllable (such as consultancies and contracts), these costs are managed actively to ensure any potential savings or price advantages can be achieved. All other expenditure is considered to be effectively uncontrollable.

The uncontrollable nature of non-labour costs reflects the fact that these costs are largely outsourced. In addition to the market-dependent nature of outsourced costs, large components have been locked in by contractual arrangements for the coming price period.

[30] These contracts include materials purchases and service contracts, such as asset maintenance contracts.
[31] For example by ensuring contracts are secured through competitive tender where possible.

5.3 Performance against the current price determination

Overview

Over the four-year price period from 2009-10 to 2012-13, Hunter Water's regulated operating expenditure was $29.9 million above the IPART target as shown in Table 5.1. This represents a 7.5 per cent variance over the period and is due to a number of factors outlined below.

Table 5.1 Operating expenditure 2009-10 to 2012-13 ($m nominal)

	2009-10	2010-11	2011-12	2012-13 est.	Total
IPART determination Real ($m 2008-09)	93.0	92.7	92.8	93.4	371.9
CPI (a)	3.05%	3.6%	2.5%	2.5%	
IPART determination ($m nominal)	95.8	98.9	101.5	104.8	401.0
Actual/Forecasts	96.1	100.8	112.0	122.0	430.9
Variance ($m nominal)	**0.3**	**1.9**	**10.5**	**17.2**	**29.9**
Variance (%)	**0.3%**	**1.9%**	**10.3%**	**16.4%**	**7.5%**

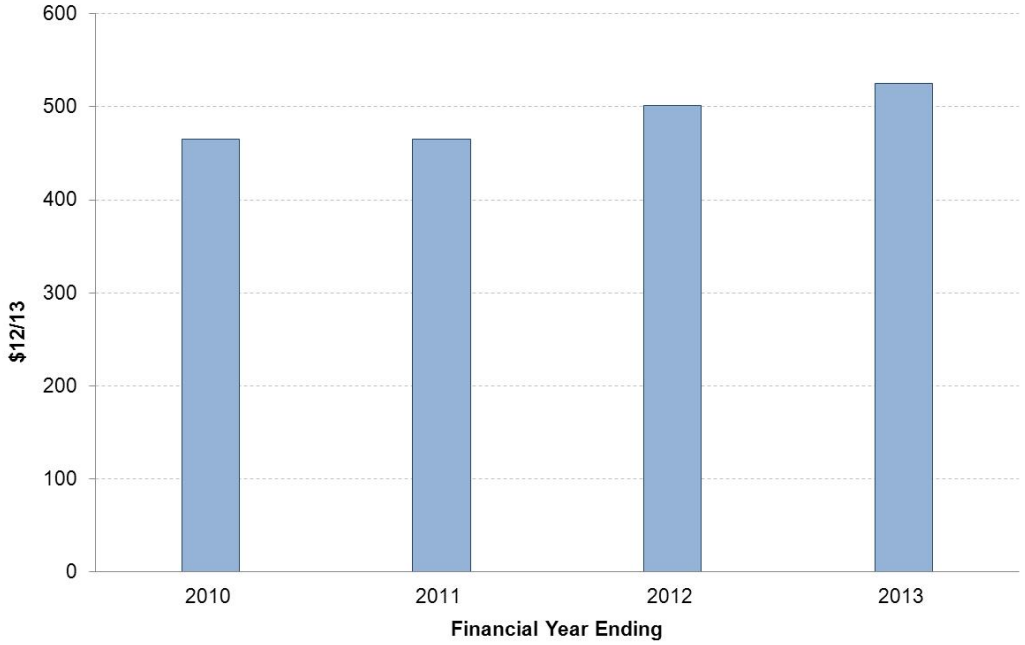
Source: IPART, 2009 (a),Table 6.1 and HWC's AIR Table 5.1 (totals may differ due to rounding).

a) 2009-10 CPI of 3.05% used in periodic pricing reports provided to IPART in 2010 and 2011. Calculated using ABS Weighted average CPI for eight capital cities June 09 (167.0) to June 10 (172.1) to 2 decimals. This differs from AIR preloaded CPI rounded to 1 decimal at 3.1%.

The $29.9 million variation in regulated operating expenditure is largely a result of the $26.1 million for new items unforeseen at the time of the previous price submission as well as a lower level of costs being excluded from regulated operating expenditure and attributed to recycled water (see Box 5.1).

Operating costs per property shown in Figure 5.4 have increased in line with the additional shareholder-approved expenditures detailed in Table 5.2. These increases include some 'one-off' expenditures (for example $3.1 million in 2011-12 and $5.0 million in 2012-13 for the Lower Hunter Water Plan), which will not be ongoing. In 2012-13, operating costs per property is estimated to be $525. This is still well below the other agencies shown in Figure 5.1 and about 25 per cent below that applying to Sydney Water and derived from its IPART-determined allowed opex in 2012-13.

Figure 5.4 Regulated operating expenditure per property ($2012-13)



Source: 2012 IPART AIR total 'regulated operating expenditure' including corporate (excluding recycled water) divided by water properties.

During the current price period, additional items totalling $26.1 million were either approved by shareholders in recent Statements of Corporate Intent (SCI) lodged with NSW Treasury or relate to new legislative or additional regulatory requirements. These items include:

- IPART determined price increases - Input costs have increased by approximately $5.5 million since 2009 as a result of IPART-approved increased electricity network prices with an additional $1.0 million resulting from IPART changing the basis of Office of Water bulk water charges from variable charges based on actual water extractions to a fixed charge based on total licensed entitlement.
- Lower Hunter Water Plan - The decision not to proceed with Tillegra Dam led to the need to bring forward development of a Lower Hunter Water Plan (LHWP) by the Metropolitan Water Directorate. Around $8.1 million is forecast to be spent on the LHWP during the current price period. A further $0.4 million in expenditure has been forecast for property maintenance and a land-use strategy to ensure the best outcome for the community upon sale of land holdings in the Tillegra area.
- Regulatory requirements - An additional $2 million of costs for spoil[32] disposal have been incurred following legal advice that previous methods (disposing on land owned by Hunter Water) no longer meet regulatory requirements (Box 5.2).
- Shareholder request/benefit - The State Government initiated a review of the efficiency of State-owned corporations ($0.5 million) which resulted in the development of customer relationship management and quality assurance strategies. A credit and

[32] Spoil is the excavated contaminated waste product (including soil, asphalt, and broken pipe etc) resulting from the repair or replacement of an underground pipe.

hardship program was also developed aimed at addressing some of the affordability issues faced by customers - this has contributed almost $2.0 million to operating costs.[33]

Box 5.1 Recycled water methodology

Development of a recycled water cost methodology has resulted in certain expenditure being reclassified from recycled water to wastewater. There has also been a deferral of some planned recycled water expenditures. Consequently the value of expenditure forecast for recycled water over the current price period is $2.2 million compared to $10.1 million estimated in Hunter Water's 2009 submission. As the complexity of the inter-relationship between wastewater and recycled water became apparent after the 2009 submission was compiled, it was found that some costs were incorrectly classified as recycled water at the last submission. For example, expenditure essentially driven by EPA wastewater licence requirements is more appropriately classified as wastewater costs. Subsequently, Hunter Water presented this classification methodology to IPART and has developed and implemented processes to 'ring-fence' clearly-defined recycled water expenditure (including allocated overheads).[34] See further discussion of this methodology in section 5.6.

Most of the reduction in recycled water operating expenditure represents a reclassification of operating expenditures. These costs were excluded previously from regulated costs because they were classified as (unregulated) recycled water costs, but now largely remain within the regulated amounts in Table 5.1. As an example, around $4.5 million of overheads were removed from regulated costs and allocated to recycled water in the last submission. Due to the reduction in direct recycled water costs (deferral and reclassification), only $0.5 million in overheads are now attributed to recycled water (leaving an additional $4 million in regulated costs).

Although these reclassifications have contributed to the unfavourable variance being reported against IPART's allowed operating expenditure for 2009-10 to 2012-13, in reality, these simply represent a change in classification from recycled water expenditure to wastewater expenditure.

Management of Hunter Water's debt portfolio was transferred to NSW TCorp at a cost of $0.3 million over the current price period.[35] Debt management by TCorp reduces Hunter Water's treasury risk and is assisting in managing the increased interest costs associated with the growing debt portfolio required to fund the capital program.

An additional $0.4 million has been incurred to increase the focus on water efficiency by Hunter Water's customers through a range of initiatives, particularly shower head exchanges. This expenditure has largely been offset by corresponding amounts of miscellaneous unregulated income.

- Changed methodology - In the 2009 submission, some biosolids disposal and transportation costs were incorrectly classified as a cost of external (unregulated) sales on the basis that it was proposed to investigate the potential sale of these by-products as an unregulated revenue stream. In reality, no market was identified or revenue

[33] Additional emphasis on credit and hardship was also driven by amendments to Hunter Water's operating licence in March 2011. These amendments replaced the existing requirement for a policy on debt and disconnection with a more explicit requirement for a hardship policy for customers experiencing financial difficulty.
[34] Hunter Water Corporation, 2011 (a)
[35] TCorp is NSW Treasury Corporation. It is the central financing authority for the New South Wales public sector.

generated. In any case, these expenditures should always have remained reported within the core (regulated) costs of the wastewater business, with any actual revenue received being adjusted from the revenue requirements according to IPART's methodology. The classification of these costs has been corrected, leading to a reported operating cost increase of $1.5 million. There is no underlying increase in the level of expenditure.

- Carbon price - The introduction of carbon price is estimated to add around $3.3 million to input prices (largely electricity) in the final year of the current price period. Details of the impacts of the carbon price on HWC's costs are provided in Appendix B.
- Water treatment residuals disposal[36] – An estimated $1.1 million of additional expenditure is forecast every second year to dispose of residuals from water treatment plants (following legal advice this can no longer be disposed of on Hunter Water land) (see Box 5.2).

The other key item is the lower level of expenditure removed from regulated operating costs and attributed to recycled water. As indicated, around $4 million less overheads, is being attributed to recycled water compared to assumptions in the 2009 submission. This is a result of a change in classification of some expenditure (refer to Box 5.1) as well as deferral of some recycled water projects.

Table 5.2 details the actual costs incurred for "shareholder approved" and additional regulatory or legislative costs listed above, as well as the impact of the lower value of corporate expenditure being excluded from regulated costs and attributed to recycled water.

Table 5.2 Additional expenditure items ($m nominal)

Item	2009-10	2010-11	2011-12	2012-13 est.	Total
IPART-determined price increases	-	1.1	2.5	2.9	6.5
LHWP & land-use strategy	-	-	3.2	5.3	8.5
Regulatory requirements	-	-	1.0	1.0	2.0
Shareholder request/benefit	-	0.6	1.3	1.3	3.2
Changed methodology	-	0.1	0.2	1.2	1.5
Shareholder approved	-	1.8	8.2	11.7	21.7
Carbon price	-	-	-	3.3	3.3
Water treatment residuals disposal	-	-	-	1.1	1.1
Total shareholder approved and regulated costs	**-**	**1.8**	**8.2**	**16.1**	**26.1**
Reduction in value of Corporate attributed to recycled water	0.4	1.1	1.2	1.4	4.1
Other minor increases/(savings)	(0.1)	(1.0)	1.1	(0.3)	(0.3)
Total	**0.3**	**1.9**	**10.5**	**17.2**	**29.9**

Source: HWC

[36] One of the by-products of the water treatment process is sludge – effectively made up of the removed suspended sediments from the raw water and residue of a range of chemicals used to treat the water. Legal advice was received that the current method of disposal does not meet regulatory requirements. See Box 5.2.

The unforeseen items detailed in Table 5.2 explain the $29.9 million variance compared to IPART's 2009 determination shown in Table 5.1. If the above shareholder-approved items and reclassification of recycled water are excluded, IPART's allowed operating expenditure has been met.

Box 5.2 Spoil and Water Treatment Residuals Disposal

The *Contaminated Land Management Act 1997* sets out the role of the Environment Protection Authority (EPA) and the rights and responsibilities of parties it might direct to manage significantly contaminated land. A number of amendments to the *Contaminated Land Management Act 1997* became effective from 1 July 2009.

The changes to the legislation resulted in Hunter Water reviewing sites that may constitute contaminated sites. Consequently, two sites (CTGM pipeline and Farley WWTW) have been referred to the EPA and detailed investigations have been undertaken.

Spoil from water and sewer main repairs which includes bitumen, asphalt and contaminated soil that was previously kept at these sites is now being taken to landfill sites at a cost of around $1 million per year.

Water treatment residuals (sludge), which are a by-product of the water treatment process were previously allowed to overflow from lagoons at Grahamstown and Dungog and settle onsite. However, following legal guidance on the provisions of the *Contaminated Land Management Act 1997* this is also being sent to registered disposal sites.

Other operational expenditure variances and efficiencies

IPART's 2009 price determination required Hunter Water to undertake a thorough review of operating expenditure to achieve $12.1 million efficiencies/savings ($2008-09). These reductions were over and above the $6.1 million in efficiencies Hunter Water had already incorporated within its submission. The additional reductions were factored in to operating budgets for the 2009-10 to 2012-13 years. Together, these reductions expressed in $2012-13 terms amount to $20.5 million as shown in Table 5.3 and in the following discussion in this section.

The items detailed in Table 5.2 fully explain the $29.9 million variance to IPART's 2009 determination reported in Table 5.1. It is significant that Hunter Water has been successful in delivering the $20.5 million in efficiencies that were incorporated within its last determination so that this variance could be limited to the $29.9 million due to the new and unforeseen items.

There has been a range of operational cost increases encountered by Hunter Water that are over and above specific expenditures approved by shareholders. A major driver has been a net increase in electricity usage, primarily as a result of upgrades at wastewater treatment works. This net increase has occurred despite a major focus on electricity optimisation as outlined in Box 5.3.

Box 5.3 Electricity Optimisation

Hunter Water has a small team (two full-time employees) dedicated to energy efficiency initiatives to reduce energy consumption and energy costs by optimising operations to take advantage of lower energy tariffs (shoulder and off-peak rates).

The team has been able to deliver significant energy savings through implementation of a number of initiatives. It is estimated that over 6.8GWh of electricity has been saved during the current price period. Around $4.6 million ($2012-13) in total is estimated to have been saved including reductions achieved through pursuit of corrections to billing errors.

Some of the implemented initiatives include: changing pumping from certain water pump stations to off-peak times, installation of variable speed drive pumps at certain pump stations and modification to the aeration process at Belmont wastewater treatment works.

Additional one-off savings/cost reductions have also occurred including creation of Energy Savings Certificates under the NSW Government Energy Savings Scheme and bill corrections/adjustments resulting from detailed reviews of the charges being levied by electricity retailers.

The unfavourable impact of these additional cost pressures has been offset largely by pursuing further initiatives, such as electricity optimisation, that delivered savings over and above the requirements of the original determination.

The reductions achieved over the current price period are summarised in Table 5.3.

Table 5.3 Operating expenditure savings ($m 2012-13)

	2009-10	2010-11	2011-12	2012-13	Total
HWC (Included in 2009 submission)	0.9	1.6	2.0	2.4	6.9
IPART (2009 Determination)	3.4	3.4	2.9	3.9	13.6
Total efficiencies required by IPART	4.3	5.0	4.9	6.3	20.5
Additional achieved by HWC over price period	0.1	1.2	0.8	1.7	3.8
Total efficiency savings	**4.4**	**6.2**	**5.7**	**8.0**	**24.3**

Source: HWC

Over the current price period, Hunter Water will have delivered at least $24.3 million ($2012-13) in efficiencies. Hunter Water's focus on efficiency and business improvement has delivered $3.8 million above the $20.5 million ($2012-13) target set by IPART in the last price determination (refer Table 5.3).

Some examples of the $20.5 million ($2012-13) savings and efficiencies required by IPART's determination and subsequently delivered by Hunter Water include:

- Reduced reactive maintenance workforce levels - $3.6 million. Fieldwork in the civil and electrical maintenance areas was reprioritised and reallocated over a smaller number of employees.

- Lower enterprise bargaining outcome - 0.5 per cent resulting in a $0.7 million saving. The 2009 submission forecast real wage growth of 1.5 per cent but the enterprise bargaining agreement outcome for the first year of the price period was one per cent.
- Corporate labour reductions - $2.0 million. A senior management position was removed from the organisational structure and reforms to the redundancy and redeployment policy resulted in a reduction in staffing levels and reassignment of some staff.
- Reduction in demand management costs - $2.5 million. Demand management costs were reduced by deferring or reducing expenditure on retrofit programs for homeowners and subsidies for water-efficient products used in homes and businesses.
- Reduction across corporate discretionary spend areas - $0.6 million. Expenditure on certain corporate allowances such as sponsorships, subscriptions and some non-mandatory training has been reduced.
- Lower trunk main repair costs - $0.6 million. Replacement of some large sections of high-maintenance trunk mains (including the Chichester Trunk Gravity Main between Tarro and Shortland) reduced maintenance costs.[37]
- Reduction in data and voice communication costs - $1.1 million. The conversion to internet protocol-based solutions and more focused vendor management has reduced telecommunication costs.
- Savings from optimisation of electricity use and tariffs - $1.6 million. Ongoing reductions in electricity costs of almost $0.4 million per annum (see Box 5.3).
- Reduction in legal and consultancy spend - $1.6 million. Legal and consultancy costs in general have reduced compared to those originally estimated through deferrals, allocation of work to internal resources and review of the scope of work required.

While items above represent $14.3 million of the more significant reductions, around $6 million in further savings were necessarily achieved to ensure that any variance to IPART's 2009 Determination could be limited to the $29.9 million as a result of the new items identified in Table 5.2.

These reductions reflect a range of opportunities identified and initiatives taken throughout the whole business as part of Hunter Water's annual budgeting processes to ensure that the proposed expenditures by each division are managed within the approved IPART allowances. The reductions were achieved, for example, through actively managing resourcing and operational requirements generally and making risk-based judgement calls regarding essential business operations.

In addition to the efficiencies required to achieve the target of $20.5 million and listed above, Hunter Water has achieved further reductions of $3.8 million ($2012-13) including:

- Approximately $3 million of additional electricity savings. These electricity reductions are in excess of the $1.6 million already committed in Hunter Water's last price submission and were achieved through optimisation of usage, as well as the ongoing review of accuracy of electricity supplier's accounts (Box 5.3).
- Approximately $0.8 million reduction in maintenance expenditure from reforms implemented in the area of electrical and mechanical maintenance planning (see Box 5.4).

[37] The section of the Chichester trunk main replaced was a lead-jointed above ground pipe installed in the 1920s across a wetland area. This construction and location meant the pipe moved on its concrete cradles requiring constant attention to the pipe joints. It has now been replaced with lower maintenance underground pipe.

Box 5.4 Electrical and mechanical maintenance

As part of the ongoing focus on business improvement throughout Hunter Water, electrical and mechanical maintenance activities were reviewed with a view to improving business outcomes and reducing costs. A number of initiatives have been implemented and further initiatives are being developed. By June 2013, it is forecast that savings in the order of $0.8 million will be achieved.

Initiatives that have been implemented include:

- Appointment of a scheduled maintenance planner, resulting in more efficient allocation of work.
- Review and simplification of standard scheduled maintenance jobs for wastewater pumping stations and the review and consolidation of planned maintenance jobs at wastewater treatment works. These projects have removed redundant planned maintenance jobs and reduced the likelihood of duplication of effort and unnecessary costs.
- Root-cause analysis of repeat failures, simplifying decisions about continued maintenance or replacement of assets at particular sites.
- Increased management of overtime on maintenance activities.

Initiatives currently planned or in progress that are expected to achieve additional efficiencies and savings include:

- Proactive monitoring of planned maintenance jobs, which is expected to reduce the number of high-cost reactive maintenance responses to breakdowns.
- Review of opportunities for standardisation/simplification of routine maintenance at water pump stations.

The above examples are a few of many instances where efficiencies and savings have been achieved through reprioritisation and reallocation of resources and other cost reduction strategies. Unforeseen drivers of costs or pressure on input prices are encountered regularly and require addressing on an ongoing basis in order to offset or limit their impact on Hunter Water's costs. This is particularly important given that revenue remains largely fixed (subject to sales projections being realised) during a price period, regardless of the cost pressures encountered.

Other initiatives implemented that have enabled Hunter Water to minimise increases in operating expenditure include:

- optimising the management of wastewater treatment processes, including reducing the cost of component replacements at Morpeth wastewater treatment works (WWTW)
- reviewing the risks and modifying the odour control processes at Toronto WWTW in response to significant increases to odour control costs, and
- reducing payments for local government rates through review of the rating categorisation of certain Hunter Water properties.

Operating costs 2009-10

The 2009-10 operating expenditure of $96.1 million was in line with the IPART target (see Table 5.4). There were some offsetting variances that, in part, contribute to the under-

expenditure for water and over-expenditure for corporate. However, most of the variance between components is due to the allocation of the efficiency target to the corporate category by the consultant, Atkins/Cardno, in its advice to IPART for the 2009 price determination. The majority of efficiencies identified by Hunter Water were in operational areas (such as water) not corporate and this difference in allocation affects each year of the current determination.

Table 5.4 Variation on target operating expenditure 2009-10 ($m nominal)

Component	IPART Decision	Actual Expenditure	Variation	% of target
Water	32.9	28.4	(4.5)	86%
Wastewater	36.7	38.3	1.6	104%
Drainage	1.3	1.3	0.0	100%
Corporate	24.9	28.1	3.2	113%
Total	**95.8**	**96.1**	**0.3**	**100%**

Source: IPART, 2009 (a), Table 6.1 (converted to $nominal in Table 1) and Hunter Water's AIR Table 5.2.

Operating costs 2010-11

The operating expenditure of $100.8 million reported for 2010-11 was $1.9 million over the IPART target (see Table 5.5). This variance was driven mainly by a range of new items approved by the shareholders (see Table 5.2). Over $1 million of the additional expenditure is a result of recycled water expenditure being reclassified as regulated wastewater expenditure (see Box 5.1).

The impact of the consultant's allocation of efficiencies to corporate only in the 2009 determination is evident in the variances between the business components.

Table 5.5 Variation on target operating expenditure 2010-11 ($m nominal)

Component	IPART Decision	Actual Expenditure	Variation	% of target
Water	33.5	29.0	(4.5)	87%
Wastewater	38.1	40.0	1.9	105%
Drainage	1.5	1.5	0.0	100%
Corporate	25.8	30.3	4.5	117%
Total	**98.9**	**100.8**	**1.9**	**102%**

Source: IPART, 2009 (a), Table 6.1 (converted to $nominal in Table 1) and Hunter Water's AIR Table 5.2.

Operating costs 2011-12

Operating expenditure of $112 million in 2011-12 is $10.5 million above the IPART target (see Table 5.6). Around $8.2 million of expenditure in this year represents expenditure approved by the shareholders (refer Table 5.2).

The reclassification of recycled water expenditure to regulated wastewater costs also contributed more than $1 million to the unfavourable variance reported for 2011-12.

Table 5.6 Variation to target operating expenditure 2011-12 ($m nominal)

Component	IPART Decision	Actual Expenditure	Variation	% of target
Water	34.3	34.3	-	100%
Wastewater	39.8	42.6	2.8	107%
Drainage	1.6	0.6	(1.0)	38%
Corporate	25.8	34.5	8.7	134%
Total	**101.5**	**112.0**	**10.5**	**110%**

Source: IPART 2009 (a), Table 6.1 (converted to $nominal in Table 1 of this document) and Hunter Water's AIR Table 5.2.

Operating costs 2012-13

Budgeted regulated operating expenditure of $122.0 million for 2012-13 is $17.2 million above the IPART target (see Table 5.7).

Around $11.7 million of the expenditure in this year represents expenditure approved by the shareholders, consistent with those impacts identified for earlier years (refer Table 5.2). Water treatment residuals disposal expenditure of $1.1 million will also be required in 2012-13 (Table 5.2). The reclassification of recycled water to wastewater costs contributes around $1.5 million to the unfavourable variance for 2012-13.

It has been estimated that the carbon price will add $3.3 million (2.7 per cent) to Hunter Water's annual operating expenditure in 2012-13. This represents the estimated increase in the cost of carbon-intensive goods and services in Hunter Water's supply chain as suppliers pass on their carbon pricing costs. Around 60 per cent of the increase anticipated in 2012-13 represents the estimate of the impact of carbon pricing on electricity prices paid by Hunter Water. Appendix B provides details about the methods used to estimate carbon pricing impacts.

The impacts of these increases are forecast to be partially offset by reductions and savings in other expenditure areas during 2012-13, including incorporating the results of efficiency initiatives in electrical and mechanical maintenance and electricity (Box 5.4).

Table 5.7 Variation on target operating expenditure 2012-13 ($m nominal)

Component	IPART Decision	Projected Expenditure	Variation	% of target
Water	35.7	41.2	5.5	115%
Wastewater	41.7	46.5	4.8	112%
Drainage	1.5	0.8	(0.7)	53%
Corporate	25.9	33.5	7.6	129%
Total	**104.8**	**122.0**	**17.2**	**116%**

Source: IPART 2009 (a), Table 6.1 (converted to $nominal in Table 1) and Hunter Waters AIR Table 5.2.

5.4 Projected operating expenditure 2013-14 to 2016-17

Hunter Water's projected regulated operating costs are estimated to be $476.3 million ($2012-13) for the four-year price period commencing 1 July 2013. A year-by-year projection is shown in Table 5.8.

Table 5.8 Projected real operating expenditure 2013-14 to 2017-18 ($m 2012-13)

	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	Total [a]
Water	41.2	36.4	37.9	37.1	38.8	39.3	150.2
Wastewater	46.5	47.2	48.3	48.8	48.8	49.6	193.1
Drainage	0.8	0.8	0.8	0.9	0.8	0.9	3.3
Corporate	33.5	31.3	32.0	32.7	33.7	34.3	129.7
Total regulated	**122.0**	**115.7**	**119.0**	**119.5**	**122.1**	**124.1**	**476.3**
Total recycled water	0.9	1.7	3.1	3.9	4.2	4.3	12.9
Total Opex	122.9	117.4	122.1	123.4	126.3	128.4	489.2

Source: HWC
a) Total excludes 2012-13 and 2017-18; it represents operating expenditure for the price determination period only.

The $476.3 million projected regulated expenditure represents a real cumulative reduction of $11.7 million for the four years of the price period commencing 1 July 2013, when compared with the base 2012-13 operating cost of $122.0 million extrapolated over the next four years. This comparison is shown in Table 5.9.

Table 5.9 2012-13 budget and projected operating expenditure ($m 2012-13)

	2012-13 Base Year Opex	Base Year Opex extrapolated (4 yrs)	Price Period Projections (Next 4 yrs)	Variance
Total regulated opex	122.0	488.0	476.3	(11.7)
Less 'one-off' LHWP	5.0	20.0	0	20.0
2012-13 Base year Opex (normalised)	**117.0**	**468.0**	**476.3**	**8.3**

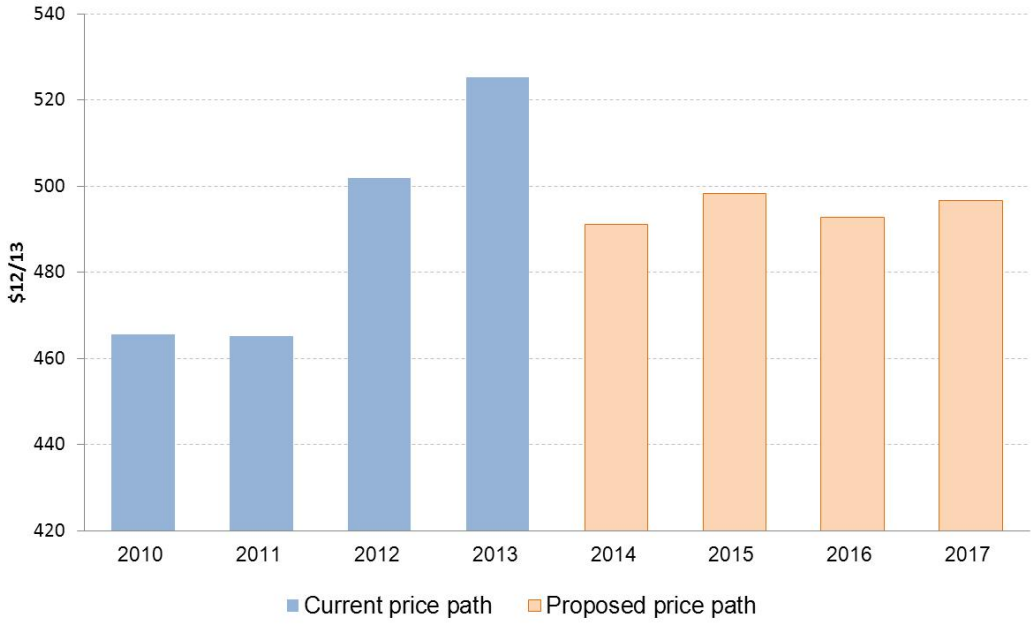
Source: Hunter Water

Embedded within the base 2012-13 operating cost budget is the one-off $5 million budgeted for the Lower Hunter Water Plan (LHWP). If this one-off expenditure item is excluded from the 2012-13 base operating cost, the projections are $8.3 million ($2012-13) or 1.8 per cent higher than the 2012-13 base over the next determination period. This represents an average increase of less than 0.5 per cent per annum, which is less than the annual rate of growth in connected properties of around 1.4 per cent.

Consequently real operating costs per property appear to decline over the coming price period from $525 in the 2012-13 base year to $497 at the end of the price period, as shown in Figure 5.5. In 2015-16, Hunter Water's operating cost per property will be around 30 per cent lower than that derived for Sydney Water from the allowed operating costs in IPART's

June 2012 determination report.[38] This underscores that further operating cost reductions are unlikely to provide the scope to achieve an overall CPI, or CPI minus, pricing outcome similar to that recently determined for Sydney Water's prices.

Figure 5.5 Regulated operating expenditure per property ($2012-13)



Source: 2012 AIR total 'regulated operating expenditure' including corporate (excluding recycled water) divided by water properties

The items that account for the most significant real increases over the coming price period (relative to 2012-13) are shown in Figure 5.6.

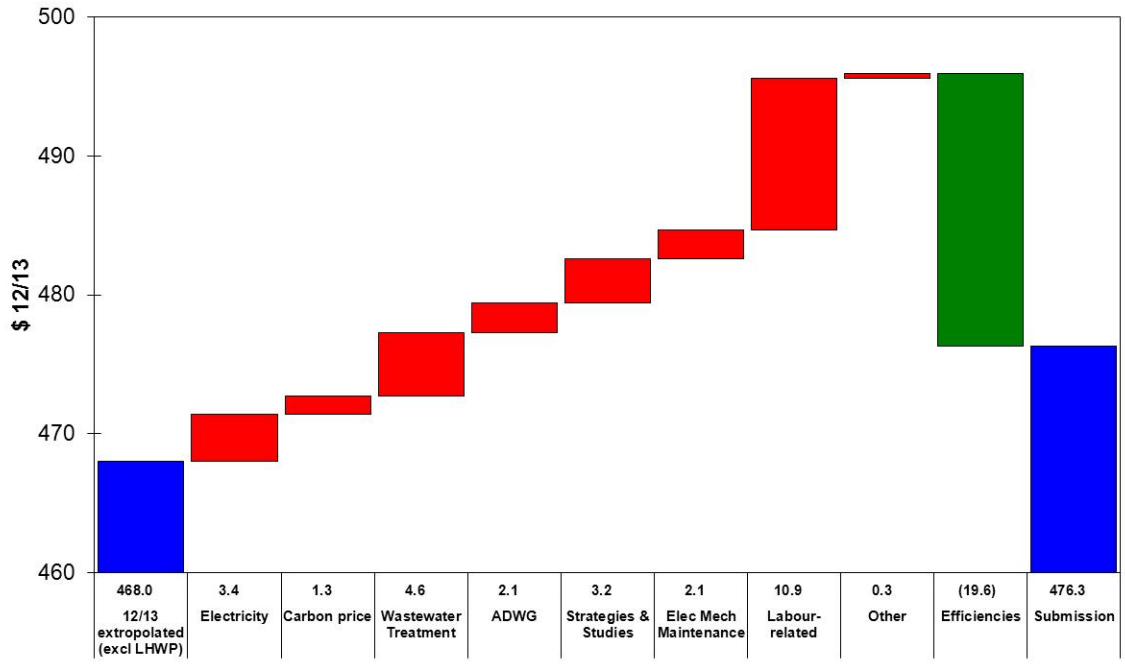
Some of the main drivers of real increases over the next price period include:

- Electricity - $3.4 million (excluding carbon price). Reflecting anticipated real price increases as well as the impacts of connection growth and wastewater treatment plant upgrades on electricity consumption.[39]
- Carbon price - $1.3 million. Includes $0.5 million for the impact of carbon pricing on electricity prices[40] and $0.8 million of impacts of other indirect carbon pricing costs (suppliers' pass through), calculated using the eco-footprint model developed by Sydney University.[41]

[38] IPART, 2012 (e), Tables 5.8 and 5.9. 2015-16 is quoted because it is the last year of the current price period for Sydney Water.
[39] Modern wastewater treatment processes are energy intensive so electricity consumption increases as treatment plants are upgraded. Energy is typically used within modern treatment plants for transfer pumping, aeration, driving skimmers and scrapers, biosolids dewatering and UV disinfection.
[40] Assessed by specialist consultant, Energy Management Services.
[41] This is the same model and methodology used by Sydney Water and described in Appendix 4 of Sydney Water's September 2011 submission. See Sydney Water Corporation, 2011.

- Wastewater treatment - (excluding electricity) $4.6 million. Reflecting system growth and higher quality treatment attributable to recent plant upgrades required to meet EPA licence requirements and pollution reduction programs.
- Australian Drinking Water Guidelines (ADWG) - $2.1 million. A change in relation to turbidity guidelines has resulted in an increase in operating costs to achieve compliance with Hunter Water's operating licence requirement to maintain systems consistent with the ADWG.
- Strategies and studies - $3.2 million. Expenditure on catchment management in line with ADWG requirements for "multi-barrier" protection from catchment to customers' taps. Also includes an increased focus on asset management and servicing studies to ensure the efficient utilisation of upgraded assets and to inform an efficient capital prioritisation process, particularly within the very tightly constrained capital expenditure environment.

Figure 5.6 Projected operating cost movements 2013-14 to 2016-17 ($m 2012-13)



Source: Hunter Water

- Electrical and mechanical maintenance - $2.1 million. The greater complexity and new technology in the upgraded treatment plants and pump stations is expected to impact on electrical and mechanical maintenance expenditure over the next price period. This increased technology is the result of Hunter Water upgrading 11 of its 19 wastewater treatment works during the current price period.
- Labour related costs - $10.9 million. Incorporates $4.1 million for real wage growth of one per cent (anticipated to result from EBA negotiations in progress at time of finalising projections); $1.2 million as a result of Australian Government legislated increases in the superannuation guarantee levy required to be made by employers from July 2013; and $5.6 million of other employee costs such as performance pay and performance-based regrades. Initiatives such as these are required to be in place to ensure appropriately

skilled employees can be attracted and retained in a competitive local salary market, which is already characterised by skills shortages.[42] Initiatives to contain labour costs are discussed further in the following section.

- Other - $0.3 million. A range of other changes are anticipated including $1 million for land tax and the identification of property titles by the Land and Property Management Authority (LPMA). These identifications involve land that is vested in (i.e. owned by) Hunter Water but historically has not been transacted upon. The formal identification by LPMA results in the assignment of a Lot and Deposited Plan, which will result in them being assessed and valued for land tax and rating purposes. Meter reading and billing agency fees also reflect known price increases and anticipated growth in connections throughout the coming price period, which will result in additional meters to be read, sending bills, and fees and charges related to various customer payment options. Chapter 11 of this submission outlines new payment options that are being introduced as part of improved credit and hardship programs.

Hunter Water has taken every opportunity to limit the impact of unavoidable increases by restricting expenditure to levels considered essential to maintain appropriate levels of service and meet regulatory requirements. In addition, Hunter Water has included considerable levels of 'target' reductions that will be challenging to achieve, but will need to be delivered in order to operate within the levels of expenditure committed to within this submission.

The items that represent the most significant real decreases over the coming price period (relative to the 2012-13 base year) are detailed in Table 5.10 and associated commentary. In total, the main initiatives are expected to deliver savings of $19.6 million over the four years of the next price period, compared to the 2012-13 budget base.

Efficiencies proposed

In its 2012 discussion of efficient costs and investment returns in the NSW water sector, the NSW Commission of Audit commented that, overall, it "*is of the opinion that Hunter Water is efficient and are in pursuit of cost reductions*".[43] The efficiency initiatives that Hunter Water is pursuing are outlined in this section.

With customer affordability at front of mind, Hunter Water undertook a rigorous review of operating expenditure projections in early 2012 and has committed to deliver real cumulative savings of $19.6 million ($2012-13) over the next price period as shown in Table 5.10. These efficiencies are proposed to be delivered through business reforms and improvement programs and represent a real reduction of more than 16 per cent on the 2012-13 base year operating expenditure or over four per cent per year. These savings will be achieved through efficiency improvements and identifying opportunities to reduce or defer expenditure, after consideration of any relevant risks.

Initiatives to be pursued include:

- Delivering $10.4 million in labour cost savings through formalising an employee 'vacancy rate' of five per cent in staff planning, as well as commitment to other reductions such as management of excess leave to offset the anticipated outcome of enterprise bargaining negotiations.

[42] The Hunter region is a major coal mining region and, due to the current mining boom, is highly competitive for a range of skills relevant to Hunter Water. Skills subject to competitive pressure from the presence of mining range across many activities from accountancy through to engineering and electrical and mechanical services. This competitive pressure also influences a range of contract costs, such as civil and electrical maintenance contracts.
[43] NSW Commission of Audit, 2012

While delivering the savings from expected vacancies without any provision to temporarily backfill will be difficult, it is even more challenging following the adjustment made in the 2012-13 budget to eliminate funding for contract labour and temporary positions. Even though the decision to absorb these additional functions in 2012-13 is not part of the $19.6 million savings quoted for the next price period, it will effectively lay the foundations for expenditure in the 2013-14 to 2016-17 price period being around $5 million lower.

- Further real reductions in electricity use of $2 million over the four-year price period. This represents a target that will be delivered through continued optimisation of energy use across Hunter Water's operational sites.
- Further reducing wastewater treatment costs by $3.1 million or around four per cent over the price period. While the precise initiatives remain unspecified at this time, targeted areas include unscheduled asset maintenance (for example buildings and non-operational equipment) and reviewing the timing/scheduling of maintenance on other items including conveyor belts and screens, diffuser replacements and cleaning of aeration tanks.
- A proposal to discontinue in-kind support to the NSW Dams Safety Committee and ANCOLD (Australian National Committee on Large Dams), which will reduce operating costs by $0.4 million.
- Revising the timing of water treatment residuals (sludge) disposal from Hunter Water's Grahamstown and Dungog water treatment plants. This will reduce costs by $1.4 million over the next price period, compared to 2012-13 levels.
- Completion of investment required to establish a credit and hardship program in the current price period. Much of this expenditure was related to development and implementation of this program. Now that this program is in place, ongoing expenditure requirements in this area are lower, resulting in cost reductions of $0.3 million per year or $1.3 million over a four-year period.

Table 5.10 Expected operating expenditure efficiencies ($m 2012-13)

	2013-14	2014-15	2015-16	2016-17	Total
2012 price submission savings					
Vacancy rate assumptions	2.6	2.6	2.6	2.6	10.4
Other labour savings (to offset real EBA)	0.1	0.2	0.3	0.4	1.0
Electricity optimisation	0.2	0.4	0.6	0.8	2.0
Wastewater treatment initiatives	0.5	0.7	0.9	1.0	3.1
Dam safety (in kind support)	0.1	0.1	0.1	0.1	0.4
Water treatment residuals disposal	1.0	(0.3)	1.0	(0.3)	1.4
Credit & hardship	0.3	0.3	0.3	0.4	1.3
Total projected efficiencies	**4.8**	**4.0**	**5.8**	**5.0**	**19.6**
Other savings [a]	2.1	2.8	3.8	4.0	12.7
Total projected savings	6.9	6.8	9.6	9.0	**32.3**

Source: HWC

a) Previously included in 2011-12 SCI

Hunter Water continues to encounter ongoing pressures to increase expenditure. Many of these increases had been identified and factored into the 2011-12 Statement of Corporate Intent (SCI) projections agreed with shareholders.

Subsequent to the finalisation of the 2011-12 SCI, and in light of increasing customer affordability concerns, it was clear that cost increases needed to be kept to an absolute minimum. A review was undertaken to evaluate competing priorities and identify any further cost-saving initiatives. Expenditure that did not directly relate to achieving ongoing regulatory compliance and the provision of core services to customers was deferred, removed or adjusted in scope.

Examples of these reductions include: reducing expenditure on strategy studies; reviewing the timing of dewatering lagoons; and building on the improvements already made in the electrical/mechanical maintenance area (this will effectively offset the increases in maintenance expected due to the increased complexity of plants). As a result, there has been a net reduction of $12.7 million in regulated expenditure compared to the level that was incorporated in the 2011-12 SCI.

While current projections represent a $12.7 million net reduction in operating costs compared to the 2011-12 SCI, this SCI did not include the impacts of regulatory requirements such as water treatment residuals disposal, Australian Drinking Water Guidelines (ADWG) turbidity requirements and the impact of carbon pricing. As a result, actual reductions achieved are effectively significantly higher than the $32.3 million quoted above.

5.5 Methodology, major assumptions and risks

The budgeting process undertaken by Hunter Water ensures that, at all times, the business is seeking to optimise processes and provide quality services to the community.

On an annual basis, Hunter Water prepares five-year rolling operating expenditure budgets based on the strategic initiatives and objectives contained within the SCI agreed with shareholders. These budgets are based on the IPART-allowed operating expenditure, with the exception of items which could not have been foreseen (such as the introduction of the carbon price and increases in bulk water costs).

Hunter Water's planning is also influenced by the statutory and regulatory framework including the *State Owned Corporations Act 1989*, the *Hunter Water Act 1991*, other legislation including the *Protection of the Environment Operations Act 1997,* the *Independent Pricing and Regulatory Tribunal Act 1992* (under which IPART regulates the operating licence) and a range of other regulations.

Budgets for operating expenditure are prepared annually and are built at cost centre (i.e. separately by product - water, wastewater, stormwater, recycled water and corporate - and location) and expense element levels (describes the nature of the budget - such as electricity, fuel, software licence etc).

Budgets are reviewed in detail by the Executive Management Team and by the Board of Directors before inclusion in the SCI. As indicated previously, the detailed reviews this year resulted in $12.7 million of net reductions being made to the operating cost budget (Table 5.10).

Budgets are based on a "normal" year and no expenditure allowances are made for items that have historically come up from time to time, such as increased failures from extreme weather events.

The main assumptions underpinning the operating expenditure forecasts include:

- Total water sales are forecast to remain relatively stable for 2013-14 to 2017-18. As outlined in Chapter 4, consumption projections are derived from the revised demand management model developed as a part of the Lower Hunter Water Plan project. Details of demand projections are provided in Chapter 4.
- Modest growth in connections and billable properties. No allowance has been made for the closure of any major customers. The detailed projections are shown in Chapter 4.
- Hunter Water has assumed annual inflation of 2.5 per cent for the price period from 2013. For a number of items in recent years, there have been regular real cost increases and Hunter Water retains the risk associated with future real price increases for inputs. No allowance has been made in forecasts for further large real increases in electricity network prices (as have been experienced in the current price period).
- No costs have been allowed for carbon price on direct emissions. It has been assumed that Hunter Water will remain below the National Greenhouse and Energy reporting threshold of 25,000 tonnes of direct CO_2-e emissions for the coming price period.

  The carbon price will impact on the cost of purchased inputs. To estimate this impact, the University of Sydney's Integrated Sustainability Analysis Team's Triple Bottom Line reporting tool has been used (further detail about the nature and application of this tool is provided in Appendix B). The model is a recognised measurement tool for assessing social, environmental and financial impacts of a business's carbon footprint. The model was applied with input obtained from the model's original creator as well as other agencies that have applied the methodology, such as Sydney Water.
- Costs have been forecast assuming there will be no changes to regulatory requirements or increases in mandatory performance requirements. For a number of years, changing regulatory requirements (licence conditions and pollution reduction programs) have driven the need for more technically advanced processes at wastewater treatment plants. As a result, assuming no future changes carries a degree of risk, if additional changes do eventuate.
- While weather conditions can impact significantly on Hunter Water's operating costs average weather conditions are assumed. For example, a dry year can lead to additional pumping requirements from river systems into off-river storage, additional ground water extraction, continued pumping to ensure adequate water supply and pressure and increased main breaks due to ground contraction. A wet year can lead to additional pressures on the wastewater system leading to higher costs including increased electricity for pumping of wastewater to treatment plants and increased chemicals for treatment.
- Any wage increases above 2.5 per cent provided through the enterprise bargaining negotiations will be offset by productivity improvements as required by the Government Wages Policy.
- Full-time equivalent staff numbers (FTEs) will decline slightly over the price coming period from 483 to 473, with the removal of positions budgeted at the end of fixed-term contracts wherever it is a sound business decision to do so.
- No allowance has been made in operating cost forecasts for increases in software licence fees, outside the known increases in place for existing contracts. The risk of increased licensing costs resulting from the upgrade of core information systems will be borne by Hunter Water.

Other Australian regulators make provision for unforeseen changes by incorporating "pass through" mechanisms for costs outside the control of the agency, particularly for costs

imposed by other regulatory arrangements. As additional operating costs cannot be adjusted in the same way as capital by subsequent inclusion in the regulatory asset base, it would be appropriate for IPART to consider pass through mechanisms for unforeseen operating costs incurred by water utilities. Increases in the regulated price of electricity, other regulated fees and charges and potential additional operating expenses arising from the Lower Hunter Water Plan could be considered in pass through arrangements.

5.6 Ring fenced expenditure

Subsidiary/unregulated expenditure

Hunter Water Australia Pty Ltd (HWA) is a fully-owned subsidiary of Hunter Water Corporation (Hunter Water). HWA was established to pursue commercial sales in a range of technical services throughout Australia and overseas. This arrangement is of benefit to Hunter Water through the expertise HWA gains by its involvement with a wide range of other businesses. It is able to apply this experience to improving Hunter Water's processes and practices.

HWA operates independently, has its own management structure and Board of Directors and provides Hunter Water with water treatment, wastewater treatment, laboratory, engineering, and survey and land information services. These services are provided at market competitive rates.

Separate contracts are in place for the water and wastewater treatment services provided to Hunter Water by HWA. The existing treatment contracts with HWA are in place until July 2014 with no extension option in place. At this point, a further benchmarking/tendering process will be undertaken to ensure competitive rates are established.

Hunter Water Corporation presents consolidated (group) financial information in its annual statutory accounts, which includes the accounts of HWA[44]. As part of the consolidation process for the statutory accounts, the profit margin generated by HWA is eliminated from the total operating costs reported for the group. The elimination of the profit margin on consolidation actually reduces the regulated cost base to a lower level than is likely to be the case if these services were provided by an unrelated entity. That is, in using group operating costs for the price submission, the regulated costs are lower than they would be if these services were provided directly from the market.

Any external sales opportunities that present to Hunter Water are serviced through HWA to ensure Hunter Water focuses on its core business. If Hunter Water staff work on external projects for HWA, HWA is charged on a cost-recovery basis (that is, no profit is levied by Hunter Water). The level of these sales is very low and the cost of performing work for HWA is removed from the regulated cost base via the 'cost of external sales offset' account in the Income Statement.

All costs associated with external sales made by HWA are removed from Hunter Water's regulated cost base and are shown as 'cost of external sales' in the Income Statement. These costs, which relate to unregulated sales by HWA, are reported in IPART's annual information return.[45]

The accounting consolidation impact of HWA on Hunter Water's reported 'group' operating costs can vary from year to year depending on the actual amount of external work

[44] The term 'group' refers to the combined (consolidated) financial information of Hunter Water Corporation and Hunter Water Australia. As required under accounting standards, any profit margin charged between the two entities is eliminated on consolidation leaving only the base costs of undertaking the work. The term 'parent' refers only to the financial information of Hunter Water Corporation.
[45] AIR table 6.3 'Consolidated Profit & Loss'

undertaken by HWA, the costs incurred by HWA to provide these external services and the amount of purchases from HWA capitalised by Hunter Water.

Although Hunter Water believes the parent operating costs represent the true core regulated expenditure, due to concerns previously raised by IPART that purchases by Hunter Water from HWA are not purchased from the 'market', Hunter Water has again lodged this submission on a 'group' basis.

The operating expense dissections in section 5 of the annual information return to IPART are completed on a parent basis so that detailed expense elements can be sourced from, and directly linked to, actual costs in the parent financial ledger. A single adjustment item (called 'Adjustment to Group'), is then included to bring the total expenditure level back to represent expenditure reported for the group. This method retains the transparency, accuracy and integrity of financial information being provided, while still achieving the elimination (reduction) of profit on payments made by Hunter Water to HWA.

Recycled water

Hunter Water has separately identified and reported amounts representing recycled water in accordance with IPART's requirements.

In the absence of detailed guidelines, Hunter Water has developed 'flow diagrams' for each wastewater treatment plant that identify the specific processes and items of equipment (and therefore expenditure), that are involved in supplying recycled water as distinct from wastewater. These flow diagrams serve to identify the cost 'ring fencing' boundaries required by IPART. Hunter Water's process for defining and measuring recycled water was first presented to IPART at the Inter-agency working group meeting held in June 2010 and subsequently in a background paper submitted to IPART in June 2011[46]. In the absence of feedback on this approach from IPART, it has been adopted on the basis that it is an appropriate reallocation of costs that is consistent with the concept of ring fencing recycled water and wastewater costs.

Hunter Water's assumption is that where recycled water solutions are adopted as a 'least cost' solution to achieve necessary wastewater objectives (such as licence compliance), those expenditures remain classified as wastewater expenditure to ensure accurate product pricing for wastewater. This assumption recognises that if the recycled water option was not available to meet the wastewater objectives, another solution, of at least the same cost, would have to be adopted and would be charged to wastewater.

There was no clear definition or process for the identification and measurement of recycled water at the time of the 2009 submission. Also, the nature, timing and value of planned recycled water projects have changed. Consequently the level of expenditure estimated to relate to recycled water in that submission was overstated.

Income from recycled water customers is tracked by individual customer.

5.7 Allocation of operating costs to activities

Hunter Water has designed its general ledger account code structure in order to improve the appropriateness of its operating cost allocations to relevant products, activities and locations. This enables better cost information to be available if a competitor was to be granted access to use Hunter Water's infrastructure. That is, to more accurately price Hunter Water's products, as well as ensuring that expenditure on non-regulated activities (e.g. recycled water), is appropriately valued and ring-fenced.

[46] Hunter Water Corporation, 2011 (a)

Around one third of total operating expenditure is captured directly as water, wastewater, stormwater or recycled water expenditure, as well as being specifically identified as source, treatment or transport (reticulation) elements. This detail is captured within Hunter Water's financial ledger through the chart of accounts and by using appropriate work-order, project and equipment identification within the enterprise resource planning system.

Hunter Water has also further developed its activity-based costing (ABC) methodology to minimise the value of expenditure remaining as shared overhead or common costs requiring arbitrary allocation. Hunter Water's ABC methodology identifies opportunities to reasonably attribute operating costs to relevant activities, effectively further reallocating over one third of operating costs out of shared or common costs directly to water, wastewater, stormwater or recycled water. This is done by utilising, for example:

- labour hours collected in asset management systems for jobs undertaken by the civil and electrical and mechanical maintenance workforce
- allocation of engineering and other relevant employees' labour and associated costs to functions, based on both the nature of specific roles and where/how time is used, and
- the nature and purpose of individual parcels of land for attributing land rates, taxes and insurance costs to properties held.

As a result of this methodology, less than one third of total annual operating expenditure remains as shared or common costs requiring apportionment. These remaining costs are allocated to relevant products and activities in the same proportion as the overall values of expenditure already assigned to the respective water, wastewater, stormwater and recycled water products, and separated between source, treatment and transport functions.

6 Capital Expenditure

Main Points

- *Hunter Water is on course to deliver its allowed capital investment from IPART's 2009 price determination.*
- *Hunter Water's capital expenditure program for the next price period is $329 million ($2012-13). The program is approximately half that delivered in the current price period and reflects a focus on regulatory requirements in Hunter Water's area of operations.*
- *Hunter Water's financial position and credit rating constrain the available funds for capital expenditure. This constraint has been a key consideration in prioritising works for inclusion in the capital portfolio.*
- *In light of the capital constraint, the primary justifications for investment over the next four years are regulatory and statutory requirements and asset reliability driving 58 per cent of the program, connection growth driving 15 per cent, and business efficiency driving 14 per cent. The balance is due to investments in discretionary standards and Government programs.*
- *The 10-year view shows that the level of expenditure is forecast to remain stable in the foreseeable future assuming a continuation of current system performance, connection growth and regulatory arrangements and pending the outcomes of the Lower Hunter Water Plan.*
- *Hunter Water maintains a focus on developing processes and practices to support efficient and effective development and delivery of projects in the capital portfolio to provide value for money for customers and shareholders.*

6.1 Introduction

This chapter presents information about Hunter Water's capital expenditure in the current price period ending on 30 June 2013 and proposed capital expenditure over the next four- and ten-year periods.

During the current price determination, the most significant event has been the removal of Tillegra Dam from the program and the subsequent adjustments to the overall capital program.

As part of the 2009 determination, IPART allowed $244.9 million[47] ($2008-09) for the planning and construction of Tillegra Dam. In December 2010, the NSW Government announced that it would not provide planning approval for Tillegra Dam and hence the

[47] IPART, 2009 (a), Table 7.10

project was removed from the capital portfolio and regulatory asset base (RAB). Customers were provided a refund in 2010-11 to compensate for the expenditure on Tillegra Dam included in prices to March 2011. At the same time, the water service charge for the remainder of the price period was adjusted to reflect the removal of all future dam-related expenditure. This adjustment to the RAB removed all allowances for the project identified in the 2009 determination and hence eliminated Tillegra-related expenditure from the RAB.

The 2009 determination was the first time that expenditure related to Tillegra Dam had been included in the RAB. Although expenditure on land purchase had occurred since the 1980s, IPART had never allowed this to be included in the RAB.[48]

Hunter Water has recently called for tenders for the development of a long-term land use strategy for the use of the Tillegra lands acquired for the project. The process is expected to take around 12 months and seeks to develop a strategy to optimise the value of the land for the region and the local community. In developing the strategy, local stakeholders, including Dungog Shire Council, the community and relevant government planning authorities, will be consulted.

The dominant theme in the formulation of the proposed capital expenditure is maintenance of the Corporation's long-term financial position as measured by its investment grade rating. While there is a clear need to ensure regulatory compliance, maintain the asset base and service future growth, there is also an imperative to safeguard the Corporation's investment-grade credit rating. The capital expenditure proposals therefore seek to strike a balance between the principles of sound asset management, environmental protection requirements and statutory performance.

This chapter commences with a comparison of IPART's allowed capital expenditure target for the current price period (adjusted for the removal of Tillegra Dam expenditure) and the actual expenditure performance. The performance of delivery as measured by physical output measures set by IPART in 2009 is then presented followed by an overview of the proposed ten-year program. This chapter concludes with a presentation of the proposed expenditure by component for the 2013-14 to 2016-17 price period followed by a description of the processes employed in the planning and delivery of the capital portfolio.

6.2 Performance between 2009-10 and 2012-13

Hunter Water is on course to deliver its capital investment portfolio as outlined in the Tribunal's 2009 determination report. This is the largest four-year expenditure portfolio in Hunter Water's history and demonstrates improved performance in the efficiency of capital investment delivery. This performance is reflected by close alignment to the output measures set by IPART and a strong performance against regulatory compliance requirements.

The 2009 IPART determination defined a prudent and efficient capital portfolio of $639 million in nominal dollar terms. The breakdown of this program is shown in Table 6.1.

Hunter Water expects to meet this investment level in the timeframe while achieving the majority of outcomes within time and budget. The distribution of the program over the current price period is shown in Table 6.2. As with any portfolio, there are variances at project, program and category level. However Hunter Water has managed to deliver each category broadly within the IPART-determined allowance as demonstrated in Table 6.3. This is also shown in Figure 6.1.

[48] See for example IPART, 2005, section 6.3, page 42

The main variances at a category level are:

- The reallocation of the high-voltage electricity supply upgrade project ($16.2 million) from corporate to water and wastewater. The high-voltage system directly services water and wastewater assets so it is more appropriate to allocate the spend to these business segments than treat it as corporate expenditure. This reduces the corporate variance from $4 million over the determination allowance to $12 million under the allowance.
- Increased costs to deliver the wastewater treatment works upgrade program. The majority of these increases are associated with four projects in the program (Burwood Beach, Paxton and Boulder Bay treatment plants and the Branxton Treatment and Recycled Water Scheme).[49] The increases result primarily from knowledge gained from further design development leading to better definition of the scope of the works as well as addressing deficiencies in the estimating practices used in early 2008.
- Water projects prioritised out of the portfolio to accommodate the increase in wastewater treatment costs.

Table 6.1 IPART determined capital expenditure 2009-10 to 2012-13 ($m nominal)

	2009-10	2010-11	2011-12	2012-13	Total [a]
Water	47.1	53.2	53.7	49.1	203.1
Wastewater	110.1	91.8	86.7	87.7	376.3
Stormwater	0.8	0.9	0.9	0.9	3.5
Corporate [b,c]	14.3	14.6	13.9	13.6	56.4
Total	**172.3**	**160.5**	**155.2**	**151.3**	**639.3**

Source: IPART, 2009 (a) plus allowance for inflation using June quarter on June quarter ABS CPI, weighted average for all capital cities and 2.5% pa for last 2 years. Totals may differ due to rounding.

a) Total is for the regulated expenditure only, excludes recycled water
b) Excludes capitalised borrowing costs
c) Includes the high-voltage electricity supply upgrade project ($14.5m)

Hunter Water has delivered a large wastewater treatment plant upgrade program over this period with nine treatment plants undergoing significant upgrades to continue to meet effluent quality standards and provide capacity for growth. The program was reset in March 2010 and effectively now has been delivered.

The key drivers of the portfolio over the pricing period have been maintaining regulatory standards ($286 million) and catering for growth ($243 million).

Details of the major capital projects and expenditure on them in each year of the current price determination period are provided in Appendix C.

[49] Much of the Branxton recycled water system is to meet wastewater licence requirements to minimise discharge to local waterways. Accordingly, this expenditure is allocated to regulated wastewater costs rather than unregulated recycled water costs. The broad allocation principles for recycled water expenditure were outlined more fully in Chapter 5.

Table 6.2 HWC capital expenditure 2009-10 to 2012-13 ($m nominal)

	2009-10 (actual)	2010-11 (actual)	2011-12 (forecast)	2012-13 (forecast)	Total [a]
Water	46.3	45.2	40.0	59.5	191.0
Wastewater	107.3	136.8	80.1	72.2	396.5
Stormwater	0.4	1.0	1.4	1.1	3.9
Corporate [b,c e]	10.6	12.1	12.2	9.7	44.6
Total [d]	**164.7**	**195.1**	**133.7**	**142.5**	**635.9**

Source: HWC (totals may differ due to rounding)

a) Total is for the regulated expenditure only, excludes recycled water
b) Excludes capitalised borrowing costs
c) High-voltage upgrade project ($16.3m) reallocated from corporate to water ($14.6 million) and wastewater ($1.7 million)
d) Indexed using June quarter on June quarter ABS CPI, weighted average for all capital cities and 2.5% pa for last 2 years
e) Corporate excludes corporate allocation to recycled water.

Table 6.3 Capital expenditure 2009-10 to 2012-13 ($m nominal)

	IPART Determination	Actual/ Forecast	Variance
	[A]	[B]	[B-A]
Water	203.1	191.0[e]	-12.1
Wastewater	376.3	396.5[e]	20.2
Stormwater	3.5	3.9	0.4
Corporate [b,]	56.4 [c]	44.6	-11.8
Total [a d]	**639.3**	**635.9**	**-3.4**

Source: HWC. Totals may not add precisely due to rounding.

a) Total is for the regulated expenditure only, excludes recycled water
b) Excludes capitalised borrowing costs
c) Includes the high-voltage electricity upgrade project ($14.5m)
d) Indexed using June quarter on June quarter ABS CPI, weighted average for all capital cities
e) High-voltage upgrade project actual expenditure ($16.3m) reallocated from corporate to water ($14.6 million) and wastewater ($1.7 million)

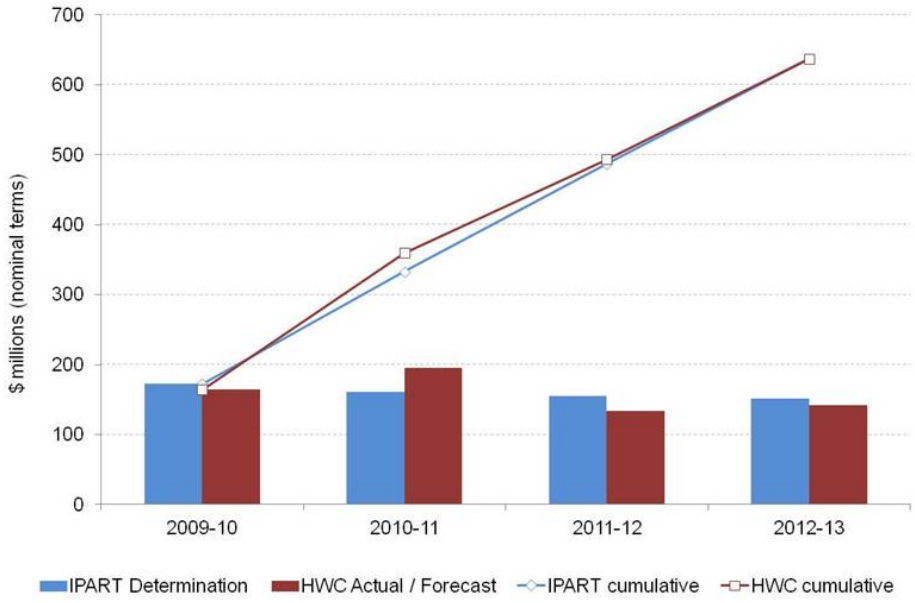
Hunter Water's primary objective is to meet the four-year IPART allowed capital expenditure.

The capital expenditure allowances set by IPART for each year of the price period are used as a guide in developing the annual capital budget. Each year, there is expected to be some deviation between the IPART allowance and Hunter Water budget.

Despite this, Hunter Water has delivered within two per cent of the annual budget over the first three years of the current pricing period, demonstrating consistent delivery performance. As shown in Figure 6.1, the annual budgets have been broadly in line with the IPART's allowed annual expenditure.

The following sections provide a brief overview of expenditure in each year of the current price determination period.

Figure 6.1 Capital expenditure 2009-10 to 2012-13 ($m nominal)



Source: HWC

Capital expenditure 2009-10

Hunter Water made a capital investment in 2009-10 of $165 million compared with the IPART-allowed expenditure of $172 million (in nominal terms). This included $46 million of expenditure on water assets, $25 million on wastewater networks, $73 million on wastewater treatment plant upgrades and $8 million on backlog wastewater schemes.

2009-10 saw the completion of Stage 1 of the Aberglasslyn and Shortland wastewater network upgrades, while significant progress was made on the wastewater treatment upgrade program at Branxton, Burwood Beach, Paxton, Dora Creek and Raymond Terrace treatment plants. Works commenced on the Newcastle wastewater network upgrade while progress continued on the Millfield, Ellalong and Clarence Town backlog sewer projects.

On the water side; upgrades proceeded to the Cessnock, Tomaree and Maitland–North Rothbury water distribution systems, the Dungog clear water tank and replacement of the trunk main across Ash Island and a major section of Chichester Trunk Gravity Main (CTGM).

Capital expenditure 2010-11

Hunter Water made a capital investment in 2010-11 of $195 million compared with the IPART-allowed expenditure of $161 million (in nominal terms). This included $45 million on water assets, $37 million on wastewater networks, $92 million on wastewater treatment plant upgrades and $8 million on backlog wastewater schemes.

Highlights during this period were the completion of the recycled water main from the Branxton wastewater treatment works to the Vintage Golf Club; upgrades to the Edgeworth and Raymond Terrace wastewater treatment plants; and the Kurri Kurri Stage 1 and Redhead wastewater network upgrades.

Significant progress was made on the wastewater treatment upgrade program at Branxton, Burwood Beach, Paxton and Dora Creek; the Millfield-Ellalong and Clarence Town backlog sewer projects and the Newcastle wastewater network upgrades.

On the water side; the upgrade to the Tomaree water system and the replacement of trunk mains at Ash Island were completed while upgrades continued to the Cessnock and Maitland–North Rothbury water distribution systems, the Dungog clear water tank and the CTGM.

Within the corporate investment group; significant Information and Communication Technology (ICT) projects included upgrading of the SCADA computing platform, a technical upgrade of the Customer Care and Billing System and a refresh of the Hunter Water internet website.

Capital expenditure 2011-12

Hunter Water forecasted a capital investment in 2011-12 of $134 million compared with the IPART-allowed expenditure of $154 million. This includes $40 million of expenditure on water assets, $40 million on wastewater networks and $38 million on wastewater treatment plant upgrades.

2011-12 marked the completion of the first suite of wastewater treatment plant upgrades at Branxton, Burwood Beach, Paxton and Dora Creek. The Windale/Gateshead Stage 1, Toronto Stage 1, Morpeth Stage 2 and Cardiff wastewater network upgrades were commissioned, while significant progress was made on the wastewater treatment upgrade program at Boulder Bay, Farley, Shortland and Toronto. The Millfield-Ellalong and Clarence Town backlog sewer projects have been commissioned, while work continues on the Newcastle wastewater network upgrades. Work commenced on the Williamtown wastewater transfer main and delivery of the Farley wastewater treatment plant upgrade.

Water-related infrastructure investments included continuing upgrades to the Cessnock, and Maitland–North Rothbury water distribution systems and completed works on the Dungog clear water tank and replacement of further sections of the CTGM.

Within the corporate investment group; significant ICT projects were completed including upgrading of the telemetry system, a refresh of the IP telephony system, establishment of an Information Security Management System, and rollout of new field computing devices and field global positioning system for all vehicles to improve workplace safety and efficiency. This latter expenditure was recommended by Atkins/Cardno in their 2008 report to IPART.[50]

Forecast capital expenditure 2012-13

Hunter Water forecasts a capital investment in 2012-13 of $142.5 million compared with the IPART determination allowance of $150 million.

The completion of the first stage of the Newcastle and the second stage of the Aberglasslyn wastewater network upgrades is expected in this period. It will also see the completion of the Shortland and Toronto wastewater treatment inlet works upgrade. The high-voltage electricity supply upgrade will commence roll out, Windale/Gateshead Stage 2 wastewater network upgrade will commence and work will continue on the Farley wastewater treatment upgrade.

On the water side, upgrades continue to the Cessnock, and Maitland–North Rothbury water distribution systems and planning continues for future works.

[50] Atkins/Cardno, 2009, section 3.8 p 56

Within the corporate investment group; there is a plan to implement security and disaster recovery improvements, document management upgrade and a desktop standard operating environment upgrade.

6.3 Performance against IPART 2009 output measures

Hunter Water reports annually against all output measures for the capital portfolio defined by IPART in the 2009 determination report for the period from 2009-10 to 2012-13. Hunter Water's performance against these measures is detailed in Appendix D. Figures for 2012-13 have been forecast at May 2012. Many targets including upgrade of wastewater treatment plants have been met over the period with categories such as trunk main replacements and condition assessments exceeding the targets set by IPART in 2009.

The main reasons for variances include revised catchment strategies and growth rates, changes to the timing of developer works (for example, as a result of a slowdown in development activity) and accelerated project delivery.

6.4 Portfolio development for the 2012 price submission

Assembling the capital program for a four-year price submission is an ongoing process throughout the preceding price determination period. Prioritisation of component projects for the submission starts with the 20-year portfolio prepared for the Statement of Corporate Intent (SCI) provided to shareholders in the year preceding the price submission (in this case, the 2011-12 SCI).

The 20-year portfolio that was presented to shareholders in the 2011-12 SCI included approximately $1.1 billion ($2012-13) of regulated expenditure in the next price determination period. At that point, the portfolio included a number of projects that had been identified as fitting within a range of strategic objectives, but that were yet to be prioritised against other projects. This level of capital expenditure would have driven a real price rise of approximately 40 per cent across the coming four-year determination period.

The next step in capital prioritisation for the price submission took place over the following 12 months to April 2012. This process incorporated significant work over the last 18 months to develop a new transparent portfolio management framework to be used to prioritise projects for inclusion in the capital works portfolio for the price submission and ongoing program management.[51] This portfolio was developed taking into account regulatory compliance requirements and risks, population growth projections, renewal, maintenance and critical asset management strategies and long-term infrastructure investment strategies.

Once asset management and risk are catered for, the portfolio is reviewed against its impact on Hunter Water's forward financial position, taking into account customer affordability. Prior to projects being scored against the new prioritisation system introduced in 2011, a tiered approach was developed in an effort to get an early view of an appropriate funding envelope in terms of risk, benefits, financial position[52] and customer affordability. The main elements of this approach were:

- The portfolio was broken into sub categories - wastewater treatment, wastewater transport etc.

[51] This framework uses the portfolio, program and project office (P3O®) investment management model, which is designed to help organisations to prioritise the selection and delivery of new initiatives (programs and projects). More information on the P3O model is provided later in this chapter.

[52] With particular reference to the impact of the proposed capital program on credit ratings over the next two price periods.

- Each sub category had a review of the included projects/programs in the next price period against the project's drivers, with an emphasis on alignment to regulatory compliance as a driver.
- Within each sub category projects were classified into three tiers, which in broad terms are:
    - Tier 1 – projects that need to be done under any scenario – necessary to ensure business-as-usual and minimum levels of service are maintained
    - Tier 2 – required to meet compliance in the future or maintain existing levels of service, and
    - Tier 3 – projects that address strategic initiatives; improve level of standard above that required by regulation or to service projected population growth.

From this process, four scenarios were investigated for the submission in order to provide the optimum mix of value for money, risk management and benefit to the customers while maintaining an investment-grade credit rating, albeit with a reducing level of revenue buffer, and possibly lower headroom between performance and operational standards, as time progresses.[53] The preferred scenario at April 2012 for the submission was $606 million ($2012-13) in capital expenditure within the next price period. This would have seen price rises of approximately 17 per cent in real terms by the end of the four-year price period.

In June 2012, revised financial modelling incorporating updated Weighted Average Cost of Capital (WACC) and demand assumptions showed that the organisation's credit rating would drop below investment grade within 10 years if capital expenditure was not substantially reduced. The financial modelling indicated that regulated capital expenditure of $330 million ($2012-13) in the period 2013-14 to 2016-17 and $300 million ($2012-13) in the period 2017-18 to 2020-21 would be required to stabilise the financial metrics and maintain an investment grade credit rating (BBB).

In light of the revised financial analysis, the prioritised capital portfolio was further reviewed to investigate the potential of providing a capital portfolio that met the financial viability constraints, without compromising regulatory commitments.

Capital expenditure within each program area was adjusted by deferring or eliminating projects within that program area and considering the risk presented by not proceeding with the proposed projects. In refining the portfolio, the projected cost of each project has been reduced by up to 10 per cent to reflect the potential for value engineering and contingency reduction, once each project is individually reviewed or advances through the gateway approval process.[54] An overview of the gateways in the approval process is shown in Figure 6.2.

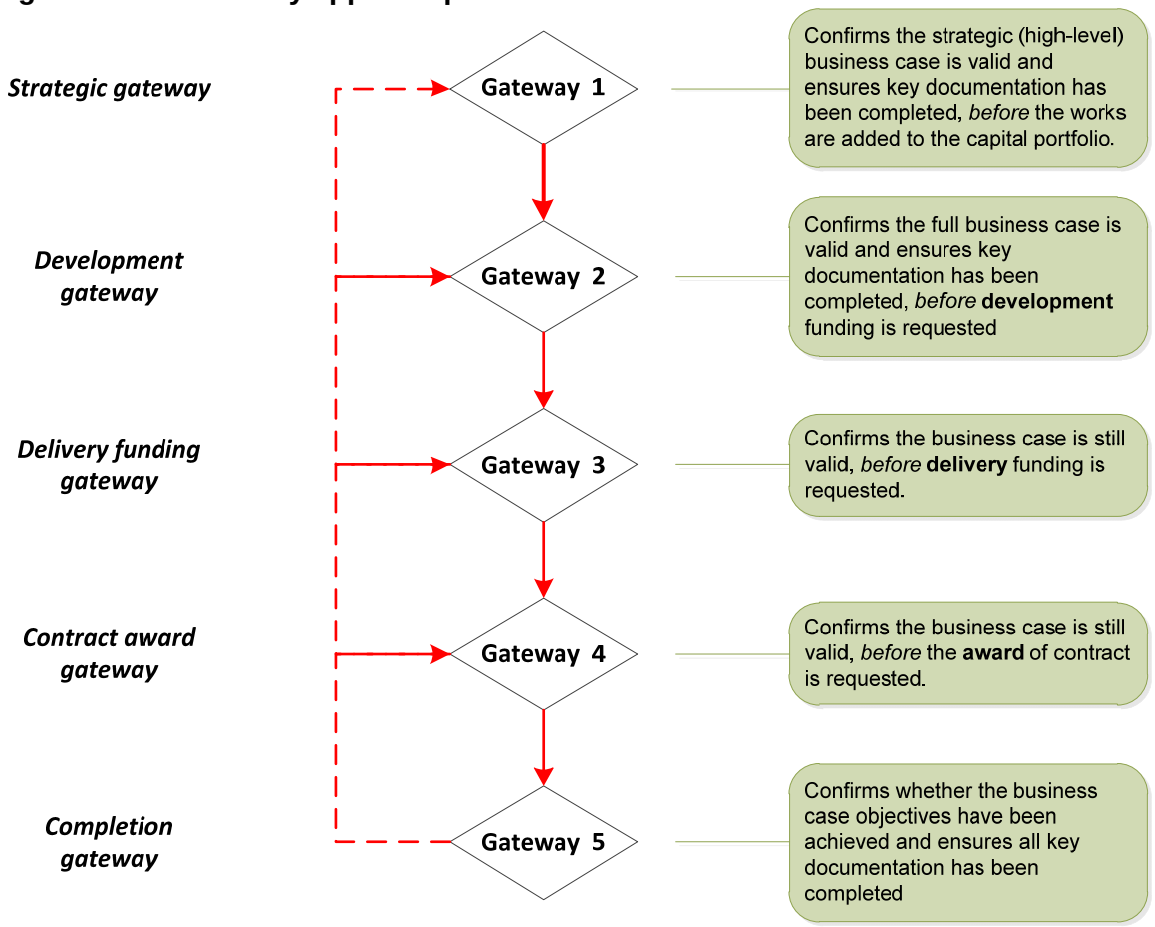
For the revised capital portfolio, wastewater treatment plant upgrades to ensure compliance with existing Environment Protection Licence or legislative requirements have been retained. Upgrades to meet existing EPA Pollution Reduction Program requirements have also been retained. However, there is no allowance in the program to address any future improvement in performance that may be required by any of Hunter Water's five main operational

[53] See section 3.2 in Chapter 3 for a discussion of headroom and headroom risks.

[54] Atkins/Cardno reviewed the gateway approval process in 2008 and commented that it provided greater control and governance over the staged approval process of capital works and is consistent with good practice. See Atkins/Cardno, 2009, section 10.2.

regulators.[55] Those improvements, if mandated, will be the subject of future capital programs.

Figure 6.2 Gateway approval process



Source: HWC

It is also assumed that connection growth will remain at, or below, 1.4 per cent per year and in areas with spare asset capacity. The operating environment is dynamic and the relatively small capital portfolio provides no buffer for material changes from the external environment.

The 10-year projection, shown in Figure 6.3 and Appendix E, highlights that the level of expenditure is forecast to maintain stable system performance assuming actual growth is in line with current projections and a stable regulatory environment and pending the outcomes of the Lower Hunter Water Plan.

6.5 Ten–year capital expenditure plan

Hunter Water takes a long-term approach to asset planning producing strategy plans for up to 20 years, depending on the assets involved and the population growth expectations for the area served.

[55] These regulators are IPART (operating licence), EPA (Protection of the Environment Licences and PRPs), NSW Office of Water (Water Access Licences and water sharing plan requirements), NSW Health (Drinking Water Quality requirements) and NSW Dams Safety Committee (dam safety).

This strategic planning allows a robust 10-year portfolio to be maintained, which is presented in this section. All projects in the 10-year portfolio have passed through the strategic gateway (gate 1) in the gateway approval process shown in Figure 6.2. This gateway confirms the strategic (high-level) business case is valid and ensures key documentation has been completed, before the works are added to the capital portfolio. The need is generally developed from a catchment or asset strategy plan, taking account of population growth profiles, asset condition and asset performance.

Water

Hunter Water's 2011 Bulk Water Strategy is an integrated and holistic approach to managing drinking water quality risks from the catchment to the outlet of water treatment plants and is consistent with the framework approach in the Australian Drinking Water Guidelines (ADWG).[56] The strategy proposes to deliver the Grahamstown Water Treatment Plant (WTP) Stage 3 upgrade by 2025 to meet projected growth in the demand for treated water.

To ensure Hunter Water's assets meet ADWG compliance requirements and appropriately address known water quality risks, the strategy recommends expediting a range of interim upgrades, consistent with the master plan for the site, in the price period commencing in July 2013. The Bulk Water Strategy also recommends the implementation of a Catchment Improvement Program to address identified water quality risks in the drinking water catchments.

Other key water resource assets have been identified for replacement/renewal in the price period commencing in July 2013 to ensure Hunter Water meets compliance standards and to address risk. These include the upgrade of Nelson Bay WTP, replacement of Campvale Water Pump Station culvert, geological stability works at Balickera Tunnel and replacement of assets at Dungog WTP.

The total expenditure over the next 10 years on water resource assets, including catchment, storage and treatment, is expected to be in the order of $90 million ($2012-13). Of this, the majority of expenditure will be on water treatment infrastructure with expenditure also planned for catchments and storage.

The Lower Hunter Water Plan (LHWP) is currently being developed by the Metropolitan Water Directorate in collaboration with Hunter Water and input from the lower Hunter community. The expected completion date is late 2013 and, as such, its outcomes are currently not known. No allowance has been made to deliver capital works, including design and construction, of any capital investment outcomes recommended in the LHWP.

A geographic information system based catchment model has been developed, and adapted from that used by the Sydney Catchment Authority, to identify and prioritise risks and ensure there is a sound scientific basis to expenditure in the catchments. A similar model is proposed for Chichester Dam to better understand ecological processes in the dam and inform future strategic and operational decisions related to management of the dam's catchment.

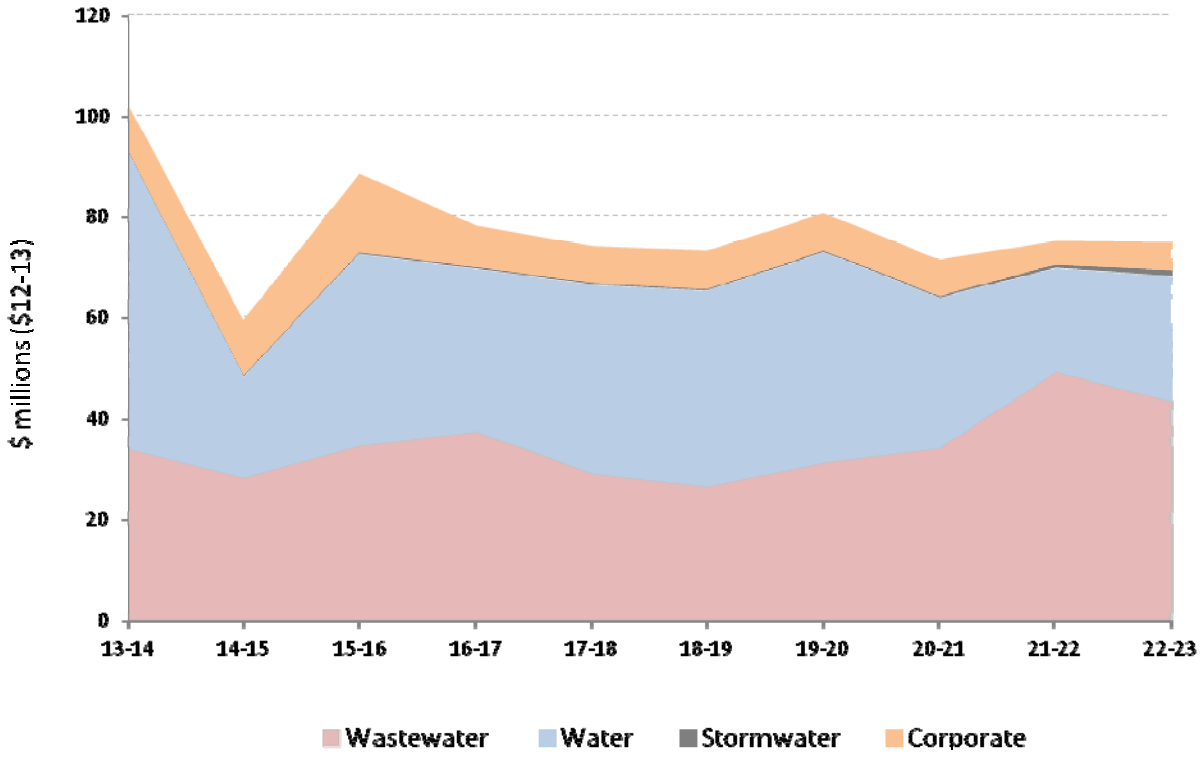
In the 10-year portfolio, Hunter Water is planning to upgrade the capacity of its water distribution network as growth occurs to ensure that it complies with operating licence requirements related to water pressure and supply continuity.[57] Initially, works are focused on well-established development areas with strong historic growth. Over the 10 years, major upgrades are planned for the water distribution systems servicing the following areas -

[56] Compliance with the ADWG is a requirement of Hunter Water's operating licence. See Hunter Water Corporation, 2012 (a), clause 2.1.

[57] See Hunter Water Corporation, 2012 (a), clause 4.2

Edgeworth to West Wallsend, Heddon Greta to Cessnock, Aberglasslyn to Branxton, East Lake Macquarie and Raymond Terrace.

Figure 6.3 Capital expenditure 2013-14 to 2022-23 ($m 2012-13)



Source: HWC projections

Hunter Water is implementing risk-based asset management to the water distribution system, which has resulted in the water mains being assessed based on the Enterprise Risk Management Framework.[58] This assessment has identified critical mains that require proactive management incorporating condition assessment and reliability strategies to determine the optimum solution (either renewal, rehabilitation, operational control or risk acceptance) to be implemented.

This program has resulted in approximately $170 million in renewal projects being identified and analysed, with a business case and prioritisation assessment resulting in the highest priority projects valued at approximately $25 million being recommended within the next price period. This 10-year program is anticipated to be $65 million and is dominated by the replacement of the Chichester Trunk Gravity Main (CTGM) at $43 million, with all projects proceeding to reduce risk to continuity of supply, staff and community safety and the local environment.

The program will continue, with the identified acceptable projects to be included in the capital portfolio and be included in the future price submissions. Based on current analysis, it is likely that the risk-based asset management program will continue with further sections of the CTGM renewal in subsequent price periods.

[58] Hunter Water's Enterprise Risk Management Framework is consistent with ISO31000 and ensures a consistent approach to risk management. Application of the framework enables Hunter Water to establish and refine controls to reduce the likelihood and impact of adverse events.

Wastewater

In the 10-year portfolio, Hunter Water is planning to upgrade its wastewater treatment plants as growth occurs to ensure that it meets regulatory requirements in the Environmental Protection Authority (EPA) system licences. This will include works to reduce health risks, provide additional treatment capacity, improve effluent quality, reduce the amount of effluent discharged to the environment and improve asset condition and reliability. Over the 10 years, major upgrades are planned for Burwood Beach, Farley, Morpeth, Raymond Terrace, Boulder Bay, Dungog, Edgeworth, and Dora Creek treatment plants.

Hunter Water is also planning, in the 10-year portfolio, to upgrade the capacity of its wastewater transport systems to reduce overflow impacts on customers and the environment and cater for growth. Initially, works are focused on high-priority customer and environmental impacts and meeting specific Pollution Reduction Program (PRP) commitments in the EPA system licences. Over the 10 years, major upgrades are planned for the wastewater transport systems in the following areas – Mayfield/Waratah, Whitebridge, Elermore Vale, Belmont North, Rutherford, Bolwarra/Largs and Beresfield.

There are currently no backlog schemes that are approved to proceed. However Hunter Water is able to proceed should there be an appropriate business case and government direction as outlined further in section 6.6.

Stormwater

Hunter Water's objective for the stormwater systems under its control is to maintain the existing capability with the stormwater pipes and channels. Investigations are proceeding to determine both the rehabilitation requirements for the Lower Throsby Creek and the piped system, and to determine the potential community requirements associated with channel naturalisation. However, it is anticipated that renewal investment will remain consistent over the next 10-year period.

Corporate

Over the 10-year period approximately $83 million is expected to be spent on corporate projects. The majority of this expenditure is in ICT with the focus of expenditure on:

- Rolling infrastructure platform refresh – continued investment in Hunter Water's computing environment to sustain its ICT asset base and maintain ICT service levels to business operations.
- Major upgrade of enterprise resource planning and enterprise asset management systems incorporating replacement of the current in-house developed work management and regulatory reporting system.
- Upgrade and/or replacement of customer care and billing system. A project to replace or upgrade this core system will be required in the latter five years of the 10-year portfolio.

6.6 Projected capital expenditure 2013-14 to 2016-17

Hunter Water's capital expenditure program for the next price period in is projected at $325.4[59] million ($2012-13) as defined in Table 6.4. The program is approximately half that delivered in the current price period and reflects a focus on regulatory requirements in Hunter Water's area of operations.

[59] Includes reduction – Corporate for reallocation to Recycled Water.

Each project included in the program has been assessed at a minimum through the strategic gate in the gateway approval process as described earlier.

Table 6.4 Proposed capital expenditure program ($m $2012-13)

	2013-14	2014-15	2015-16	2016-17	2017-18	Total [a]
Water	58.8	20.0	38.0	32.2	37.3	148.9
Wastewater	34.1	28.4	34.7	37.5	29.3	134.7
Stormwater	0.4	0.4	0.4	0.4	0.4	1.4
Corporate [b]	8.7	7.8	15.5	8.2	7.3	40.3
Total	**101.9**	**56.6[c]**	**88.5**	**78.3**	**74.3**	**325.4**

Source: HWC Totals may not add precisely due to rounding.

a) Total is for the price period, excludes 2017-18

b) Excludes capitalised borrowing costs

c) Note in addition to regulated expenditure there is $17.4m on non-regulated recycled water

Capital expenditure prioritisation

Hunter Water operates in a highly regulated environment and has requirements to meet licence and other regulatory conditions and manage assets in line with growth and an evolving regulatory environment.

Hunter Water's assets are aging and there is a continuing need to invest in renewing and replacing these assets. Modelling predicts an increasing cost in managing these assets and therefore there will be a continuing upward cost pressure on future generations to meet the cost of replacing assets and building new ones.

Affordability for customers is an important consideration for Hunter Water in determining the appropriate capital portfolio. Hunter Water Corporation has always strived to appropriately balance customer affordability with servicing customers' needs and expectations and compliance risk. This is proving more challenging in each pricing period.

As outlined in section 6.4, Hunter Water developed new prioritisation criteria as part of the implementation of a portfolio management approach to the capital portfolio in 2011. The impact of capital expenditure on regulatory requirements is a fundamental decision making criterion for Hunter Water. This means that projects and programs are not only assessed on their contribution to strategic objectives, but also on their contribution to meeting regulatory requirements.

In Hunter Water's prioritisation framework, the alignment to business drivers is assessed by a consideration of an individual project's or program's:

- contribution to meeting regulatory requirements, referred to as "compliance", and
- contribution to meeting strategic objectives, referred to as "value".

Prioritisation using these criteria helps Hunter Water to understand the natural tension between "running the business" (compliance) and "changing the business" (value). Several capital expenditure scenarios were developed for the submission in an attempt to find the optimum portfolio that balances the competing needs of risk to compliance, value to the business, financial position and affordability to the customer. The portfolio presented in this submission is heavily weighted to projects that address compliance requirements based on existing performance.

Overall program summary

Capital expenditure broken down by key expenditure drivers is shown in Table 6.5. The total expenditure breakdown is illustrated in

Figure 6.4 and highlights the dominance of the mandatory standards driver in the overall proposed program. The drivers listed in the following tables are those set by IPART and defined in relation to Table 9.1 of the IPART Annual Information Return (AIR). A detailed definition of each driver is provided in the Glossary (section 15.2) at the end of the submission.

Capital expenditure programs over the coming price period for water, wastewater, stormwater, and corporate components are summarised in the following sections.

Appendix F sets out the projects with total expenditure over the proposed price period that is greater than five million dollars.

Table 6.5 Proposed capital expenditure program by driver ($m 2012-13)

Driver [a]	2013-14	2014-15	2015-16	2016-17	2017-18	Total [b]
Growth	12.5	4.7	14.3	19.0	29.5	50.4
Mandatory standards	50.8	39.1	44.9	33.1	27.4	167.8
Business decisions	10.2	9.9	16.4	9.0	8.9	45.5
Asset and service reliability	0.0	1.3	8.9	10.0	5.6	20.3
Discretionary standards	1.7	1.1	3.6	6.6	2.3	13.0
Government programs [c]	26.8	0.4	0.6	0.6	0.6	28.5
Total [d]	**101.9**	**56.6**	**88.5**	**78.3**	**74.3**	**325.4**

Source: HWC Totals may not add precisely due to rounding.

a) The drivers used in this and the following tables are those defined by IPART in Table 9.1 of the AIR. The definitions for each driver are listed in section 15.2 of this submission.

b) Total is for the price period, excludes 2017-18

c) Government directive and deferred costs

d) Excludes capitalised borrowing costs

Water

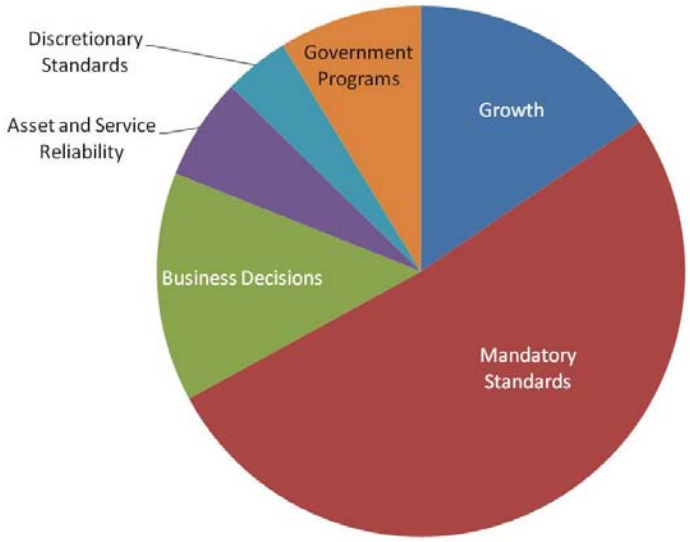
Approximately $149 million ($2012-13) is expected to be spent on water supply over the next four years with $65 million on water distribution and trunk mains, $33 million on water treatment and water resources and $24 million on upgrading the high-voltage electricity supply serving the water assets.

The water component also includes $26 million for the Kooragang Industrial Water Scheme (KIWS). This amount comprises $10 million reallocated to water in line with a Government directive and $16 million in deferred costs. The allocation of this recycled water expenditure to water supply is in accordance with IPART's methodology for allocating recycled water avoided costs and Government directions to non-recycled water customers.[60] It is discussed further in Chapter 7 and the details of the KIWS cost recovery model are provided in Appendix G.

[60] IPART, 2006, section 8.3 and Appendix E

While the IPART issues paper notes that the 2009 determination allowed Hunter Water to recover the avoided costs associated with the scheme, this was not the case as no KIWS-related costs were rolled into the RAB from 2009. [61]

Figure 6.4 Capital expenditure program 2013-14 to 2016-17 ($m 12-13)



Source: HWC estimates

The drivers in this figure are defined in the Glossary (section 15.2) at the end of this submission.

A breakdown of the expenditure by the main drivers over the coming price period is provided in Table 6.6. The program includes expenditure on the existing system to improve performance, secure reliability and appropriately assess and manage known risks and expenditure on new works to cater for projected growth.

Capacity upgrades are proposed in the water distribution system to ensure compliance with the operating licence. These are focused on addressing continued growth in well-established development areas (e.g. the northern side of Lake Macquarie, Cessnock and the Aberglasslyn area).

Expenditure is also proposed to address known risks to the provision of a safe and reliable supply of drinking water, a key objective of Hunter Water's business. These risks include potential for deteriorating water quality from catchments, reliability and safety risks of key infrastructure and the need to ensure compliance is continually maintained.

The major water supply projects proposed are:

- Replacement of trunk main assets - $20 million. This includes two further sections ($15 million) of the Chichester Trunk Gravity Main.
- Upgrades to high-voltage electricity supply network serving water assets - $24 million. This project will increase safety for operators and the public, reduce the risk of operational failure and facilitate handover to Ausgrid, where appropriate.[62]

[61] IPART, 2012 (d), page 37

[62] Ausgrid is the electricity network operator serving homes and businesses throughout Sydney, the Hunter and the Central Coast.

- Interim upgrades to the Grahamstown water treatment plant - $15 million. These works are required to ensure compliance is met and known risks to water quality and asset reliability are addressed. They include new fluoride and alum storage facilities.
- Upgrade of the Nelson Bay water treatment plant - $5 million. The existing plant does not comply with chemical storage, environmental and safety regulations. There is a significant risk to the area's water supply due to restricted access and potential asset damage during bushfires.
- Renewals and replacements of water treatment and distribution assets - $34 million.

Table 6.6 Proposed water capital expenditure program by driver ($m 2012-13)

Driver	2013-14	2014-15	2015-16	2016-17	2017-18	Total [a]
Growth	2.4	1.4	4.4	4.9	17.5	13.1
Mandatory standards	26.6[b]	12.9	19.8	13.7	10.3	73.0
Business decisions	3.3	3.9	3.9	3.7	3.7	14.8
Asset and service reliability	0.0	1.3	8.9	9.6	5.6	19.8
Discretionary standards	0.4	0.4	0.9	0.3	0.2	2.1
Government programs	26.1[c]	0.0	0.0	0.0	0.0	26.1
Total	**58.8**	**20.0**	**38.0**	**32.2**	**37.3**	**148.9**

Source: HWC Totals may not add precisely due to rounding.

a) Total is for the price period, excludes 2017-18
b) Includes $24 million on upgrading the high-voltage assets serving the water assets
c) $26 million for the Kooragang Industrial Water Scheme (KIWS). This amount comprises $10 million in Government directive and $16 million in deferred costs

Wastewater

The next two price periods will see a smaller program of investment in upgrading wastewater treatment plants to maintain regulatory compliance when compared to the current price period. The program is expected to increase in the subsequent price periods to ensure compliance, service growth, and to improve effluent quality at some plants, dependant on the outcomes of current marine studies and receiving water investigations. The major items in the next price period include:

- Burwood Beach treatment works - providing ultraviolet effluent disinfection to address identified health risk by the Quantitative Microbial Health Risk Assessment.[63]
- Farley treatment works – commencing works to expand effluent reuse from the plant to meet EPA licence nitrogen load-limit requirement.
- Morpeth treatment works – upgrading the capacity of the wet weather bypass facilities at the inlet works as part of a pollution reduction program commitment. This will permit

[63] The Quantitative Microbial Health Risk Assessment was designed and carried out by the University of New South Wales Water Research Centre in liaison with NSW Health and the EPA. As a result of this assessment, both NSW Health and EPA have provided clear direction that the identified health risk, while small, is not acceptable and a capital solution to the health risk needs to be implemented. Therefore the decision was made to implement ultraviolet disinfection of the effluent stream to reduce the identified health risk to bathers.

additional wet weather flows to be pumped directly to the plant (i.e. bypassing the inlet works) to reduce wet weather overflows within the upstream transport network.

- Dungog treatment works – upgrade the capacity of the deficient infrastructure (inlet works, flow conveyance system and clarifiers), ensure safety compliance by addressing asset condition issues and reducing health risk by ensuring compliance with the disinfection requirements of national reuse guidelines.[64]

The wastewater network upgrade program for the next price period will mainly address existing capacity deficiencies that present a high risk of wet weather overflows to customers' properties and the environment. Of the $27 million capacity upgrade program, the only item predominantly driven by future growth is a contribution to essential new infrastructure serving Williamtown. The proposed wastewater capital program by expenditure driver is shown in Table 6.7.

The worst performing parts of Hunter Water's wastewater network in wet weather include some of the oldest and most built-up parts of Newcastle. These include the suburbs of Mayfield, Waratah, Whitebridge, Elermore Vale and Windale where there is limited growth potential. Upgrading these parts of the wastewater network forms a large part of the works program for the next price period and these upgrades do not have a significant upsize component for growth. The program also includes necessary upgrades in the suburbs of Medowie and Beresfield, which both have known overflow problems and are adjacent to sensitive wetlands.

Table 6.7 Proposed wastewater capital expenditure program ($m 2012-13)

Driver	2013-14	2014-15	2015-16	2016-17	2017-18	Total [a]
Growth	8.9	2.4	8.6	12.9	10.9	32.8
Mandatory standards	21.0	23.6	22.1	16.6	14.9	83.5
Business decisions	2.7	1.7	1.3	1.3	1.3	7.0
Asset and service reliability	0.0	0.0	0.0	0.4	0.0	0.4
Discretionary standards	1.2	0.7	2.6	6.3	2.1	10.9
Government programs	0.1	0.0	0.0	0.0	0.0	0.1
Total	**33.9**	**28.4**	**34.6**	**37.5**	**29.2**	**134.7**

Source: HWC. Totals may not add precisely due to rounding.

a) Total is for the price period, excludes 2017-18

While there are areas across the wastewater network that are likely to experience strong growth in the next price period, the impact on the existing performance of the wastewater network in these areas is expected to be relatively manageable.

For some of the larger developments, the preferred (and least-cost) strategy generally involves using spare capacity in the existing system for a period of time and then having developers build transfer assets, at their cost, directly to another part of the network that has capacity or directly to a treatment plant. Therefore, there are very few network upgrades in the portfolio to service prospective large developments. For smaller developments, Hunter

[64] Australian Guidelines for Water Recycling: Managing Health and Environmental Risks (Phase 1)-2006

Water adopts a risk approach to assess whether developments can connect to the existing network without the need for immediate major upgrades.

Backlog and infill sewerage infrastructure

There are approximately 2,600 dwellings within established urban areas and villages throughout Hunter Water's area of operations that are not connected to a sewer system. Most of these dwellings use on-site sewerage disposal which, over time, may give rise to public health and/or environmental concerns. These risks intensify as pressure for new development within these areas increases, which in turn leads to differing wastewater service standards between new and existing development. Consequently, the local community perceives unsewered homes as an accumulation of unfinished work by developers and Hunter Water with an expectation that Hunter Water will eventually address this "backlog" as part of its sewerage investment program.

Hunter Water estimates the cost of addressing backlog sewer within its area of supply is in the order of $155 million. This includes both infill backlog areas within existing developed and sewered areas and smaller rural villages.

Hunter Water proposes a long-term plan that would address these issues progressively through an allowance of $4.5 million ($2012-13) over the coming determination period for strategic investment in a backlog sewerage projects. The Corporation recognises that the issue of backlog sewer has come about over many decades and therefore solutions may take many years to be fully realised. However, the allowance made by Hunter Water in this submission will establish a starting point to begin to address the highest priority areas and to undertake continual planning for future backlog works.

Stormwater

Hunter Water intends to spend approximately $1.4 million ($2012-13) during the coming price period on the assessment, rehabilitation and maintenance of stormwater channels within the Hunter region.[65]

A breakdown of the expenditure is provided in Table 6.8. These stormwater assets transfer stormwater flows and minimise flooding impacts on the community. Consistent with appropriate asset management practices, Hunter Water considers these assets to be critical, thereby requiring a rolling condition assessment of the stormwater asset components. Under this program, Hunter Water regularly assesses the stormwater assets to determine the likelihood of failure. This assessment process is used to make informed decisions about replacement or rehabilitation of channel structures.

[65] Hunter Water manages major stormwater assets only in the local government areas of Cessnock, Lake Macquarie, and Newcastle.

Table 6.8 Proposed stormwater capital expenditure program ($m 2012-13)

Driver	2013-14	2014-15	2015-16	2016-17	2017-18	Total [a]
Growth	0.0	0.0	0.0	0.0	0.0	0.0
Mandatory standards	0.4	0.4	0.4	0.4	0.4	1.4
Business decisions	0.0	0.0	0.0	0.0	0.0	0.0
Asset and service reliability	0.0	0.0	0.0	0.0	0.0	0.0
Discretionary standards	0.0	0.0	0.0	0.0	0.0	0.0
Government programs	0.0	0.0	0.0	0.0	0.0	0.0
Total	**0.4**	**0.4**	**0.4**	**0.4**	**0.4**	**1.4**

Source: HWC. Totals may not add precisely due to rounding.

a) Total is for the price period, excludes 2017-18

Corporate

Approximately $40 million ($2012-13) is projected to be spent on corporate projects that will be allocated to regulated capital expenditure over the next price period with $33 million on Information and Communication Technology (ICT) projects, $3.4 million on metering and meter replacement projects and $3.1 million on the implementation of quality management systems to meet the new IPART operating licence requirements. The breakdown of corporate expenditure by driver for the proposed price period is shown in Table 6.9.

The main areas of expenditure are in ICT. The ICT portfolio covers investment in all ICT-related hardware and software projects across the Corporation. The portfolio is broken up into the asset and operations side of the business, the customer side of the business and supporting enterprise-wide ICT infrastructure, applications and information. Funding has been allocated for ICT infrastructure to sustain a more secure, stable and resilient ICT platform.

The main streams funded within these investment groups include:

- Customer care and billing – Customer Information System technical upgrade and releases, e-business and metering.
- Asset information systems - spatial data capture, plan services, SCADA enhancements and minor asset systems.
- Enterprise applications and information – ongoing upgrades to business intelligence, knowledge management, internet/intranet, enterprise business systems and minor applications.
- Enterprise infrastructure – upgrades to infrastructure (computers, storage, servers) and minor infrastructure projects.
- Ellipse upgrade – upgrade to the enterprise resource planning and enterprise asset management systems.[66]

[66] Ellipse is Hunter Water's ERP (enterprise resource planning) system for finance, procurement, HR, OHS, payroll, point asset management, Fixed Asset Register.

Table 6.9 Proposed corporate capital expenditure program ($m 2012-13)

Driver	2013-14	2014-15	2015-16	2016-17	2017-18	Total [a]
Growth	1.2	0.9	1.2	1.2	1.1	4.5
Mandatory standards	2.8	2.1	2.6	2.4	1.8	9.9
Business decisions	4.2	4.4	11.1	3.9	3.9	23.6
Asset and service reliability	-	-	-	-	-	-
Discretionary standards	-	-	-	-	-	-
Government programs	0.6	0.4	0.6	0.6	0.6	2.2
Total	**8.7**	**7.8**	**15.5**	**8.2**	**7.3**	**40.3**

Source: HWC. Totals may not add precisely due to rounding.

a) Total is for the price period, excludes 2017-18

6.7 Proposed capital output measures

Hunter Water supports the use of output measures to help determine the delivery effectiveness and value for money achieved from the capital portfolio. As required by IPART's submission guidelines, Hunter Water has proposed new output measures for the coming price period. These measures are detailed in Appendix H.

The proposed measures are consistent with the measures IPART set for Sydney Water Corporation in its recent review of Sydney Water's prices. The movement towards serviceability outcomes is a positive step and Hunter Water looks forward to working with IPART in the future to develop suitable measures.

6.8 Capital portfolio efficiency and delivery

The Water Services Association of Australia (WSAA) undertook a study in 2011 involving interviews with several Australian regulators and concluded that capital portfolio efficiency could be interpreted as "capturing processes and procedures that deliver value to consumers, keeping costs at the minimum level consistent with timely delivery of the required projects". [67]

This finding is consistent with the objectives of Hunter Water's capital portfolio management - to deliver the right projects at the right time for the right price such that value is delivered to both customers and the environment. Hunter Water aims to meet this objective through the use of integrated, best practice portfolio, program and project management practices.

The main areas of any capital works portfolio are:

- asset management
- investment planning (strategy and timing)
- cost estimation
- portfolio, program and project management, and

[67] Water Services Association of Australia, 2011.

- procurement.

These are discussed in turn in the following sections.

Asset management

Hunter Water develops its renewal, maintenance and critical asset management strategies consistent with its asset management objective. The overall asset management framework is illustrated in Figure 6.5.

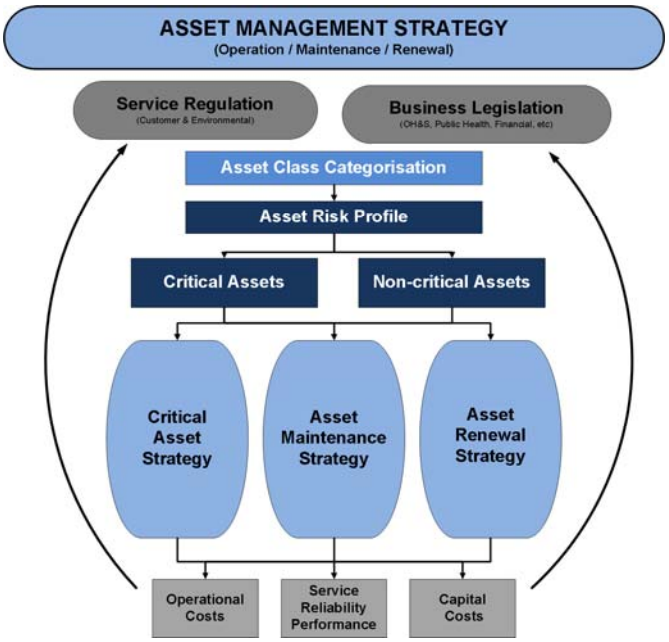
This objective is to balance the community's service expectations with the operational risks of delivering the agreed service at an optimised cost. Challenges that impact on this objective include the long-term financial sustainability and the continual increase in community expectations about both reliable drinking water and environmental discharge quality. They also include increasing climate variability, which impacts secure water supply and asset operational performance and future resource availability. The asset management objective at Hunter Water can therefore be summarised as:

'Optimise physical asset life cycle management to provide sustainable water services to existing and future customers at acceptable levels of risk'.

Effective management of assets is essential in order to provide services that are financially sustainable and to demonstrate this to customers, regulators and other stakeholders. The corporate benefits of the asset management discipline include improved governance and accountability, improved financial efficiency and affordability for customers, enhanced service management and customer satisfaction, improved risk management and sustainably constructing and operating assets.

Asset management integrates with corporate strategy development and business planning and ensures that non-asset solutions, life-cycle costs and risks are considered through the asset life cycle (see Figure 6.5).

Figure 6.5 Asset management framework



Source: HWC

Investment planning

Hunter Water develops investment strategies for its assets to ensure that it meets customer and environmental regulatory standards, caters for expected customer growth, and meets other strategic business objectives.

A least-cost life-cycle approach is taken in developing these strategies and the staging and timing of proposed upgrade works is adjusted depending on the monitoring of actual operational performance of the existing assets, the rate of actual new customer connections, the risk position taken with regard to regulatory compliance and the financial viability of the organisation.

The main elements of the investment planning process are:

- Preparing strategies that will inform the capital portfolio definition process. Strategies are usually developed for a 20-year timeframe, and for some assets, even longer.
- Undertaking regular planning review and risk assessments to confirm or adjust the timing of proposed works in the capital portfolio (particularly in the next 10 years), and revising the strategies if needed.
- Undertaking options assessment. This looks at various approaches to meeting service requirements including the do nothing, least capital cost and interim solution options in addition to the least-cost life-cycle option.
- Preparing business cases that incorporate the above elements.

Catering for growth is an important consideration, and Hunter Water has a growth mapping tool which is a single spatial GIS framework that has been developed to collate, manage, analyse and make growth projections using data from various sources. It helps to understand growth drivers at a regional level and importantly from a capital decision-making viewpoint, at a local scale (that is, at local government area and specific development area levels). Monitoring of actual connections is done on an annual basis and growth projections and the capital portfolio adjusted accordingly.

Cost estimation

Accurate cost estimation is a cornerstone of efficient program delivery. The objective of Hunter Water's estimating guidelines is to improve the estimating of capital works projects to gain greater correlation between initial estimates and the final costs of projects. This correlation is not solely focused on individual projects but also the portfolio of works.

The performance goal of the estimating guidelines is to:

- achieve a variance of less than 25 per cent between forward portfolio budgets (preliminary estimates at gateway 2 – development funding) and final capital project costs; and
- achieve an even distribution of estimates above and below the final capital project costs (50 per cent above and 50 per cent below preliminary estimate at gateway 2 – development funding).[68]

The cost estimating guideline provides a matrix detailing the type of estimate required for each type of project and the stage of the project, including parametric, first principles and risk-based cost estimating. The level of contingency assigned to projects decreases at each gate as uncertainty decreases until award of contract when contingencies are typically 5 to10 per cent, depending on project complexity.

[68] See Figure 6.2 to see where gateway 2 fits within the approval process.

Based on the goal of an even distribution of estimates above and below the final capital project costs, on average, project savings are able to offset project overruns.

The guidelines and performance against the guidelines are reviewed annually with lessons learnt fed back into the guidelines and future estimates.[69] To increase the robustness of estimates, any project with projected expenditure greater than $3 million is prepared by an independent expert estimator.

Hunter Water has made good progress in cost estimating over the last four years and this has been a significant factor in delivering the current price period portfolio on budget and on time.

Portfolio, program and project management

Portfolio, program and project office (P3O®) is a best-in-class investment management model for organisations to choose and deliver new initiatives (programs and projects). P3O refers to the total structure in place through various offices (portfolio, program and project) to manage investments (as opposed to managing day-to-day operations).

The use of P3O methodologies to enhance Hunter Water's portfolio and program management capability provides a decision-enabling/delivery-support model for investment management within the Hunter Water.

Portfolio management at Hunter Water is undertaken by the Corporation's "portfolio office", which centrally manages the investment process, strategic alignment, prioritisation and selection, as well as monitoring and optimising the value achieved by the capital investments.

The primary intent of portfolio management is "doing the right projects" and its design and ongoing refinement is guided by the following core concepts:

- consistent with best practice
- a top-down framework with a clear link to business drivers (regulatory and strategic)
- being proactive, continuous and responding to, and informing, organisational objectives and strategy
- providing a decision-support framework that is:
    - evidence-based, transparent and repeatable
    - applicable to short-, medium- and long-term planning
    - scalable to support the planning cycles from one to 10 years and support one-off decisions as part of ongoing change management, and
    - robust, yet context sensitive.
- providing a structured and focused means for meaningful engagement with all stakeholders in the capital investment process.

Procurement

Earlier sections of this chapter demonstrated that Hunter Water has effectively delivered the full $640 million of IPART's 2009 allowed capital expenditure. In part, this is a reflection of Hunter Water's good track record of efficient procurement.

[69] Improvements through experience have included making greater use of external estimating expertise, involving delivery personnel earlier in projects to confirm scope, ensuring upgrade project scope takes account of the condition of existing assets and improving estimating data bases for sharing estimating knowledge.

For many years, Hunter Water has taken a flexible and adaptive approach to its procurement of capital works and has demonstrated a willingness and ability to adopt new and innovative procurement models. In addition to the conventional, design and construct tender, Hunter Water has embraced:

- alliance partnership contracts
- bundling of different projects into single tenders
- principal-supplied materials, where Hunter Water uses its purchasing leverage to acquire materials at lower prices than those available to small construction contractors
- panels of suppliers and contractors, and
- combining Hunter Water and construction industry delivery capacity.

A major procurement initiative during the current price review period has been the use of an alliance partnership with private sector contractors for the delivery of a significant portion of the wastewater and recycled water treatment works program. The alliance model was selected for delivery of the wastewater treatment program because the program had the following characteristics:

- very tight timeframes
- shortage of Hunter Water resources, particularly in design and project management
- large projects on brownfield sites that needed to remain operational during construction
- complex interfaces with operational impacts
- need for Hunter Water to be involved in design and construction decisions, and
- the ability to still use competitive tenders for construction.

The alliance model was seen as the procurement approach most likely to ensure successful and timely delivery of this $200 million program of treatment works. In addition an alliance was seen as able to deliver the following benefits:

- linkages that allow lessons learnt from one project to be applied to others, improving the efficiency of delivery as the alliance program proceeds
- standardisation of equipment and design and so reducing duplication of design effort and resulting in life-cycle cost savings, and
- greater access for Hunter Water to a wide set of cost data to improve estimating accuracy for other works outside the alliance program.

The alliance model has provided considerable flexibility, allowing changes to best suit planning and budget requirements to ensure that the best solution to meet the business case is adopted. This was demonstrated in the Branxton and Paxton wastewater treatment works upgrade projects where the alliance group identified an alternative concept to those originally proposed. Modified commercial arrangements were adopted to allow the alternate designs to be pursued while still meeting required timeframes. In another instance, concept review by the alliance group identified that a major portion of the proposed scope of work to be undertaken at the Boulder Bay treatment works could be deferred by at least five years.

Around 73 per cent of the 2009-10 to 2012-13 capital program was delivered through traditional forms of procurement involving design-bid-build arrangements using in-house project managers. A significant focus was placed on workplace and public safety, and on environmental and customer requirements (including consultation) while delivering the nominated program.

During the next five years Hunter Water will procure services for the delivery of infrastructure to a value of approximately $400 million. This will be achieved mainly through competitive tenders.

Hunter Water welcomes the opportunity to provide further information about its procurement processes to IPART and its review consultants during the price review.

7 Determination period and revenue requirements

Main Points

- *Hunter Water believes that the recent practice of setting prices for four-year determination periods should continue.*
- *Hunter Water has used IPART's new post-tax building block approach to develop price proposals.*
- *Under the new approach, tax liability is included as a price building block and return on capital is based on a real post-tax weighted average cost of capital.*
- *Specific price adjustments are sought for each of the three main products – water supply, wastewater services and stormwater services – so that prices are more cost reflective and there are no cross-subsidies between products.*
- *This submission is based on a target real post tax rate of return of 5.6 per cent*

7.1 Length of the determination period

An important consideration in framing revenue requirements is the length of the price determination period. Hunter Water's preference is for a price period of four years because this period strikes a reasonable balance between providing price certainty to Hunter Water and its customers and the Corporation's commitment of resources to a price review. Shorter periods impose considerable resourcing costs in terms of preparing for, and servicing, the review process while periods longer than four years can reduce the capacity to adjust prices for unforeseen circumstances. Where a four-year price period is adopted, it is essential that there is capacity for all prices, including miscellaneous service charges, to be adjusted for the effect of inflation.

7.2 Changes to the building block approach

In framing the prices sought in this submission, Hunter Water follows the building block approach to price setting used by IPART. However, IPART has made some changes to the building block approach since the last Hunter Water determination in 2009.

In December 2011, IPART decided to include tax as a separate cost building block and use a post-tax weighted average cost of capital (WACC) to estimate the appropriate return on capital. This decision applies to all future water price reviews.

In summary, the building block approach aims to ensure the following costs are covered by prices.

- operations, maintenance and administration
- depreciation, sometimes referred to as return of capital
- a rate of return on the capital invested in the business
- an allowance for working capital, and
- company income tax expense.

Readers seeking more information on IPART's building block approach are referred to the discussion in the issues paper[70] and the discussion in IPART's final report on the incorporation of company tax in pricing determinations.[71]

Calculation of the tax building block

The separate tax building block and use of a post-tax weighted average cost of capital (WACC) should reflect the income tax expense paid by the entity. As the income tax paid by the entity covers both the regulated and non-regulated components, a number of non-regulatory components have been included in the tax building block calculation to ensure it closely reflects the tax liability of the entity.

The tax building block calculation is adjusted for the acquisition of actual assets free of charge (which is treated as non-regulated income), an estimated tax depreciation (adjusted to exclude a component relating to non-regulated assets) and an estimated interest expense, based on a notional calculation rather than the entity's actual gearing ratio and actual average interest rate.

IPART's use of a notional gearing ratio and cost of debt percentage (based on the parameters used in the WACC calculation) overstates the interest expense, and therefore underestimates the revenue allowance from the tax building block. Although this submission has adopted the IPART methodology, Hunter Water believes that an entity's actual gearing ratio and actual average interest rate should be used to determine the revenue allowance from the tax building block if it is intended to closely reflect the actual tax liability of the entity. The economic regulator for the water sector in the United Kingdom, the Office of Water (OFWAT) calculates the tax building block as an entity-specific cost based on the entity's actual gearing. OFWAT believes the treatment of tax and the parameters used to calculate the WACC should be determined separately.[72]

Gamma (imputation credits) is no longer a parameter of WACC, but it is a component of tax liability under the IPART's revised building block model.

Tax liabilities can be estimated using the following formula:

$$T = \frac{1}{(1+\Pi_c)}\left[R.(1+\Pi_c) - OPEX.(1+\Pi_c) - TD - I\right]\left[\frac{t.(1-\gamma)}{1-t.(1-\gamma)}\right]$$

Where T is the real tax liability, $(1+\pi_c)$ is the cumulative inflation adjustment, R is real allowable regulated revenue exclusive of tax, $OPEX$ is real operating costs, TD is nominal tax depreciation, I is nominal interest payments, t is the corporate tax rate and γ is the value of imputation credits.

[70] IPART, 2012 (d), chapter 4
[71] IPART, 2011 (b)
[72] OFWAT, 2011 (a), par 121, page 40

Gamma is the dividend imputation factor, and represents the value placed on dividend imputation credits by investors. Under the Australian dividend imputation system, investors receive a franking credit for the company tax paid by the organisation. The credit ensures the investor is not taxed twice on their investment returns (i.e. via company tax paid, and then again via personal tax returns).

In 2009 the Australia Electricity Regulator (AER) proposed a gamma of 0.65[73]. This was challenged and overruled by the Australia Competition Tribunal. The Tribunal determined the gamma should be 0.25.

A report prepared by the Strategic Finance Group (SFG) in response to the AER proposed 0.65 gamma, presented considerable evidence that the dominant market practice is to make no adjustment for franking credits when estimating the cost of capital or performing valuation exercises. Based on evidence, SFG concluded that it was a conscious choice by market experts, and not based on an unawareness of the issue. The market practice is to use a gamma of zero.[74]

The overall impact of a decrease in gamma will increase the total notional revenue, due to the increase of tax liability.

IPART's current practice is to adopt a gamma range of 0.3 to 0.5. In December 2011, IPART released a discussion paper on the review of imputation credits (gamma). In this paper, IPART proposed a gamma of 0.25. [75]

Based on this evidence presented by SFG, the reversal of the AER decision and IPART's proposal of a gamma of 0.25, Hunter Water supports a gamma of 0.25 be applied to the tax liability building block.

7.3 Operating and capital costs

Details of operating, maintenance and administration costs are provided in Chapter 5 and information on capital expenditure in the previous price period and that foreshadowed for the coming price period are outlined in Chapter 6.

7.4 Rate of return

For the purposes of this submission, Hunter Water has adopted a post-tax WACC of 5.6 per cent based on the parameter ranges shown in Table 7.1 and derived considering long-term average rates for the market-based parameters. For comparison with IPART's previous approach of excluding tax from the building blocks and using a real pre-tax rate of return, this post-tax rate is equivalent to a pre-tax rate of 6.6 per cent.

In the light of the high level of current market uncertainty and volatility, Hunter Water firmly believes that the appropriate WACC should be determined using long-term average rates for the key market parameters. Hunter Water has argued that using current market rates is inappropriate for setting prices over a four-year term in its submission to IPART's 2009 review of the debt margin and, again, in its August 2011 response to IPART's discussion paper on incorporating company tax into price determinations. The latter submission demonstrated how IPART's use of current values had produced quite different WACC outcomes over an 18-month period.

[73] Australian Energy Regulator (AER), 2009
[74] Strategic Finance Group, 2009, page 2
[75] IPART, 2011 (c)

Nevertheless, Hunter Water has considered and presented both long-term averages for WACC parameters as well as parameters derived from current market values. This is similar to the approach that IPART has taken in the 2012 price determination for Sydney Water. In that determination, IPART considered both long-term averages and current market values but preferred to set a point estimate at the top of the range derived from current market values.

The long-term average approach derives a midpoint WACC of 5.6 per cent. This would be in the upper bound of the WACC range of 4.3 per cent to 5.9 per cent, aligned with market values. As such, Hunter Water believes that adopting a WACC that is in the upper bound of the WACC range based on market values, and aligned with long-term averages, is consistent with IPART's recent determination for Sydney Water. [76]

Table 7.1 WACC parameters

	Long term averages	Market values
Nominal risk free rate	5.4%	3.1%
Inflation	2.5%	2.5%
Debt margin	2.0%	3.5% to 4.8%
Debt to total assets	60%	60%
Market Risk Premium	5.5% to 6.5%	5.5% to 6.5%
Gamma	0.25	0.25
Equity Beta	0.6 to 0.8	0.8 to 1.0
Cost of equity	8.7% to 10.6%	7.5% to 9.6%
Cost of debt	7.4%	6.6% to 7.9%
WACC range (real post-tax)	5.3% to 6.0%	4.3% to 5.9%
WACC midpoint (real post-tax)	5.6%	5.1%
WACC point estimate (real post-tax)	**n/a**	**5.6%**

Source: HWC and IPART, 2012(e), Table C.3

A detailed discussion of WACC parameters assumed and the overall WACC estimate is provided in Appendix I. Hunter Water engaged Deloitte Touche Tohmatsu (Deloitte) to provide an external review of the WACC parameters and comment on the suitability of the rate of return proposed by Hunter Water. In their review, Deloitte concluded that Hunter Water's view of the overall post-tax WACC at 5.6 per cent is not unreasonable and is within their own projected WACC range of 5.5 per cent to 6.2 per cent. The Deloitte discussion of the appropriate method for calculating the WACC is contained in commercial in confidence Appendix J.

NSW Treasury Corporation (TCorp) also agrees with Hunter Water's approach in considering long-term parameters for the WACC with arguments discussed further in Appendix I.

Hunter Water acknowledges that market-based parameters including the risk-free rate, inflation and debt margin will need to be updated at the time of Hunter Water's final determination to reflect prevailing market conditions and changes in long-term trends. Given the global credit and financial situation prevailing in September 2012, Hunter Water believes it is possible that the WACC may be different at the time IPART makes its final determination in May or June 2013.

[76] IPART, 2012(e), Table C.3

7.5 Avoided costs and Government directions

IPART allows the value of avoided and/or deferred costs associated with recycled water schemes to be recovered from the broader customer base[77] via an adjustment to the regulatory asset base. The rationale for this allowance is that investment in recycled water is a benefit to all customers in that it has potential to save, or defer, further investment in providing water supply or wastewater treatment/network infrastructure. These potential investment savings can occur in both water source and in water distribution infrastructure and operations. Investment in water recycling can also offset the need for further investment in wastewater infrastructure, such as wastewater treatment and disposal facilities and reduce wastewater operating costs.

Some adjustments have been made to capital and operating costs to include "deferred" and "avoided" costs associated with the proposed Kooragang Industrial Water Scheme (KIWS). The supply of recycled water to large industries on Kooragang Island will defer the need to upgrade potable water treatment and trunk delivery system upgrades.

The "avoided" costs from deferring these upgrades include those associated with the deferment of the stage three upgrade of the Grahamstown water treatment plant, deferment of the need to upgrade the trunk delivery main from Grahamstown water treatment plant and operating cost savings at the Grahamstown water treatment plant. The details of the valuation of the deferred and avoided costs for the KIWS are presented in Appendix G.

A further adjustment to the RAB proposed in this submission is due to the directives issued following the announcement by the Premier of NSW of a new dam and the Hunter/Central Coast water grid[78]. Included in the package of works was the construction of the recycled water plant for Kooragang Island. The Minister for Water subsequently wrote to:

- Hunter Water under section 20P of the *State Owned Corporations Act 1989* and instructed the Board of Directors to provide a subsidy of up to $10 million for the Kooragang Island recycled water project; and,
- IPART under section 16A of the *Independent Pricing and Regulatory Tribunal Act 1992* advising IPART of the 20P instruction to provide a $10 million subsidy and that it would be applied to the Tribunal's consideration of the maximum prices charged by HWC from 1 July 2009.

The incorporation of the $10 million subsidy was to be achieved by including $10 million in the water component of the roll forward of the RAB during the 2008 price review. At that time, commercial negotiations with potential recycled water customers were at a very early stage and the cost estimates for the scheme were also in early development. As a result, the subsidy and avoided costs were not included in the 2008 submission and hence were not part of the water capital expenditure determined by IPART or rolled into the RAB.

With the completion of commercial negotiations in July 2011 and confirmation from IPART that the 2008 directive remains valid, Hunter Water is seeking the inclusion of the $10 million subsidy and avoided costs as part of proposed water capital expenditure for inclusion in the RAB.

[77] IPART, 2006, Appendix D

[78] Dated 13 November 2006

7.6 Building block components and aggregate pricing

Building Block Components

Hunter Water's financial modelling derives the building block components for its water, sewer and drainage operations. The building block components for water, sewer and drainage are detailed in Table 7.2, Table 7.3 and Table 7.4.[79]

The building block components in Table 7.2 and Table 7.3 do not include the costs associated with recycled water operations, which are accounted for separately in setting recycled water prices. As discussed section 7.5, some adjustments have been made to capital costs to include "avoided" costs associated with the proposed Kooragang Industrial Water Scheme using the methodology set out in IPART's 2006 recycled water pricing guidelines.[80]

The total revenue requirements shown in the tables have been smoothed on an "end-point smooth" basis – sometimes referred to also as a "glide path" basis and to smooth out any pricing effects arising from projected step changes in demand.[81] Revenue smoothing has only been applied to the four years of the proposed price period.

Table 7.2 Building block components – water ($'000 2012-13)

Component	2013-14	2014-15	2015-16	2016-17	2017-18
Operating costs	49,947	51,941	51,166	53,595	54,428
Depreciation	13,675	14,097	14,434	14,830	15,909
Tax liability	4,409	4,554	4,494	4,585	4,920
Return on RAB [a](unsmoothed)	54,138	55,734	56,830	58,241	59,509
Working capital requirement	513	773	695	743	751
Target revenue requirement (unsmoothed)	**122,683**	**127,098**	**127,620**	**131,994**	**135,516**
Target revenue requirement (smoothed) [b]	**125,218**	**126,209**	**127,087**	**131,173**	NA

Source: HWC. Totals may not add precisely due to rounding.

a) RAB = regulatory asset base.

b) Includes a reduction for non tariff regulatory revenue and a smoothed return on the RAB building block over the 2013-14 to 2016-17 period.

[79] Tables in this chapter provide data for one year beyond the proposed price period. This is to meet IPART's requirement to provide data for five years regardless of the proposed price period. The column providing the additional data is shaded.

[80] IPART, 2006, Appendix C

[81] Because annual revenue requirements must be recovered from projected sales, step changes in sales (such as may result from the closure of a major customer) can affect the arithmetic calculation of the price required to recover revenue. Where this is the case, additional smoothing is required to avoid prices moving in opposite directions within the price period.

Table 7.3 Building block components – sewer ($'000 2012-13)

Component [a]	2013-14	2014-15	2015-16	2016-17	2017-18
Operating costs	64,630	66,012	67,091	67,327	68,449
Depreciation	15,919	16,161	16,465	16,810	17,611
Tax liability	7,360	5,130	4,979	5,020	5,348
Return on RAB [b] (unsmoothed)	62,593	63,062	63,854	64,866	65,590
Working capital requirement	829	937	881	900	962
Target revenue requirement (unsmoothed)	**151,331**	**151,302**	**153,271**	**154,922**	**157,961**
Target revenue requirement (smoothed) [c]	**137,548**	**142,704**	**148,040**	**153,552**	NA

Source: HWC. Totals may not add precisely due to rounding.

a) Includes trade waste.

b) RAB = regulatory asset base.

c) Includes a reduction for non tariff regulatory revenue and a smoothed return on the RAB building block over the 2013-14 to 2016-17 period.

Table 7.4 Building block components – drainage ($'000 2012-13)

Component	2013-14	2014-15	2015-16	2016-17	2017-18
Operating costs	1,146	1,150	1,219	1,167	1,187
Depreciation	511	515	519	523	534
Tax liability	(93)	(93)	(100)	(99)	(91)
Return on RAB [a] (unsmoothed)	2,006	1,999	1,994	1,988	1,980
Working capital requirement	40	26	26	27	26
Total revenue requirement (unsmoothed)	**3,610**	**3,598**	**3,657**	**3,605**	**3,635**
Target revenue requirement (smoothed) [b]	**4,881**	**4,398**	**3,962**	**3,569**	NA

Source: HWC. Totals may not add precisely due to rounding.

a) RAB = regulatory asset base.

b) Includes a reduction for non tariff regulatory revenue and a smoothed return on the RAB building block over the 2013-14 to 2016-17 period.

7.7 Real price changes and 'X' factors

IPART's 2009 determination for Hunter Water was framed to deliver a real pre-tax rate of return on Hunter Water's regulatory asset base of 6.5 per cent. This rate of return was a point estimate 30 basis points lower than the midpoint of the commercial range for the WACC as determined by IPART.

IPART justified adopting a point estimate lower than the midpoint as a special case that was "*strongly motivated by stakeholder submissions*" about the significant price increases faced by customers. IPART considered that the lower point estimate provided Hunter Water "*with a commercial return that adequately compensates the business for the capital it has invested*" and was "*well within the range of values that could be considered to provide an appropriate return on capital."*

Hunter Water has framed its pricing proposals to deliver the revenue requirements set out in section 7.6 with the return on the regulatory asset base matching the point estimate real post-tax WACC of 5.6 per cent as derived in section 7.4 above. Hunter Water has set the revenue requirements separately for its water, sewer and stormwater drainage businesses and the separate 'X' factors to deliver this outcome for each of the businesses are set out in Table 7.5.

Hunter Water considers that setting prices at the levels proposed will enable it to maintain an investment grade rating.

Table 7.5 'X' factors for water, sewer and drainage (per cent)

	2013-14	2014-15	2015-16	2016-17	2017-18
Water	2.1%	2.1%	2.1%	2.1%	1.8%
Sewer	2.5%	2.5%	2.5%	2.5%	0%
Stormwater drainage	-10.5%	-10.5%	-10.5%	-10.5%	0.3%

Source: HWC

8 Water pricing

Main Points

- *To maintain strong water conservation signal, Hunter Water's charging structure is based on a pay-for-use philosophy with most of the Corporation's water revenue derived from usage charges.*
- *Hunter Water has set proposed usage prices that cover the increasing costs of the water supply part of its business. Usage prices will increase from the current price of $2.08 per kilolitre to $2.26 in 2016-17, before inflation.*
- *This usage price also maintains the variable proportion of a typical residential water and sewerage bill at around 40 per cent. The 2012 pricing consultation showed that three quarters of customers want more control over their bill through usage charges.*
- *The proposal maintains the location-based prices applying to usage greater than 50,000 kilolitres per year by individual customers and introduced in 2001. The prices provide more cost-reflective charging to customers using very large volumes of water without drawing on much of Hunter Water's extensive distribution infrastructure.*
- *New water service charges are proposed in line with IPART's new pricing principles for the structure of metropolitan water utility prices.*
- *A common residential service charge of $16.69 per year will apply to all residential houses, home units and flats and to many small non-residential customers in 2013-14.*
- *The higher water service charge that has applied to customers in Dungog Shire since 2008 will be discontinued from 1 July 2013. This will save residential customers in Dungog Shire around $36 in 2013-14.*
- *Hunter Water proposes to retain the average cost method for setting the interchange price with the central coast. This approach sets an initial interchange price of $1.15 per kilolitres in 2013-14.*

8.1 Current price structure and prices

The most fundamental reform of water pricing in Australia has occurred over the last two decades. In the Hunter, this reform began in 1982 with the introduction of "pay-for-use" pricing and was completed in the mid 1990s when property value ceased to be used to calculate service charges. Since then, a simple user-pays philosophy has guided continuing

refinement of pricing leading to the current charging structure. The result is that, today, Hunter Water has a largely pay-for-use pricing structure for its water services, providing a strong demand management signal. For a typical household customer, usage charges make up around 95 per cent of the total annual water bill. For industrial customers, usage charges can be more than 99 per cent of the bill.

The 2000 IPART determination saw the introduction of "location-based" water usage charges for industrial customers with very high water consumption. These location-based charges apply only in areas close to water sources and reflect the lower costs of supplying water in these areas because less distribution infrastructure is used. Hunter Water believes that cost-reflective location-based charges for large industrial customers are in line with the competition reforms that have occurred more generally across Australia over the last two decades.

Hunter Water's current water prices comprise service charges related to meter size and a single usage charge for most customers. In 2012-13, the service charge for a 20 mm meter is $18.92 in most of Hunter Water's area of operations and $64.55 in the areas formerly served by Dungog Shire Council. The usage charge for consumption under 50,000 kilolitres per year (and hence the only usage charge applicable to most customers) is $2.08 per kilolitre in all areas. A location-specific usage charge applies to usage over 50,000 kilolitres and varies with location as described above. The current service and usage charges are shown in more detail in Table 2.1 earlier in this submission.

8.2 Long run marginal cost

IPART's 2009 determination report outlines IPART's approach to setting water usage prices. IPART considers the most efficient approach for setting usage prices is with reference to the long-run marginal cost (LRMC) of water supply.

LRMC is simply a derivation of future marginal capital and operating costs. In its January 2009 submission to IPART, Hunter Water adopted the average incremental cost (AIC) as most practical means of calculating the LRMC. In this approach, the present value of the costs associated with supplying water from the next source augmentation in a least-cost expansion plan is divided by the present value of the incremental demand supplied by that option.

In 2009, the next augmentation was taken as the construction and operation of Tillegra Dam. In addition to the construction, operation and maintenance costs of the dam, the calculation included the incremental costs associated with the treatment to potable quality, as well as the cost of distribution to the water network. It its final determination in July 2009, IPART also calculated the LRMC using the costs of Tillegra Dam as the next supply increment.

The proposed Tillegra Dam was refused planning approval in December 2010 and thus will not proceed. As a result, it is no longer appropriate to base the calculation of LRMC on the costs associated with Tillegra Dam.

The decision to not proceed with Tillegra Dam has rendered Hunter Water's 2008 Integrated Water Resources Plan (the $H_2$50 Plan) obsolete, and created the need to develop a new Lower Hunter Water Plan.

The development of a Lower Hunter Water Plan will ensure there is adequate water for the region's needs, both in drought and for the longer term, to support predicted growth in population and industry. The Lower Hunter Water Plan is being developed by the Metropolitan Water Directorate of the Department of Finance and Services in collaboration with Hunter Water. The plan will look at a range of options to secure the Lower Hunter region's water supply and is expected to be completed by late 2013.

Until the Lower Hunter Water Plan is finalised, Hunter Water will not have any formal suite of demand management and supply increment measures on which to calculate the LRMC.

In the absence of such a suite of measures, Hunter Water proposes that the water usage price for the next determination period could be established by indexing the 2012-13 price forward by the water 'X' factors outlined in Chapter 7. This is discussed further in section 8.4.

8.3 IPART's proposed changes to water price structures

In June 2011, IPART began a review of the price structures for water and sewerage services for the four metropolitan water utilities.[82] As a result of the review, IPART developed pricing principles for the fixed service and variable usage charges for the water and sewerage services provided by these utilities. These principles are reported in IPART's March 2012 report on price structures for metropolitan water utilities[83]

The main elements of IPART's proposed water tariff structures are:

- the water usage price is to be a standard variable charge for all customers and set with reference to Hunter Water's long-run marginal cost
- the residential water service charge is to be a standard annual charge for all residential dwellings unless there is evidence that there are material differences in the costs of servicing different residential types, and
- the total water revenue collected from non-residential customers is to reflect the costs incurred in servicing those customers.

Hunter Water has framed the water charges proposed in this submission according to these principles and broadly following the revenue hypothecation approach illustrated by Figure 8.2 of IPART's March 2012 report. However, Hunter Water's proposals also maintain some earlier price reforms that are both well established and well accepted by the Hunter community. These include:

- a location-specific usage tariff applicable to industrial customers for usage exceeding 50,000 kilolitres per year
- an unfiltered water charge for water that is supplied directly from raw water sources, without filtration, and
- a price for inter-regional transfer to and from the central coast water utilities.

It is also proposed to reconfigure the water charges for unmetered properties along the lines adopted by IPART in its June 2012 price determination for Sydney Water. Hunter Water has a very small number of properties that are not metered, principally because it is not practical due to the physical configuration of the building structures and access to the water main.

8.4 Proposed water usage prices and service charges

As mentioned in the introduction to this chapter, Hunter Water has a long history of emphasising usage charges as a means of providing a water conservation signal.

Hunter Water proposes that real water usage prices be increased in line with the X factor adjustments that deliver the notional annual revenue requirement throughout the

[82] The four utilities subject to IPART price regulation are Sydney Water Corporation, Gosford City Council, Wyong Shire Council and Hunter Water Corporation.
[83] IPART, 2012 (b)

determination period. These annual X factors and the proposed usage charges are shown in Table 8.1[84].

Hunter Water's 2012 pricing consultation highlighted that customers believe that reducing their water usage level should have a greater impact on their bill. Three quarters of respondents thought that reducing water usage should have a greater impact than it does.

In this context, Hunter Water has selected water usage charges that would at least maintain the variable proportion of the residential combined water and sewer bill at around its current level of 40 per cent. This results in higher water usage charges than those IPART determined for Sydney Water in June but does acknowledge customers' desires for control over the bill.

Table 8.1 Proposed X factors and usage prices

	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
X factors (%)	NA	2.1	2.1	2.1	2.1	1.8
Usage price ($2012-13)	2.08	2.12	2.17	2.21	2.26	2.30

Source: HWC

Water service charges are a fixed annual charge for water service. These service charges serve, in part, to pass on to customers the cost of providing ongoing access to the system in relation to their water demands.

In keeping with IPART's approach to setting service charges in previous determinations, the service charges are calculated as a "balancing item" to ensure that water revenue covers the expected building block costs of providing the water service. The size of this balancing item is therefore dependent on the level of usage charges proposed.

Currently, service charges are set in relation to meter size. As outlined in the previous section, IPART's 2012 report on price structures has proposed changing the basis for residential service charges to a per occupied property basis. Under this arrangement, the same water service charge will apply to each house and strata title home unit and to each flat in a multiple occupancy building under single ownership.

Small non-residential stand-alone properties will be charged the same service charge as residential properties. Larger non-residential properties and multi-premise non-residential properties will continue to pay service charges according to meter size.

Proposed service charges for residential properties, small stand-alone non-residential properties and service charges for other non-residential properties are shown in Table 8.2.

Table 8.2 Proposed water service prices ($2012-13/year)

	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Residential						
Houses	18.92	16.69	16.69	16.69	16.69	16.70
Units and flats	N/A	16.69	16.69	16.69	16.69	16.70

[84] Tables in this chapter provide data for one year beyond the proposed price period. This is to meet IPART's requirement to provide data for five years regardless of the proposed price period. The column providing the additional data is shaded.

	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Non residential						
20mm stand alone	N/A	16.69	16.69	16.69	16.69	16.70
20mm	18.92	18.39	18.41	18.45	18.32	18.21
25mm	29.56	28.69	28.72	28.78	28.58	28.41
32mm	48.43	47.08	47.13	47.23	46.90	46.62
40mm	75.68	73.56	73.64	73.80	73.28	72.84
50mm	118.25	114.94	115.06	115.31	114.50	113.81
65mm	199.83	194.20	194.41	194.83	193.46	192.30
80mm	302.70	294.24	294.56	295.20	293.12	291.36
100mm	472.98	459.75	460.25	461.25	458.00	455.25
150mm	1,064.20	1,034.44	1,035.56	1,037.81	1,030.50	1,024.31
200mm	1,891.89	1,839.00	1,841.00	1,845.00	1,832.00	1,821.00
250mm	2,956.09	2,873.44	2,876.56	2,882.81	2,862.50	2,845.31
300mm	4,256.77	4,137.75	4,142.25	4,151.25	4,122.00	4,097.25
350mm	5,793.93	5,631.94	5,638.06	5,650.31	5,610.50	5,576.81

Source: HWC

8.5 Location-based usage prices

Background

Since the early 1990s, it has been widely recognised that increasing competition or competitive pricing could greatly facilitate microeconomic reform and allocative efficiency. It is not intended to revisit that discussion in this submission other than to remind readers that the benefits of microeconomic reform underpin Hunter Water's introduction of more efficient and cost-reflective pricing for major customers. The customers paying Hunter Water's location price are regionally significant businesses, mostly engaged in export or import-competing industries.

In the second half of the 1990s, the Hunter Water observed the new competition regimes developing in other utility sectors, such as electricity and telecommunications, and the potential for similar competition in the water industry.

Competition in these other sectors led to significant price restructuring, especially for large-volume users, with prices under competition more closely reflecting the actual cost of supply to a specific location or business. In many cases, these prices came about as a result of access arrangements or by utilities responding to the threat of access or competition and offering more cost-reflective pricing under contract. In the other sectors, these new price regimes were increasingly replacing the conventional uniform, or postage-stamp, prices. Hunter Water could see that various competition mechanisms, such as access regimes, could easily be applied to water supply in the lower Hunter region with similar results.

Because Hunter Water's usage price is based on long-run marginal cost, the usage price more than recovers the annual operating costs of the water supply business. In 2010-11, around 55 per cent of the water usage price contributed to the recovery of the capital-related building block costs of depreciation and return on capital. However, a small number of Hunter Water's industrial customers are located close to the water source infrastructure and hence very little of the water distribution infrastructure is needed to supply these customers. In this context, it is questionable whether customers that use very large volumes of water without extensive use of the distribution system should pay a water usage price, based on the full long-run marginal cost, which recovers the capital-related costs for infrastructure that the customers do not use.

In 2000, Hunter Water proposed to IPART that it should develop cost-reflective pricing for water supplied to large-volume customers located close to the Corporation's water sources to mirror the pricing arrangements emerging in other utility sectors. This location-based tariff was introduced in 2001 and has been well accepted as a competition response and is acknowledged as a leading price initiative in the water sector.

The lineal nature of Hunter Water's distribution system, and the fact that its sources are grouped at the northern extreme of this lineal system, mean that the application of location prices is both logical and practical. With such a lineal system, the amount of infrastructure used to supply water increases with the distance from the sources. It is, therefore, relatively easy to link distribution infrastructure costs to distance from the source and to structure prices to reflect these infrastructure costs.

Because competitive pricing instruments, like access pricing, are likely to be used by large-volume users, Hunter Water has designed the location-based water usage charge to apply only to industrial and commercial customers with very high water consumption. The location-based prices are applied on a water operational zone basis by calculating a charge for each of Hunter Water's water operational zones. The prices for each zone are derived by adjusting the capital-related costs covered by the usage price (depreciation and return on capital) to reflect the value of the distribution system servicing particular locations. Locations close to the water sources use less of the distribution system and hence should contribute less to the capital-related costs covered by usage prices.

The location tariff only applies to an individual customer's usage in excess of 50,000 kilolitres per year. The intent of this threshold was to maintain equity in charging with smaller industrial customers and residential customers in the same locations. This threshold means that customers eligible for a location specific usage charge still pay the full postage stamp price for the first 50,000 kilolitres of consumption each year. This is equivalent to the consumption of around 270 households.

The asset basis for the location tariff

The asset basis for the current location tariffs was comprehensively reviewed in 2008 as a preparation for the 2009 price submission to IPART.[85] This was the first review of the asset basis since 2000. Given that there is very little change in the overall structure of the water distribution network in the short term, it is not considered that a further review is needed at this time and the 2008 asset basis should be used for the 2012 submission.

On the basis of the 2008 asset review, the area of operations is divided into 16 water distribution zones. For seven of these zones, the gross margin calculated using postage stamp prices more than recovers the depreciation and return on capital for the distribution assets servicing these zones. The gross margin is the water usage price less the operating

[85] See Hunter Water Corporation, 2009, section 9.4 for details of this review.

costs and thus is the proportion of the usage price that goes to covering the capital-related costs of depreciation and return on capital.

This method ensures that location-based prices are cost-reflective. Each location price still reflects the full operations, maintenance and administration costs of supplying a unit of water. However, the unit price at each location only covers depreciation and return on capital of the distribution assets used to service that location, not the average deprecation and return for the entire distribution network.

Using the methodology established in 2000, the water usage gross margin is adjusted to reflect the value of the assets involved in servicing each individual water zone. Where only headworks and minimal distribution assets service the zone, this adjustment means that only a small gross margin is added to operating costs to derive the location tariff.

In keeping with the 2000 price determination, where the location tariff modelling shows that the assets servicing the zone would warrant a higher price than the postage stamp price (such as for the zones at the southern extreme of the lineal network), the usage price for these zones is capped at the postage stamp price.

The relevance of location-based prices in 2012

The economic efficiency arguments for the location tariff outlined at the beginning of this section are still relevant today, particularly with growing national concern about the apparent slow down in productivity growth over the last decade.[86]

The National Water Initiative pricing principles recognise that there is a place for location-based prices where the benefits can be achieved without significant costs for determining and implementing more cost-reflective prices. Principle 7 in the national pricing principles states:

> *Water charges should be differentiated by the cost of servicing different customers (for example, on the basis of location and service standards) where there are benefits in doing so and where it can be shown that these benefits outweigh the costs of identifying the differences and equity advantages of alternatives.*[87]

This principle is reinforced by findings of the Productivity Commission's 2011 final report on Australian's urban water sector. The Commission expressed the view that volumetric charges should be set efficiently where there are benefits from doing so. Specifically, its Finding 6.2 stated:

> *Charging a uniform price for water over a large geographic region ('postage stamp' pricing), irrespective of the variation in costs of servicing individual locations within the region, leads to inefficiencies and inequities. There is scope for efficiency gains in moving to location-specific pricing, particularly where cost differences within the 'postage stamp' region are large and easy to quantify.*[88]

As outlined above, the lineal nature of Hunter Water's distribution system and the congregation of a number of major industries close to water sources makes it relatively easy to devise and operate a location-specific tariff system for these customers that does enable differences in infrastructure costs to be taken into account in the usage price.

[86] There is a lot of available information outlining the slow down in labour and multi-factor productivity growth. See for example Parkinson M, 2011.

[87] National Water Initiative Steering Group on Water Charges, 2010

[88] Productivity Commission, 2011, Section 6.4

On the other hand, some stakeholders have argued in successive price reviews that offering the lower location-based usage price to eligible large-volume users erodes the demand management price signal.

Hunter Water believes that offering these lower prices to the large-user customer set does not erode the demand management signal. The location-based usage prices are volumetric charges and the customers that can take advantage of them are very large users, so efficient water use is already an important consideration for these businesses in managing their costs. In a number of cases, the water used is a direct input to the final product and so a material reduction in water use by these businesses can only be effected by reducing the output of the businesses' end products.

While location-based prices do offer reduced usage charges for consumption in excess of 50,000 kilolitres in specific locations, there is a sound basis to continue offering these prices in the context of cost reflectivity and allocative efficiency. Such principles are now generally accepted within the community and are particularly relevant give the likely sustained low growth in productivity.

Further, the customers in zones eligible for the location charges will also face increases in both the base and location usage prices and this will ensure that prices remain cost reflective and that relative demand signals are maintained.

Proposed location-based usage prices

There are 23 major industrial and commercial customers that use, or are expected to use, more than 50,000 kilolitres per year over the price period in the location price zones out of a total of 30 customers that use, or are expected to use, above the 50,000 kilolitre threshold in the area of operations as a whole.

Thus around three quarters the major customer set, defined as those using over 50,000 kilolitres per year, are eligible for a location tariff. In 2012-13, major customers eligible for location prices are expected to account for around 78 per cent of major customer water use. By 2016-17, this proportion is expected to fall to around 74 per cent, mainly as a result of an increase in use of recycled water by major industrial customers.

The proposed location prices for the price period are shown in Table 8.3.

Table 8.3 Proposed location-based usage prices ($2012-13/kL)

	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Base usage price	2.08	2.12	2.17	2.21	2.26	2.30
Location-based prices						
Dungog	1.56	1.61	1.66	1.67	1.73	1.76
Kurri Kurri	2.06	2.09	2.14	2.18	2.23	2.27
Lookout	1.90	1.94	1.99	2.02	2.07	2.11
Newcastle	1.85	1.89	1.93	1.96	2.02	2.05
Seaham-Hexham	1.61	1.67	1.71	1.73	1.79	1.82
South Wallsend	1.94	1.98	2.03	2.07	2.12	2.16
Tomago-Kooragang	1.56	1.61	1.66	1.67	1.73	1.76
All other areas	2.08	2.12	2.17	2.21	2.26	2.30

Source: HWC

8.6 Water prices for unmetered properties

Hunter Water has a very small number of unmetered properties. Most of these are in long-established city locations where access to customers' connections for metering is restricted because of the structural configurations of older buildings.

In previous submissions, Hunter Water has proposed that the water charge for unmetered properties should be calculated as the service charge plus a deemed water usage component. IPART's 2005 and 2009 price determinations rejected these proposals and allowed Hunter Water to charge only a water service charge for unmetered properties.

In each of these determinations, the approach adopted for Hunter Water by IPART has been inconsistent with the unmetered property charges determined for Sydney Water Corporation. The Sydney Water price has always comprised the water service charge plus a deemed usage component. IPART's 2012 price determination for Sydney Water again sets the water price for unmetered properties as the residential service charge plus a deemed annual water usage component of 180 kilolitres.[89]

A major objective of IPART's recent price structures review was to achieve greater consistency in the structure of prices across all four IPART-regulated water utilities. In this context, Hunter Water is again proposing that the water charge for unmetered properties should comprise a service charge plus a deemed water usage component. For consistency with the Sydney Water price, Hunter Water proposes that the deemed annual usage component be 180 kilolitres. Proposed charges are shown in Table 8.4.

[89] IPART, 2012 (e), section 9.12, Decision 43

Table 8.4 Proposed unmetered property water charge ($2012-13/year)

	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Proposed charge	18.92	398.29	407.29	414.49	423.49	430.70

Source: HWC

8.7 Prices for unfiltered water – Upper Chichester Dam pipeline

In 2000, IPART introduced a discounted price for the supply of (untreated) raw water for customers serviced by the upper Chichester Dam pipeline who do not receive filtered water from the Dungog treatment plant.

There are around 60 customers served by the pipeline upstream of Dungog water treatment plant. The water supplied to these customers is disinfected but not filtered. This water can vary in quality (particularly turbidity levels) after heavy rain and runoff into Chichester Dam.

The customers connected to the upper Chichester pipeline are effectively buying a different product from that supplied to Hunter Water's other water supply customers. These customers are outside the standard operating licence and customer contract provisions and generally have non-standard water service agreements that contain qualifying clauses regarding water quality.

In 2009, IPART set unfiltered water prices to apply from all Hunter Water's sources. Calculation of this discount was based on Hunter Water's location-based pricing model to remove costs associated with the distribution network. A further adjustment was then made to remove the costs of filtration that are not incurred in supplying unfiltered water.[90]

Hunter Water considers that this methodology is appropriate for setting a universal unfiltered water price because unfiltered water will only be available close to one of the water sources and cannot be delivered through the normal filtered water distribution system. An advantage of setting a price that applies also to areas other than the upper Chichester pipeline is that a price is available for customers who potentially may wish to gain access to unfiltered water from sources other than Chichester Dam.

Hunter Water has applied the same modelling for this price review and the proposed prices for each year of the price period are shown in Table 8.5. Unlike the base water usage price proposed in section 8.4, the unfiltered water price largely remains constant in real terms reflecting the fact that most water business cost increases are occurring in the treatment processes and in the downstream distribution network. These cost increases therefore do not affect the unfiltered water price.

Table 8.5 Unfiltered water price ($2012-13/kL)

	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Price	1.60	1.60	1.60	1.60	1.61	1.64

Source: HWC

8.8 Dungog Shire customers – removal of transitional pricing

This section details Hunter Water's pricing proposals for water services in Dungog Shire for the price review period from 1 July 2013 to 30 June 2017.

[90] Location-based prices proposed in this submission are for filtered water. The Upper Chichester Dam pipeline conveys water from Chichester Dam to the water treatment plant at Dungog so water supplied from this pipeline is not filtered.

Hunter Water assumed responsibility for Dungog Shire Council's water and sewer businesses from 1 July 2008. Hunter Water's January 2009 submission to IPART contains a detailed discussion of this business transfer.[91]

Hunter Water carried out a due diligence review of Dungog Council's water and sewer business in early 2007. This revealed that Hunter Water would need make additional capital investments in order to offer a standard of service consistent with that provided in the other parts of the area of operations and consistent with the requirements of Hunter Water's operating licence. Information about the additional works that have been undertaken and the cost of these works are provided in Appendix K.

A pricing structure was developed to fund these investments. In order to make the tariff structures and prices for Dungog customers as close as possible to those applying in the rest of Hunter Water's area of operations, the additional investment in the Dungog shire system was to be recovered though a higher water service charge and an additional sewerage levy for Clarence Town residents only. All other prices applying to customers in Dungog Shire were to be the same as those applying to Hunter Water's other customers.

The rationale for the additional charges in Dungog Council area was explained to customers in 2007 before the transfer was agreed by the Council and is explained on Hunter Water's website. Overall, there have been few complaints from customers in the Dungog local government area about the higher service charge and most have been satisfied with the explanation that revenue from this charge is being used to upgrade the water and sewer systems within Dungog Shire. Customers are also reassured by the progressive reduction in this charge.

The original cost recovery model required that the higher water service charge be applied at a uniform rate for each year of the 2009-10 to 2012-13 price determination period and then progressively phased out by 30 June 2017. However, IPART's 2009 determination reduced the service charge for Dungog residents and began the phase out immediately from 2009-10. This decision effectively meant that there was no longer any connection between the original cost recovery model and the additional water service charge.

Modelling of the additional water service charge for Dungog customers under the new tariff structures proposed by IPART indicates that there is only a modest revenue advantage to Hunter Water in continuing to apply this additional charge and phase it out by June 2017. Over the four-year price period, the additional revenue from this service charge would be around $261,000 ($2012-13).

Hunter Water is committed to honouring its original obligation to the Dungog Shire community and to bring water service prices into alignment with those applying in the rest of the area of operations by July 2017. However, continuing the higher water service charges for Dungog Shire residents on top of the tariff structure changes proposed by IPART, and outlined in section 8 3, presents a confusing picture of the tariff restructuring to customers.

Hunter Water therefore proposes not to continue with the higher water service charge for Dungog Shire customers and align the water service charges across the whole area of operations from 1 July 2013.

This proposal will reduce residential bills in Dungog Shire by around $36 in 2013-14. Because the higher charges were to be phased out during this price determination period, the effect of the saving reduces each year. The projected saving for Dungog households will reduce to around $9 per year in 2016-17.

[91] See Hunter Water Corporation, 2009, sections 4.2 and 9.7

8.9 Prices for supply to the Central Coast region

Inter-regional sales on request

In 2009, IPART issued a separate price determination for interchange prices for water sold by to Wyong Shire Council and Gosford City Council over the determination period from 2009-10 to 2012-13. The same determination also set prices at which the councils can sell water to Hunter Water.

The interchange price is intended to cover inter-regional sales of water to meet immediate water demands in the area supplied by the requesting utility. It is not intended to cover transfers for banking and later redraw. This option is discussed further in the next section.

IPART determined the interchange price using an average cost (AC) approach on the grounds that this achieved the fairest outcome for pricing water transfers because it:

- reflects the relatively low cost of interregional supply, and
- under an AC approach, revenue from sales equates to the cost of supply.[92]

Hunter Water considers that it is appropriate to continue to use the AC method to determine interchange prices for the 2013-14 to 2016-17 price determination period.

However, '*for simplicity*' in the 2009 determination, IPART set the price based on a four-year average of the average annual cost. Averaging the costs as a basis for an interchange price that is used irregularly is not appropriate because it derives a price that may well be very different from the costs incurred when the intermittent water interchange actually occurs. For example, if the only significant interchanges in the current price determination period occurred in 2012-13, the price Hunter Water could charge would be $1.37 per kilolitre under the 2009 determination. This significantly under recovers the average cost of $1.50 per kilolitre ($2012-13) for 2012-13 calculated by IPART in the 2009 determination report.[93] Hunter Water considers that because interchanges can occur irregularly, they should be priced at the costs relevant to the year in which the interchange occurs, not a price that is derived from a long-term average. The average cost method followed by IPART in 2009 easily could have been used to set a price for each year of the determination period.

Table 8.6 presents the main elements of the AC calculation using the format and method adopted by IPART in 2009 and shown in Table 9.8 of IPART's 2009 determination report. In keeping with IPART's decision to adopt a post-tax regulatory framework for Hunter Water starting with the 2012 review, tax has been added to the cost building blocks used for this analysis.

The prices shown in Table 8.6 are lower than those calculated by IPART in 2009. This is because IPART incorrectly overstated the regulatory depreciation in its 2009 calculation of the AC basis for the interchange price for the years 2010-11 to 2012-13. The regulatory depreciation amount was claimed to be reduced by 95 per cent of that applicable to water pump stations and pipelines and 60 per cent of the depreciation applicable to Tillegra Dam. However, the regulatory depreciation actually used to calculate the average cost for the years 2010-11 to 2012-13 actually exceeded the full water depreciation shown in Table 7.14 of the 2009 determination report.

[92] See IPART, 2009(a), section 9.5

[93] IPART, 2009(a). Table 9.9 shows the average cost per kilolitre in 2012-13 to be $1.34 in $2008-09. Indexed to $2012-13, this cost is $1.50.

As there has only been a small volume of water transferred at this price during the current determination period, this error in calculating the interchange price has not been of material consequence.[94]

Table 8.6 Components of the average cost calculation ($'000 2012-13)

	2013-14	2014-15	2015-16	2016-17	2017-18
Operating costs	25,981	27,964	27,240	29,368	29,845
Regulatory depreciation	24,422	25,480	26,412	27,369	30,020
Return on assets	12,548	14,352	12,955	11,652	11,103
Tax liability	4,409	4,554	4,494	4,585	4,920
Total annual cost	**67,360**	**72,350**	**71,101**	**72,972**	**75,887**

Source: HWC. This table follows the structure of Table 9.8 in IPART, 2009 (a).

Using the calculation method followed by IPART in 2009 and adjusted for the post-tax framework, the total annual cost shown in Table 8.6 is divided by the forecast consumption in each year to derive an average cost per kilolitre for that year. In 2009, IPART added an arbitrary 10 per cent premium to the four-year average to account for the intermittent nature of the demand by the central coast. Hunter Water believes a preferable approach for dealing with the intermittent nature of the demand would be to use the average cost to determine a price for each year based on AC.

Hunter Water's calculation of the average cost per kilolitre is shown in Table 8.7.

Table 8.7 Calculation of the average cost per kilolitre ($2012-13)

	2013-14	2014-15	2015-16	2016-17	2017-18
Total annual cost	67,360	72,350	71,101	72,972	75,887
Projected total consumption (ML)	58,454	57,203	56,321	56,943	57,233
Average cost per kL	1.15	1.26	1.26	1.28	1.33
Proposed price per kL	1.15	1.26	1.26	1.28	1.33

Source: HWC. This table follows the structure of Table 9.9 in IPART, 2009 (a).

This approach results in interchange prices ranging from $1.15 in 2013-14 to $1.28 in 2017-18. Hunter Water proposes that these prices should be the interchange prices for each of the years of the proposed price determination period and the longer-term averaging plus premium method used in 2009 should be discontinued.

Hunter Water has provided this calculation to the central coast councils and the councils have confirmed that they agree with the approach and the prices derived.[95]

The prices set by IPART under this methodology would only apply to inter-regional sales requested by the receiving business.

Inter-regional transfers for banking

The central coast region of NSW has a total storage capacity of 202,000 megalitres. Climatic conditions have meant that much of this capacity has not been used in the past and this

[94] The discounted regulatory depreciation for water assets used in the average cost calculation in $2008-09 was $12.728m, $19.524m and $28.014m for the years 2010-11 to 2012-13. The full regulatory water depreciation for the same years shown in Table 7.14 is $12.2m, $13.3m and $14.8m. See IPART, 2009 (a),Tables 7.14 and 9.8.

[95] Email from Gosford Council, 2 August 2012, ref HW2010-1007/25.

suggests that there is potential for water from Hunter Water's system to be stored in the central coast storages. This potential has been enhanced by completion of the Mardi Dam to Mangrove Creek Dam transfer pipeline in July 2012.

Water banking is one option for consideration as part of the Lower Hunter Water Plan. This would require water banking arrangements to be established with the central coast water authorities.[96] These arrangements would be separate to the supply agreement covering the "on request" interregional transfers discussed in the previous section.

The banking arrangements would enable Hunter Water to transfer additional flows to the central coast for a storage credit during normal operations and then draw on this credit during drought conditions. This option would be particularly favourable when Hunter Water's storages are spilling, as some of the spilled water could be banked for future use.

The aim of a banking arrangement would be to maximise regional water storage in non-drought conditions to minimise the risk of triggering drought response actions by either the central coast utilities or Hunter Water.

The IPART-determined interchange price would not be appropriate for a banking arrangement because the transfers are not intended as outright sales but as credits for later consumption. Requiring the receiving utility (i.e. utility providing the storage capacity) to pay the determined interchange price would be a major disincentive to a banking arrangement. The cost basis for the interchange price is also not appropriate because different operating costs would be incurred for deposits and withdrawals compared with outright sales and there would be different regularity of usage patterns (regular planned deposits, irregular withdrawals).

It would be difficult therefore to set a common banking price that recovers total costs and reflects the distribution of costs, benefits and risks between the parties. It would also be inappropriate to set a price for banking now, given that it is one of many water options being considered in development of the Lower Hunter Water Plan.

Hunter Water recommends that the determined interchange price should be qualified so that applies only to inter-regional transfers for immediate operational needs. This would leave the path clear for Hunter Water and the central coast authorities to develop a separate banking arrangement as part of the Lower Hunter Water Plan.

8.10 Recycled water

Hunter Water provides recycled water services under a wide range of conditions and circumstances. At this time, supply of recycled water is a small but growing component of the Hunter Water's core services.

In 2006, IPART initiated a review of the charging mechanisms for recycled water by Sydney Water Corporation, Hunter Water Corporation, Wyong Shire Council and Gosford City Council. Until that time, IPART had chosen not to regulate recycled water pricing and pricing arrangements had been left to the individual agencies.

IPART's framework for the recovery of costs associated with recycled water projects is provided in its 2006 Report on Pricing Arrangements for Recycled Water and Sewer Mining.[97]

[96] Gosford City and Wyong Shire Councils are working together to create a new organisation, the Central Coast Water Corporation. Ultimately the Corporation may combine the water and sewer services currently provided by the Councils into a new organisation servicing the entire Central Coast. This is not expected to occur until after July 2013.

[97] IPART, 2006

The 2006 IPART report divides recycled water projects into two categories, distinguishing between mandatory and voluntary schemes on the basis of customer choice and relative market power. This division has implications for allowable pricing structures and the form and extent of regulatory oversight.

- "Mandatory" schemes are those where customers are compelled to connect to recycled water sources. The pricing framework for mandated schemes consists of guidelines for establishing total recoverable costs and the different price structures available for recovering the costs. For Hunter Water, IPART made a formal price determination only for the calculation of developer charges for these schemes. However, it issued guidelines for calculating periodic prices.[98]
- "Voluntary" schemes are those where customers choose to connect to recycled water at their own discretion when they have alternative sources – e.g. industrial users with access to drinking water or rural irrigators who have access to groundwater or other surface supplies – or where the customers have significant bargaining power. The pricing framework for voluntary schemes consists of a set of high-level principles for cost recovery to guide negotiations between water agencies and customers. The Tribunal notes it will not have a regulatory role in pricing arrangements for these customers.[99]

Hunter Water considers that it complies with IPART's methodology for calculating recycled water developer charges for its residential recycling schemes, such as Thornton North (also known as Chisholm) and Gillieston Heights. Hunter Water is also applying IPART's guidelines for recovering the costs of recycled water in setting periodic (service and usage) charges for residential recycling schemes. Further details are provided in the following sections.

Mandatory schemes

Chapter 7 of IPART's 2006 recycled water pricing report states:

> *"…mandated schemes are defined as recycled water schemes to which customers are required to connect due to government policy (such as BASIX or the Metropolitan Water Plan). The key criterion for determining whether a scheme fits into this category is whether there is an obligation on someone other than the water agency (such as the customer or the developer) to connect to the scheme…".*

Hunter Water considers its reticulated residential schemes to be "mandated" on the grounds that local government instruments for these areas require connection to recycled water. Local government instruments, such as Development Control Plans (DCPs) and Local Environment Plans (LEPs), compel connection to recycled water schemes in certain areas. Maitland City Council's DCP for Gillieston Heights requires connection to recycled water.

Since July 2005 all new homes in the lower Hunter region must meet the NSW Government's BASIX requirements for water savings. Hunter Water's research suggests that in certain circumstances, such as large greenfield developments near a recycled water source, dual reticulation schemes are the most cost-effective way to meet the requirements of BASIX. In addition, the water savings are more robust than rainwater tanks due to the climate independent source.

Hunter Water considered the costs and benefits of a number of candidate residential recycling opportunities as part of its $H_2$50 (Integrated Water Resources) Plan required under the 2007-2012 operating licence. As a result of this work, it decided to proceed with

[98] IPART, 2006, p 3
[99] IPART, 2006, p 4

residential dual reticulation schemes at Gillieston Heights and Chisholm (Thornton North) in the Maitland local government area.

Early stages of both these developments are now completed with many residential lots occupied and connected to the dual reticulation systems. At the 2008 price review, the Chisholm development was at a more advanced stage of planning and it was expected that it would see faster land take up than the Gillieston Heights development. However, since that time, housing development at Gillieston Heights has progressed faster than at Chisholm.

IPART's guidelines require the costs of mandated schemes be recovered through a combination of developer charges and periodic charges.[100] Hunter Water has complied with IPART's methodology for calculating recycled water developer charges and has registered development servicing plans (DSPs) relating to Gillieston Heights and Thornton North.

IPART's guidelines[101] require water agencies to set periodic prices such that:

- There must be a usage charge and may be a service charge.
- Usage prices are set at a level that helps to balance supply and demand and discourages inefficient resource use.
- The recycled water usage price does not exceed the drinking water usage price. Hunter Water's current (2012-13) drinking water usage charge is $2.08 per kilolitre.
- The usage prices of recycled water and drinking water must be linked if the amount of drinking water top-up needed to balance supply and demand is more than 10 per cent. Recycled water infrastructure design needs to balance the usage expected from customers with the funds required to size assets to meet the demands. It is typical practice for water utilities to meet maximum demands on hot summer days by providing drinking water "top-up" into the recycled water system rather than spending on additional recycled water capacity that is rarely used. Hunter Water's schemes will be designed to need less than 10 per cent top-up, so this price setting rule will not apply.

In addition to complying with IPART's guidelines Hunter Water has also decided to apply the following principles:

- Each dual reticulation scheme will have its own service and usage prices in order to minimise cross-subsidies (i.e. Hunter Water will not necessarily aim to apply postage stamp pricing to all recycled water schemes).
- Service prices will be set at a level that recovers operational and administrative costs that are relatively constant per dwelling such as customer service (e.g. meter reading), call centre contacts, customer information and ongoing controls to minimise cross-connections.
- Usage prices will be set by using a fairness test such that customers are not disadvantaged by living in a dual reticulation area. The fairness test will set the usage charge such that an average customer in a dual reticulation area using both recycled and drinking water has the same total water bill as customers with the same total usage of drinking water only. This test is based on the 40 per cent of the total use being recycled water and 60 per cent being drinking water, which is consistent with the intended uses of recycled water (e.g. outdoors and toilet flushing).
- During any interim period between construction of properties with dual reticulation and commissioning of the recycled water plant, recycled water usage charges will apply even

[100] IPART, 2006
[101] IPART 2006, p 58

though drinking water will be supplied through the recycled water system. This is intended to encourage appropriate behaviour and safeguard against inappropriate use from taps that will eventually provide recycled water.

The recycled water developer charges in registered recycled water DSPs are based on an operating surplus calculation using indicative periodic prices calculated using the above principles.

Proposed recycled water usage and service charges for Gillieston Heights and Chisholm are shown in Table 8.8. These prices are calculated to maintain the relativity between the cost to customers of filtered water and recycled water, subject to the fairness test mentioned above.

Table 8.8 Proposed recycled service and usage water charges ($2012-13)

	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Service charge 20 mm base $/year	23.07	23.58	24.06	24.55	25.05	25.26
Usage charge $/kL	1.60	1.63	1.66	1.69	1.73	1.76

Source: HWC

Voluntary schemes

Under IPART's recycled water pricing framework industrial, agricultural and municipal irrigation schemes would be considered "voluntary" because alternative water sources are generally available giving discretionary customers sufficient negotiating power.

Hunter Water has negotiated price arrangements for a number of voluntary schemes. The price modelling follows the Tribunal's high-level principles provided in the report accompanying IPART's 2006 recycled water determination. Pricing structures may vary with access conditions and quality and quantity of recycled water, resulting in negotiated individual agreements on mutually acceptable terms.

9 Sewer pricing

Main Points

- *Residential customers currently pay a fixed service charge only for sewerage services. Non-residential customers pay a fixed service charge and a small usage charge.*
- *Hunter Water proposes to adopt IPART's recommended pricing structures for residential customers whereby service charges are no longer calculated on water meter size.*
- *All houses, regardless of water meter size, will pay the same sewer service charge.*
- *The sewer service charge for a house will increase from $555.21 in 2012-13 to $573.82 in 2013-14.*
- *Home units and flats will pay a service charge equal to 75 per cent of the service charge applying to a house by 2016-17. This change will be phased in over four years.*
- *Adopting a lower service charge for home units and flats was supported by customers in Hunter Water's 2012 pricing consultation. Fifty-seven per cent of house and unit owners supported the idea of units and flats paying a proportionate service charge.*
- *Small non-residential customers will now pay a service charge equal to that of a house.*
- *Other non-residential properties will continue to pay service charges according to water meter size.*
- *All non-residential customers will continue to pay sewer usage charges. The current usage charge will remain unchanged.*
- *It is proposed to reduce the existing levy paid by Clarence Town residents for the new sewerage scheme by almost $43 per year to $73.20 per year ($2012-13).*
- *Hunter Water proposes to continue funding backlog sewer facilities under the Priority Sewerage Program via the environmental improvement charge.*

9.1 Current price structure and prices

For most of the period since the introduction of the pay-for-use pricing in 1982, sewer charges have been structured as a two-part periodic price (in a similar way to water) comprising a usage charge and a service charge for all customer types. As for water tariffs, service charges for sewerage services are currently set in relation to water meter size.

IPART's 2009 price determination removed the residential sewer usage charge so that residential customers now pay a fixed sewer service charge only. In 2012-13, the fixed residential sewer service charge and environmental levy together make up 60 per cent the combined water and sewer bill of a typical residential customer.[102]

Customer feedback about the 2009 changes to sewer charges has been generally negative with customers concerned that the changes have reduced their ability to control their combined water and sewer bill by reducing their water consumption.[103] Many of these complaints have come from households with low levels of water use, who now feel they are not being rewarded for their efforts to reduce and control their water consumption.

Hunter Water currently charges residential customers in strata-title units and flats a minimum wastewater service charge equal to 65 per cent of the charge applying to houses. The difference in charging is intended to broadly reflect the difference in average occupancy rates for houses and for flats and units, whereby units and flats have average occupancy rates of around 60 per cent of that of houses. This charge was introduced in the 2000 determination to ensure greater equity in wastewater charges between customers in houses and residents in home units and flats. Prior to 2000, some flats and units paid very low service charges, particularly when there were many flats and units served by a small diameter common water meter.

For non-residential customers, sewer discharge factors are applied to both sewer service and sewer usage charges, so that users with a higher discharge, and therefore a larger relative impost on the sewerage system, pay a higher contribution towards costs.

The current service and usage charges are shown in more detail in Table 2.1 earlier in this submission.

9.2 IPART's proposed changes to sewer price structures

As mentioned in Chapter 8, in March 2012 IPART completed a review of the price structures for water and sewerage services for the four metropolitan water utilities and developed a set of pricing principles applicable to the metropolitan water utilities.[104]

The main elements of IPART's proposed sewer tariff structures are:

- the residential sewer service charge is to be a standard annual charge for all residential dwellings unless there is evidence that there are material differences in the costs of servicing different residential types
- the total sewer revenue collected from non-residential customers is to reflect the costs incurred in servicing those customers, and
- the non-residential sewer usage charge is to be a standard variable charge for all non-residential customers set with reference to, but not necessarily equal to, the utility's

[102] The environmental levy is paid by all sewer customers other than by pensioners eligible for government rebates on water and sewer charges.

[103] Residential sewer usage charges were based on metered water consumption. Fifty per cent of metered water consumption was deemed to be discharged to the sewer.

[104] IPART, 2012 (b), Box 1.1

short-run marginal cost of transporting, treating and disposing of domestic–strength effluent.

Hunter Water has framed the sewer prices proposed in this submission according to these principles and broadly following the revenue hypothecation approach illustrated by Figure 7.2 of IPART's March 2012 report on price structures. However, Hunter Water's proposals also maintain some additional pricing arrangements that are both well established and well accepted by the Hunter community. These include:

- A lower service charge for residential home units and flats, to take account of inflexibility in fixed service charges to reflect demand and occupancy levels. As required by IPART, this submission provides evidence that there is a material difference in the cost of servicing these customers.
- Specific levies to fund the provision of backlog sewer services under the NSW Government's Priority Sewerage Program and Country Towns Water Supply and Sewer Program.

9.3 Proposed sewer usage prices and service charges

Sewer usage price

IPART's new pricing principles retain sewer usage charges for all non-residential customers but only at levels set with reference to the short-run marginal cost of transporting, treating and disposing of domestic-strength effluent.

As part of its recent review of price structures, IPART estimated the short-run marginal cost (SRMC) to be in the range $0.20 to $0.30 per kilolitre.[105] IPART also reported that sewer usage prices across the four regulated utilities ranged from a high of $1.49 per kilolitre to a low of $0.65 per kilolitre in 2011-12 – the lowest, and closest to the SRMC, being Hunter Water's current usage charge of $0.67 (see Table 9.1).

Hunter Water proposes to retain the sewer usage charge for all non-residential customers for the 2013-14 to 2016-17 price period at the current charge of $0.67 per kilolitre in nominal terms. Over the proposed four-year price period, this approach will see the usage charge fall in real terms.

While this price is higher than the IPART's target SRMC of around $0.30, it is significantly lower than the usage prices determined for Sydney Water in 2012. The determined Sydney Water usage price will be reduced progressively but will still be $1.10 per kilolitre in nominal terms in 2015-16.

Hunter Water proposes that the sewer usage price held in nominal terms and reviewed again prior to the following price determination period, taking account of the relativity of usage charges across the four regulated utilities.[106]

Unlike IPART's recent price determination for Sydney Water, Hunter Water proposes to retain the sewer usage charge for the stand-alone non-residential customers with 20 mm meters. The factors behind this decision are:

- Retaining the usage price for all non-residential customers is in line with IPART's pricing principles.[107]

[105] IPART 2012 (b), section 6

[106] Tables in this chapter provide data for one year beyond the proposed price period. This is to meet IPART's requirement to provide data for five years regardless of the proposed price period. The column providing the additional data is shaded.

- Hunter Water's proposed sewer usage charge is much lower than the usage charges set by IPART for Sydney Water.
- All Hunter Water's small non-residential customers already pay sewer usage charges. This is different to the situation that previously prevailed in Sydney, where small non-residential customers were not liable for sewer usage charges unless they discharged more than 500 kilolitres per year. As a result, sewer usage charges generally have not applied to small non-residential customers in Sydney.
- As shown in the following section and later in Chapter 11, the adoption of the residential service charge for stand-alone 20 mm non-residential customers results in a substantial reduction in charges for most of these customers. The sample incidence analysis provided in Chapter 11 shows that some small non-residential customers may see real reductions as high as 30 per cent in 2013-14 as a result of this change, despite continuing to pay sewer usage charges.
- Retaining the sewer usage charge for all non-residential customers, including the stand-alone customers, reduces the residual revenue requirement that must be recovered from the cohort of non-residential customers that are charged according to meter size. This helps to keep the proportionate price increases over the price period for this group of customers close to that of residential customers.

Table 9.1 Proposed sewer usage prices

	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Non-residential ($/kL, nominal) [a]	0.67	0.67	0.67	0.67	0.67	0.67
$2012-13/kL [b]	0.67	0.65	0.64	0.62	0.61	0.59

Source: HWC

a) The volume to which the sewer usage charge is applied is calculated as the product of metered water consumption X a discharge factor. Different discharge factors apply to individual customers, depending on the nature of their business.

b) Prices in $2012-13 provided for reconciliation with AIR price data rows 126 and 127.

Sewer service prices

Currently, service charges are set in relation to meter size. However, IPART's 2012 report on price structures has proposed changing the basis for residential service charges to a per-occupied-property basis. Under this arrangement, the same sewer service charge would apply to each house and strata-title home unit and to each flat in a multiple-occupancy building under single ownership.

Hunter Water believes that it is not appropriate to have the same residential service charges for houses, home units and flats and has argued this position on both equity and cost-reflective grounds consistently throughout IPART's recent review of price structures.[108]

Hunter Water proposes that the sewer service charge for home units and flats should be set at 75 per cent of that applying to stand-alone houses. The following section of this submission more fully reiterates Hunter Water's position and provides evidence about the cost differences for servicing different types of residential premises. These cost differences support the proposal to set the service charge for home units and flats at 75 per cent of the service charge applying to a house.

[107] IPART, 2012(b),Box 1.1 which states "*The non-residential sewerage usage charge is to be a standard variable charge for all customers set with reference to .....*" .

[108] Hunter Water Corporation, 2011, section 2.4

In line with IPART's proposed changes, small non-residential stand-alone properties will be charged the same service charge as residential properties. Larger non-residential properties and multi-premise non-residential properties will continue to pay service charges according to meter size. A discharge factor will continue to be applied to service charges determined according to meter size.

Proposed sewer service charges for residential properties, small stand-alone non-residential properties and service charges for other non-residential properties are shown in Table 9.2. Discharge factors apply to all non-residential properties charged according to meter size.[109]

Table 9.2 Proposed sewer service charges ($2012-13)

	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Residential						
Houses	555.23	573.82	584.74	595.85	607.11	607.45
Units and flats (apartments)	363.20	387.33	409.32	431.99	455.33	455.59
Non residential						
20mm stand alone	N/A	573.82	584.74	595.85	607.11	607.45
20mm [a]	1,110.46	1,137.04	1,175.11	1,222.94	1,263.75	1,267.68
25mm	1,735.10	1,773.78	1,833.17	1,907.79	1,971.45	1,977.58
32mm	2,842.78	2,910.82	3,008.28	3,130.73	3,235.20	3,245.26
40mm	4,441.85	4,548.16	4,700.44	4,891.76	5,055.00	5,070.72
50mm	6,940.38	7,106.50	7,344.44	7,643.38	7,898.44	7,923.00
65mm	11,729.25	12,007.14	12,409.16	12,914.25	13,345.20	13,386.70
80mm	17,767.38	18,192.64	18,801.76	19,567.04	20,220.00	20,282.88
100mm	27,761.53	28,426.00	29,377.75	30,573.50	31,593.75	31,692.00
150mm	62,463.44	63,958.50	66,099.94	68,790.38	71,085.94	71,307.00
200mm	111,046.12	113,704.00	117,511.00	122,294.00	126,375.00	126,768.00
250mm	173,509.56	177,662.50	183,610.94	191,084.38	197,460.94	198,075.00
300mm	249,853.77	255,834.00	264,399.75	275,161.50	284,343.75	285,228.00
350mm	340,078.74	348,218.50	359,877.44	374,525.38	387,023.44	388,227.00

Source: HWC

a) Discharge factors apply to all non-residential properties other than 20 mm stand-alone properties. 20 mm stand-alone properties pay the residential service charge.

Sewer service prices for home units and flats

While there is broad consistency in the principles behind IPART's proposed price structures for residential water and sewer services, the application of the new structures will impact quite differently on customers' water and sewer bills.

Billing for water services will comprise a fixed service charge and a variable usage charge where, for typical residential customers, the usage charge will make up around 95 per cent of the annual water bill. This dominance of variable usage charges results in customers'

[109] More information about discharge factors can be found on Hunter Water's website. www.hunterwater.com.au/Your-Account/Managing-Your-Account/Business-Pricing--Charges/Sewer-Charges.aspx

water bills reflecting, at least in part, differences in household size and demand for water services.

The same does not apply to residential sewer charges, which comprise only a single fixed charge, regardless of household size and demand. Under IPART's proposed price structures, stand-alone houses, home units and flats will all pay the same sewer service charge despite lower average occupancy rates and lower internal water use in home units and flats. Without any variable charge, there is no charging component that reflects customer-specific demand characteristics or that provides equity between large and small households.

In 2012-13, home units and flats make up 18 per cent of the total residential stock of houses, units and flats. Home units and flats have average occupancy rates equal to 61 per cent of houses in the Hunter and the internal water use (discharged to the sewer) of units and flats is equal to 64 per cent of the average internal water use in houses.[110]

IPART, in part, supports its argument for a uniform sewer service charge for all households on the grounds that there are more single-person houses in Sydney than single person units and flats, thus indicating that there is no strong rationale for the view that units and flats should have a lower service charge than houses.[111]

However, it also important to look at the distribution of low-occupancy households within the dwelling type classifications. While, in total, there are more single person houses than single person multi-occupancy properties in the Hunter also, single person households account for 60 per cent of flats and units compared to 20 per cent of houses. One and two person households together make up 77 per cent of unit and flat households.[112] These statistics, and the average occupancy rates, clearly indicate that the majority of units and flats comprise one or two person households and this proportion, and the associated lower proportionate discharge to the sewer, provides a substantial justification for considering a separate sewer service charge for these properties.

Hunter Water tested customers' views on whether the same service charges should apply to flats and units as apply to houses as part of its 2012 pricing consultation. While almost two-thirds of survey respondents overall favoured equalisation of the service charge across all household types, this result was heavily influenced by 88 per cent of respondents being house owners. When house owners and unit owners are weighted equally, only 43 per cent favour equalisation and when the views of tenants are included also (and weighted equally), only 38 per cent favour equalisation.

IPART's pricing principles allow for a different charging structure for houses and units and flats if there is a material difference in the cost of servicing these different types of residential properties.

Hunter Water believes that a material difference can be demonstrated by looking at the proportion of sewer revenue requirements allocated to the capital-related costs of return on capital and depreciation and the decision criteria for investing in sewer infrastructure. Additional cost differences can be identified by applying the short-run marginal cost to the different discharges to the sewer from houses and from units and flats.

Until December 2008, Hunter Water produced development servicing plans (DSPs) as the basis for its developer charges for sewer services. These DSPs were reviewed every five years and approved by IPART. Investment requirements for future infrastructure in the DSPs

[110] Australian Bureau of Statistics, 2012, Table B31 (2011 Census).

[111] IPART, 2012 (b), section 5 and footnotes 24 and 41.

[112] Australian Bureau of Statistics, 2008, Table X25. 2006 census data is used because the ABS did not release 2011 census data for household composition by dwelling structure (Table X25) until 21 August 2012, after this section was drafted.

were based on growth projections measured by equivalent tenements (ET) for sewer network infrastructure and equivalent population (EP) for sewer treatment infrastructure. In the DSP investment projections, a stand-alone single residential dwelling was counted as one ET while home units and flats each counted as 0.65 ET. Thus each house in the growth profile on which network investment was based counted for 35 per cent more than a unit or flat.

Investment in wastewater treatment infrastructure is based on EP projections using current and expected occupancy rates for houses, flats and units. As indicated earlier in this section, the occupancy rate for flats and units is around 60 per cent of the occupancy of houses, so again, occupancy in units and flats accounted for a lower pro rata investment in treatment infrastructure, when compared with the investment for a house.

These ratios can be applied to the treatment and network capital building block component of the residential revenue requirement to assess the relative capital building block costs for houses and for units and flats. This analysis suggests that the capital building block costs for units and flats should be 64 per cent of that of a house. The derivation of this proportion is shown in Figure 9.1.

In addition to the differences in the capital building block costs, there is also a difference in SRMC of discharges from houses and from units and flats. This difference arises because, on average, units and flats have lower levels of internal water use than houses. Hunter Water's iSDP model identifies internal water use for different housing types from end-use analysis.[113] Assuming all internal water use by residents of units and flats is discharged to the sewer, this end-use data can used to estimate the differences in marginal cost attributable to houses and to units and flats.

IPART's final price structures report indicates that the SRMC is around $0.30 per kilolitre of wastewater discharged to the sewer.[114] Applying this SRMC to the differences in internal water use is further evidence of a lower cost of servicing units and flats. The difference in SRMC is around $18 based on a SRMC of $0.30 and the derivation is shown in Figure 9.2.

The combined difference in the capital building block cost for units and flats compared to a house and the difference in the SRMC suggest that the cost of servicing units and flats is around $431 or 78 per cent of the average residential revenue requirement of $555. Using the values in Figure 9.1 and Figure 9.2, this is derived as follows:

Capital reduction for flats and units [H]	+	SRMC Reduction [L]	=	Reduction amount for flats and units
$106	+	$18	=	$124

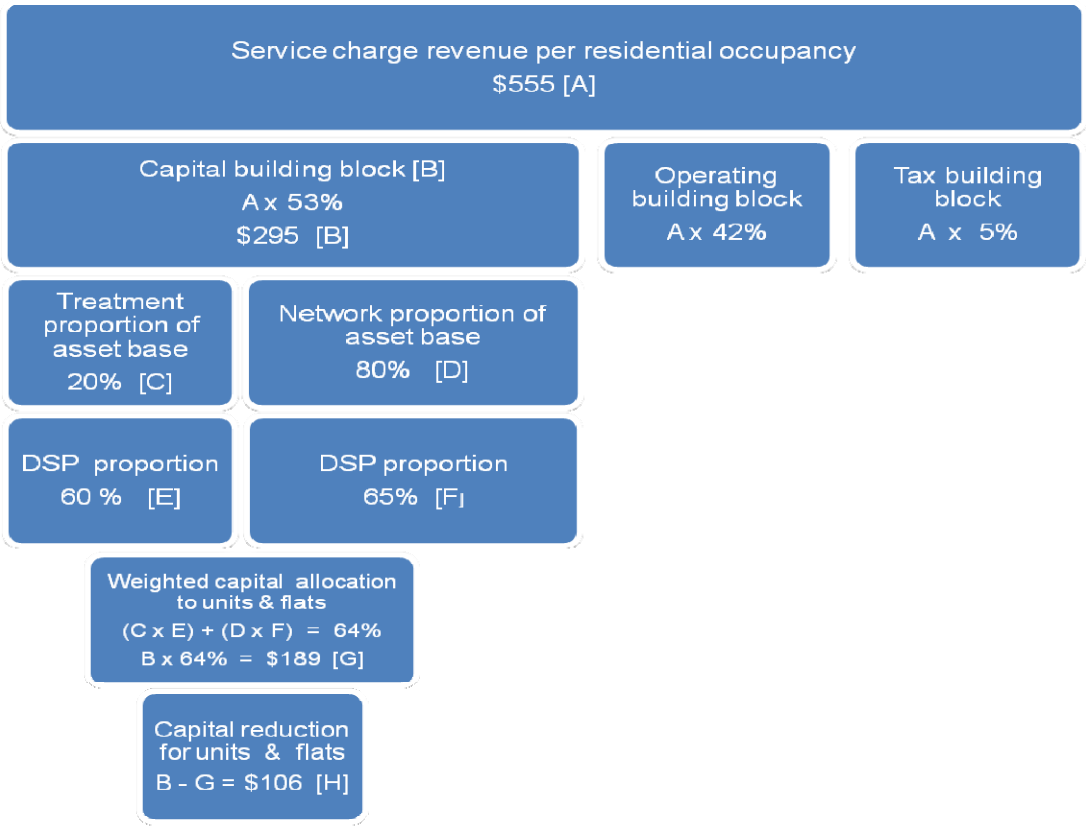
$555 [A] - $124 = $431.

Hunter Water therefore proposes that the unit and flat service charge should be set at 75 per cent of the service charge applicable to a stand-alone house, taking account of the various proportionate cost allocations in the methodology shown in the figures below.

[113] See Chapter 4 for a description of the iSDP model. End-use modelling is based on a disaggregated analysis of consumption in individual customer categories (e.g. houses, units and flats, industrial, commercial and unaccounted for water). Individual customer categories can be broken down further into individual end uses (e.g. toilets, showers, taps, washing machines, gardens, etc for residential).

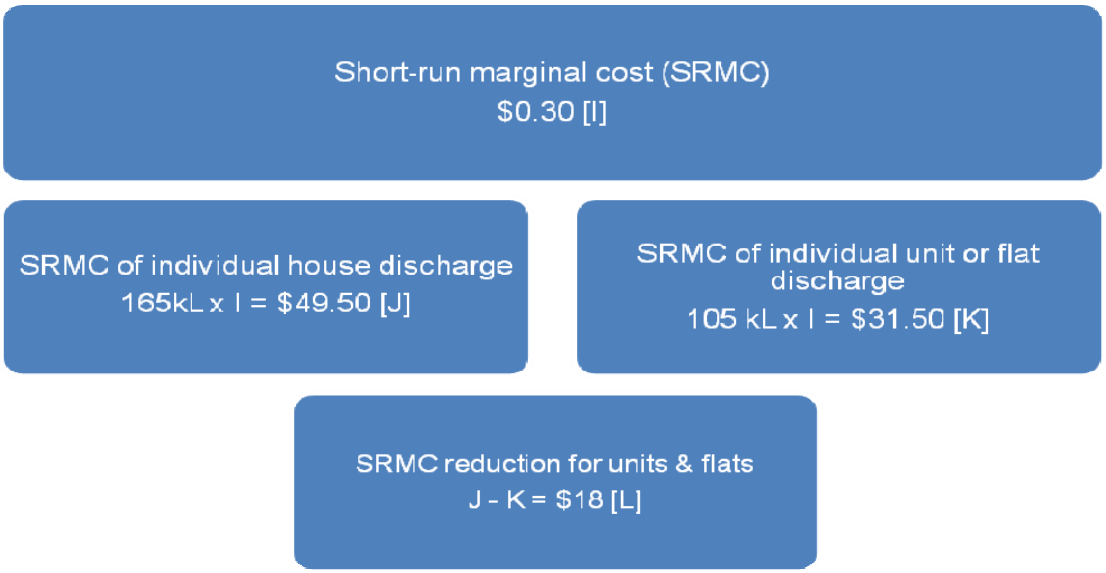
[114] See section 6 and footnote 42 of IPART 2012(b). Footnote 42 shows Hunter Water's SRMC was $0.29 when estimated in 2010.

Figure 9.1 Capital building block proportions – houses and units and flats



Source: HWC

Figure 9.2 Short-run marginal cost – houses and units and flats



Source: HWC

9.4 Backlog sewerage levies

Hunter Water has provided sewer services to backlog areas under two NSW Government funding programs – the Priority Sewerage Program (PSP) and the Country Towns Water Supply and Sewerage Program (CTWSSP). The areas provided with sewer services were identified through the eligibility and selection criteria of each program.

The PSP provides sewer services to currently un-sewered townships in the operation areas of Sydney Water, Hunter Water, Gosford City Council and Wyong Shire Council. Townships eligible for the backlog sewer program are prioritised according to potential environmental and health issues and selected for funding following a comprehensive assessment by health and environmental protection agencies in consultation with water utilities.

In the Hunter, the PSP has been funded through a combination of NSW Government funds (via community service obligation payments to the utilities) and a levy paid by the broader customer base. This funding structure sends an important message that local communities must bear at least some financial responsibility for service improvement and environmental initiatives.

Backlog sewer programs, partly funded by a specific levy on all sewer customers, have been in place in the Hunter since 1989. The initial levy was part of an earlier backlog program, the Hunter Sewerage Project (HSP), which provided sewerage to more than 20,000 properties between 1989 and 2002. The levy, known as the Environmental Improvement Charge (EIC), was part of the funding package for these works and was to remain in place for 20 years until 30 June 2009. This commitment was honoured by Hunter Water, which recommended to IPART that the EIC should not include any HSP contribution from 1 July 2009.

The CTWSSP is also a NSW Government scheme that provides funding assistance for backlog services provided by local government water utilities. Backlog programs in Hunter Water's area of operations would not normally be eligible for funding under this scheme. However, Dungog Shire Council had approved funding under the CTWSSP to provide a sewer services to Clarence Town at the time that the council's water and sewer services were transferred to Hunter Water in 2008. As part of that transfer, the Government agreed to also transfer the backlog funding under the CTWSSP.

Clarence Town sewer charge

The water and sewer business of Dungog Shire Council was transferred to Hunter Water on 1 July 2008. Hunter Water's January 2009 pricing submission to IPART provides detailed background information about reasons for this transfer and the community consultation and due diligence processes undertaken.[115]

At the time of the transfer, Dungog Council provided sewer services only in the town of Dungog and had committed to providing sewerage services to Clarence Town. The council had obtained funding assistance for the Clarence Town scheme under CTWSSP. This funding was approved in the 2007 NSW Government Budget.

Hunter Water carried out a due diligence analysis of the Dungog Council's water supply and wastewater infrastructure and costs in 2007 prior to making an offer to transfer the businesses. As part of this due diligence, Hunter Water assessed future pricing options for wastewater services in both Dungog and Clarence Town. Hunter Water based its pricing analysis on the assumption that its postage stamp wastewater pricing should apply to all wastewater services in Dungog Shire.

[115] Hunter Water Corporation, 2009. See sections 4.2, 9.7, 10.6 and 10.7

Hunter Water's analysis found that Hunter Water could operate the Dungog Council's wastewater business at the same prices that then applied to all its other customers. Accordingly, Hunter Water's January 2009 submission to IPART did not seek different wastewater prices for Dungog Shire for the price period starting in July 2009.

However, one of the main reasons for the transfer of the Council's water and sewer business to Hunter Water was the increasing cost of providing the proposed sewerage scheme to Clarence Town. In order to operate the Clarence Town scheme at the postage stamp prices applying in the rest of its area of operations, Hunter Water's 2009 submission proposed:

- That it continues to collect the Council's preconstruction levy at a reduced rate of $200 (nominal) per property per year until 30 June 2010. The Council's levy had been in place and paid to Council since 1998-99 at a rate of $260 (nominal). The Hunter Water levy would only apply to properties in Clarence Town and only to those to which the sewer service would be made available.
- That, from 1 July 2010, the levy be reduced to $100 ($2007-08) and continue until 30 June 2019.
- That there be an addition of $4 ($2007-08) to the environmental improvement charge (EIC) paid by all of Hunter Water's sewer customers to help meet the cost of backlog sewer schemes. It was considered appropriate for all customers to contribute to the cost of this scheme in this way because of the potential benefits of the Clarence Town sewer system to the protection of Hunter Water's drinking water supply.[116]

IPART's 2009 price determination approved this funding model for the Clarence Town project.

The Clarence Town sewerage scheme was completed in March 2012 and town residents are now able to connect to the scheme.

Pending completion of some minor aspects of the scheme, Hunter Water has received 98 per cent of the assistance available under the CTWSSP. Completion of the scheme and receipt of the CTWSSP funding has enabled Hunter Water to reassess its original funding model for the scheme with a high degree of certainty. Details of the cost of the scheme and funding sources are provided in Appendix K.

This reassessment has indicated that the contributions to the cost of the scheme via the EIC and the Clarence Town levy are on track to recover the outstanding capital by 30 June 2019 as originally planned but with a small surplus. Given that almost all costs are paid and the subsidy funding is received, Hunter Water believes it is appropriate to reduce the Clarence Town levy for the period remaining to June 2019 to acquit this projected surplus.

Accordingly it is proposed that the annual levy be reduced from $116.02 in 2012-13 to $73.20 ($2012-13) for the remaining period to June 2019. The following section explains that this is also the sunset date for the environmental improvement charge and thus would see both backlog levies winding up at the same time.

Environmental improvement charge

In 2003, the NSW Government announced that it would extend the PSP project to provide sewer services to the townships of Kitchener, Millfield, Ellalong and Lochinvar. This followed an earlier decision to provide funding for sewer services to Fern Bay. Because Fern Bay was

[116] Clarence Town is on the western bank of the Williams River at the top of the Seaham Weir pool, which is the extraction pondage for Hunter Water's diversions from the Williams River to Grahamstown Dam. The sewerage system for the town helps to reduce pollution of this water source.

announced early in the PSP program, additional levy funding for Fern Bay was provided through the HSP EIC levy and included in IPART's determination of the levy in 2003.

In agreeing to the extension of the PSP to cover the additional areas, the NSW Government decided that the program should be funded, in part, by an extension of the EIC for a further 10 years from 1 July 2009 to 30 June 2019 at a rate equivalent to $24 per property per year in July 2003 terms.

Further, in May 2008, Hunter Water sought Government approval for its proposed pricing and funding arrangements for water and sewer services in Dungog Shire following the transfer of Dungog Shire Council's water and sewer business to Hunter Water. The package of funding arrangements agreed by the Government included the Clarence Town sewerage charge discussed above and a further addition of $4 per property per annum ($2007-08) to the PSP levy to assist in funding the Clarence Town sewerage scheme.

IPART agreed to these proposals in its 2009 price determination. As outlined above, the component of the EIC directed to recovering the costs of the Hunter Sewerage Project was discontinued from 1 July 2009 and the EIC was restructured to recover only the costs of the PSP plus a small contribution to the cost of the Clarence Town sewerage scheme. As a result, the EIC was reduced from $54.84 per property per year in 2008-09 to $33.23 per year in 2009-10.

There have been no changes to the PSP program since the 2009 price determination and hence there is no need to alter the current PSP levy. Hunter Water therefore proposes that the 2012-13 EIC of $35.89 be maintained in real terms over the coming price period.

Maintaining the EIC as a separate charge for the PSP separates the costs of providing backlog sewerage services from the costs of the general operation, upgrade and extension of the sewerage infrastructure. It provides the community with a transparent separation of the costs associated with the existing sewerage system and the costs of providing sewerage services to backlog areas. Importantly also, the separation of the charges also forms part of the assistance arrangements for pensioner concession card holders, for whom the payment of the EIC is waived. This arrangement is outlined further in Chapter 11.

10 Stormwater pricing

Main Points

- *Stormwater management in Hunter Water's area of operations is mainly the responsibility of local councils with the Corporation owning and operating major trunk channels in the Newcastle, Lake Macquarie and Cessnock local government areas.*
- *Hunter Water's role is to maintain the current capacity of the major concrete channels and culverts in these areas.*
- *Hunter Water only applies stormwater drainage charges to customers whose properties are in areas serviced by its stormwater channels.*
- *Hunter Water proposes to retain the current charging structure with the addition of a new residential category for strata title home units.*
- *Hunter Water's proposals will see stormwater prices for houses fall by 30 per cent by 2016-17.*
- *A new home unit (apartment) price is proposed that will reduce stormwater bills for home unit owners by $55 in 2013-14.*
- *Bills for non-residential will fall by 30 per cent by 2016-17.*

10.1 Current price structure

Stormwater is rainwater that runs off buildings and land. In the natural environment, a large proportion of this water soaks into the ground or flows into waterways. In the cities, the proportion of stormwater run-off is higher due to the presence of hard surfaces such as roads, paved areas and roofs. Stormwater is carried in stormwater channels and discharges directly into creeks, rivers, the harbour and the ocean.

There is no single agency responsible for stormwater management within Hunter Water's area of operations. While stormwater drainage is mainly managed by local councils, Hunter Water owns and maintains some of the larger trunk stormwater drains in the Newcastle, Lake Macquarie and Cessnock local government areas.

Hunter Water has responsibility only for the major concrete channels and culverts through many of these catchments and its role is to maintain the current capacity of these stormwater drains. Councils are responsible for the management of street drainage and any "natural" creeks upstream and downstream of the concrete channels and NSW Roads and Maritime Services is involved in drainage from major roads and highways.

Hunter Water only collects stormwater drainage charges from customers whose properties are in the areas where the Corporation owns major stormwater channels and related structures such as detention basins. These charges enable Hunter Water to maintain and refurbish these drains and structures as required.

Overall, only around one quarter of Hunter Water's customers are within the catchments of Hunter Water's stormwater channels and therefore pay stormwater charges.

Price structure reform since 2000

Hunter Water embarked on progressive reform of drainage charges in 2000 with a view to restructuring drainage charges over successive price determination periods.

In line with the water pricing principles agreed to by the Council of Australian Governments, IPART adopted Hunter Water's stormwater pricing reform proposals by phasing out the valuation-based charges applying to non-residential properties. From the 2005 price determination, Hunter Water began to progressively replace the property-value charges with land-area based service charges for non-residential customers. This transition was completed in 2008-09.

Current charging structure

Hunter Water's current stormwater pricing structure comprises a single residential service charge applicable to all residential connections and land-area based prices for non-residential connections.

The non-residential land-area charges are applied to four land-area bands, these being:

- Small or low impact – land area less than 1,000 square metres or larger areas that are assessed to have low impact on runoff.
- Medium – land area between 1,001 and 10,000 square metres.
- Large –land area between 10,001 and 45,000 square metres.
- Very large – land area greater than 45,000 square metres.

Some large undeveloped properties, such as parks, sports fields and golf courses, have greater ability to absorb stormwater flows than developed properties with hard surfaces such as roofs and hard-paved areas. Where appropriate, these properties are classified as low impact properties.

10.2 Proposed stormwater charges

Hunter Water proposes to retain, with minor modification, the current stormwater tariff structure for the 2013-14 to 2016-17 price review period.

IPART's June 2012 decision on stormwater drainage charges for Sydney Water Corporation adopted a similar structure to Hunter Water's current area-based stormwater charges. One notable difference is the adoption of two residential service charge categories – one for houses and another for apartments.

Hunter Water agrees that there are sound equity and cost reflectivity reasons for adopting separate charges for houses and strata title units (apartments). Blocks with large numbers of units may be contributing to the cost of stormwater services disproportionally to the runoff impact of the building. Also, other multiple-occupancy residential properties under single ownership (blocks of flats), only pay one single residential stormwater service charge and this is distributed across all flats in the building through the rental charges. Therefore,

adopting a lower and separate residential service charge for strata units would provide more equity in the charging of units and flats.

The area-based categories for non-residential service charges that were developed for the 2005 price determination are still considered appropriate. Hunter Water does not propose to change these categories.

Table 10.1 shows the service charges required to recover the target stormwater drainage revenue from the proposed service charge structure and projected customer numbers.

As shown in the revenue requirements tables in Chapter 7, there is a real reduction in the revenue requirements for stormwater services over the next price determination period. This results in reductions in stormwater charges.

The total decrease in stormwater bills for residential houses by 2016-17 will be $26.10 in 2012-13 terms - from $86.42 in the current year to $60.32 in 2016-17. Bills for strata title apartments will reduce from $86.42 in 2012-13 to $30.92 or by 64 per cent in 2013-14 with further reductions to $22.08 in 2016-17. This will provide reductions of almost 75 per cent to unit owners by the end of the price period.

Non-residential charges will decrease by 30 per cent in real terms over the price period.

Further information on customer incidence is provided in Chapter 11.

Table 10.1 Proposed stormwater drainage charges ($2012-13)

	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Residential - houses	86.42	83.58	74.95	67.22	60.32	60.45
Residential - units	86.42	30.92	27.73	24.87	22.08	22.12
Non-residential:						
Small (<1,000m²) / low impact	86.42	83.58	74.95	67.22	60.32	60.45
Medium (1,001 - 10,000m²)	156.20	151.06	135.48	121.50	109.03	109.26
Large (10,001 – 45,000m²)	993.59	960.89	861.74	772.83	693.53	694.97
Very Large (>45,000m²)	3,156.84	3,052.97	2,737.94	2,455.46	2,203.49	2,208.07

Source: HWC

11 Impact of proposed prices

Main Points

Customer impacts

- *Hunter Water has used a variety of information available to assess the impacts of proposed bill increases on customers.*
- *The impact on a typical residential water and sewer customer using 185 kilolitres per year is $83 over the 2012-13 to 2016-17 period.*
- *Hunter Water tested perceptions of affordability as part of its 2012 pricing consultation. Sixty per cent of customers, including pensioners, agreed that bills are affordable.*
- *Stormwater prices will be reduced, which will partly offset the increases in other charges for approximately one quarter of residential customers.*
- *Hunter Water recognises that some customers may not be able to afford to pay their bills and, for these customers, Hunter Water has a range of assistance measures available.*

Financial impact on Hunter Water

- *Although the financial metrics are forecast to be stable for the coming price period, Hunter Water is susceptible to downgrade below investment grade at any time.*
- *There is minimal revenue headroom to respond to changes in the economic environment such as fluctuations in interest rates or seasonal influences reducing the demand for water.*
- *Only the 'Net debt/regulated asset base' ratio (an assessment of the gearing of the business) is keeping Hunter Water at an overall investment-grade credit rating, albeit borderline.*
- *Adequate pricing support is essential to ensure Hunter Water does not fall below investment grade.*

This chapter covers the impact of Hunter Water proposed prices on customers and on Hunter Water's future financial performance.

As well as providing assessment of bill increases, the chapter also outlines Hunter Water's credit and hardship policy and the specific measures that Hunter Water is providing for customers facing financial hardship. Hunter Water has a range of measures in place to assist specific groups of customers and to meet the requirements in Hunter Water's

operating licence, which sets out requirements for practices and procedures relating to hardship, debt, and water flow restriction or disconnection.[117]

11.1 Price structure proposals

As detailed in chapters 8, 9 and 10, Hunter Water's proposals for the structure of its prices are based the price structure principles published in IPART's March 2012 final report on price structures for metropolitan water utilities.[118] This submission presents pricing proposals for the five years from 1 July 2013. While five years of prices are presented in the earlier chapters, Hunter Water's preference is for a determination of prices for four years.[119] Bill impacts shown in this chapter only cover the four-year price determination period sought by Hunter Water.

The main features of Hunter Water's water, sewer and stormwater drainage prices for the period from 2013-14 to 2016-17 are summarised below.

Water

- Adoption of a standard residential water service charge for all residential customers, regardless of dwelling type. This means residential houses, home units and flats all pay the same service charge.
- Water service charges for small non-residential customers in freestanding properties being the same as those for residential customers.
- Removal of the higher water service charges applying to Dungog Shire customers. This will see water service charges for Dungog Shire customers aligned with the rest of Hunter Water's customers from 1 July 2013. This initiative will bring forward the alignment of the service charge by four years.
- Annual adjustments to the water usage price of CPI+X in each year of the price period. The X factors are determined by the revenue requirements for Hunter Water's water business as detailed in Chapter 7. This approach continues to emphasise usage prices to maintain a water conservation price signal and provide customers with a degree of control over the size of their bills.
- Continuation of the location-based water usage prices for industrial customers using very larger volumes of water. As in previous determinations, the special location-specific prices apply only to each customer's consumption in excess of 50,000 kilolitres per year. Usage up to and including 50,000 kilolitres by the eligible customers is charged at the prices paid by all other customers.

Sewer

- Residential sewer bills are made up of a fixed sewer service charge and the environmental improvement charge (EIC). However, EIC does not apply to eligible pensioners.
- Following IPART's 2012 pricing principles, separate standard residential sewer service charges are proposed for houses and for home units and flats. The difference between the service charge for houses and the service charge for units and flats is linked to the differences in the cost of servicing these housing types. It also partly compensates for

[117] Hunter Water Corporation, 2012 (a), Clause 5.4
[118] IPART, 2012 (b)
[119] Five years of prices are presented as required by IPART's price submission guidelines. Hunter Water's preference for a four-year price period is discussed in Chapter 7.

the fact that there is no variable charge (like the water usage charge) applying to sewerage services and which would otherwise reflect household demand and occupancy characteristics.

- Sewer service charges for small non-residential customers in freestanding properties being the same as those for residential houses.
- Continuation of the sewer usage charges for non-residential customers. These charges will be fixed for the coming price period at the 2012-13 price in nominal terms.
- Continuation of the EIC at the 2012-13 rate, adjusted annually for inflation. This is in line with the funding arrangements in place for the NSW Government's Priority Sewerage Program. These arrangements will see the current EIC sunset in 2019.
- Continuation of the special sewer charge for Clarence Town residents, but at a reduced rate, to help fund the recently-commissioned sewerage scheme for that town. This arrangement will sunset with the EIC in 2019.

Stormwater drainage

- Adoption of separate drainage charges for houses and for home units. This reflects the fact that units have smaller impact of the drainage system than houses and follows a similar price structure adopted by IPART in its June 2012 determination for Sydney Water Corporation.
- Continuation of the existing area-based stormwater drainage charges for non-residential properties.

11.2 Impact on residential customers

The impact on a typical customer consuming 185 kilolitres per year and occupying a freestanding house is summarised in Table 11.1. There will be an increase of $23.76 (2.4 per cent) in the first year of the price period (2013-14). This increase is just over 46 cents per week. After four years, the average residential bill will have increased by $82.95 in real terms or 8.3 per cent. The annual average increase is $21 or 2.1 per cent.

Table 11.1 Annual bill for freestanding house using 185 kL per year ($2012-13)

	2012-13	2013-14	2014-15	2015-16	2016-17	Av Annual bill change
Water service	18.92	16.69	16.69	16.69	16.69	(0.56)
Water usage	384.80	392.20	401.45	408.85	418.10	8.32
Sewer service	555.23	573.82	584.74	595.85	607.11	12.97
EIC	35.89	35.89	35.89	35.89	35.89	-
Total [a]	**994.84**	1,018.60	1,038.77	1,057.28	1,077.79	20.74

Source: HWC

a) This total is for a customer with water and sewerage services only. It does not include a stormwater drainage component.

The price structure changes proposed by IPART will have a different effect on owners of strata title units and the owners of blocks of flats. The impact of the prices on strata units is illustrated in Table 11.2. After four years, the average strata unit bill, excluding drainage charges, will have increased by $125 in real terms or 18.8 per cent. The annual average increase is $31 or 4.7 per cent.

Table 11.2 Annual bill single strata unit using 125 kL per year ($2012-13)

	2012-13	2013-14	2014-15	2015-16	2016-17	Av Annual bill change
Water service [a]	6.31	16.69	16.69	16.69	16.69	2.60
Water usage	260.00	265.00	271.25	276.25	282.50	5.63
Sewer service	363.20	387.33	409.32	431.99	455.33	23.03
EIC	35.89	35.89	35.89	35.89	35.89	-
Total	**665.40**	**704.91**	**733.15**	**760.82**	**790.41**	**31.25**

Source: HWC

a) Assumes block of 12 units sharing a 40mm meter and each using 125 kilolitres of water per year.

Residential customers who hold a pensioner concession card or certain types of Department of Veterans' Affairs Gold Card are entitled to a pensioner rebate on their total water and sewer bill. Since 2009, the pensioner rebate has been linked to changes in average household bill so that the rebate increases if the average total bill increases. Further details about the pensioner rebate are provided later in the chapter.

The estimated bills for eligible pensioners are shown in Table 11.3.

In 2012-13 terms, the bill for a typical pensioner household will be $623.31 in 2013-14 or $12 per week increasing to $660.20 or $12.70 per week in 2016-17. After four years, the average pensioner bill will have increased by $52.85 in real terms or 8.7 per cent. The annual average increase is $13 or 2.2 per cent.

Table 11.3 Annual bill pensioner customer using 140 kL per year ($2012-13)

	2012-13	2013-14	2014-15	2015-16	2016-17	Av Annual bill change
Water service	18.92	16.69	16.69	16.69	16.69	(0.56)
Water usage [a]	291.20	296.80	303.80	309.40	316.40	6.30
Sewer service	555.23	573.82	584.74	595.85	607.11	12.97
Rebate	(258.00)	(264.00)	(269.00)	(274.00)	(280.00)	(5.50)
Total	**607.35**	**623.31**	**636.23**	**647.94**	**660.20**	**13.21**

Source: HWC

a) Bill for pensioner owner of freestanding residential house. This table is based on usage of 140 kilolitres per year. This figure is indicative of average use by pensioner households. See figure 6.6 of IPART, 2008.

Around 25 per cent of the customers live in areas serviced by Hunter Water's stormwater assets, and hence they also pay for stormwater services.

The total stormwater drainage bill for owners of stand-alone houses will fall by $26.10 by 2016-17, which is 7.5 per cent per year.

As proposed in Chapter 10, owners of strata title home units will see an immediate reduction in their bill for stormwater charges of $55.50 or 64.2 per cent and this is sustained throughout the price determination period. This reduction will help offset increases in sewer service charges as a result of IPART's requirements for common service charges for houses, home units and flats.

A more detailed impact analysis is provided in Appendix L.

Components of the bill increases

This section explains the components of the projected increases in typical residential bill (based on 185 kilolitres per year water use).

In 2013-14, the typical residential bill will increase by around $23.76 to $1,018.60 per year in real terms – just over $0.46 per week.

In the final year of the price period, the real increase will be $82.95 over the current bill. This is an increase of approximately 8.3 per cent in total or 2.1 per cent per year.

Table 11.4 shows the makeup of the increases for the full term of the coming price period.

Table 11.4 Components of the typical residential bill increase ($2012-13)

	$2012-13
Water/sewer bill in 2012-13 [a]	994.84
Increase in operating costs	34.84
Increases water capex[b]	21.70
Increase in sewerage capex	21.33
Other	5.08
Water/sewer bill in 2016-17	1,077.79
Increase from 2012-13 to 2016-17	**82.95**

Source: HWC

a) This comparison is for water and sewer charges only. It excludes drainage charges because drainage charges are only relevant to around 25 per cent of customers.

b) This includes additional capital expenditure in period 2009-10 to 2012-13 that was not provided for in the prices set by IPART in 2009.

11.3 Household affordability indicators

There are a number of ways of benchmarking affordability that are used by regulators, utilities and welfare agencies throughout Australia. These include assessing bill impacts against measures of earnings, income and expenditure. Of these measures, the most common measure of affordability is household disposable income because this reflects the funds available to households to pay for consumption products, including utility services.

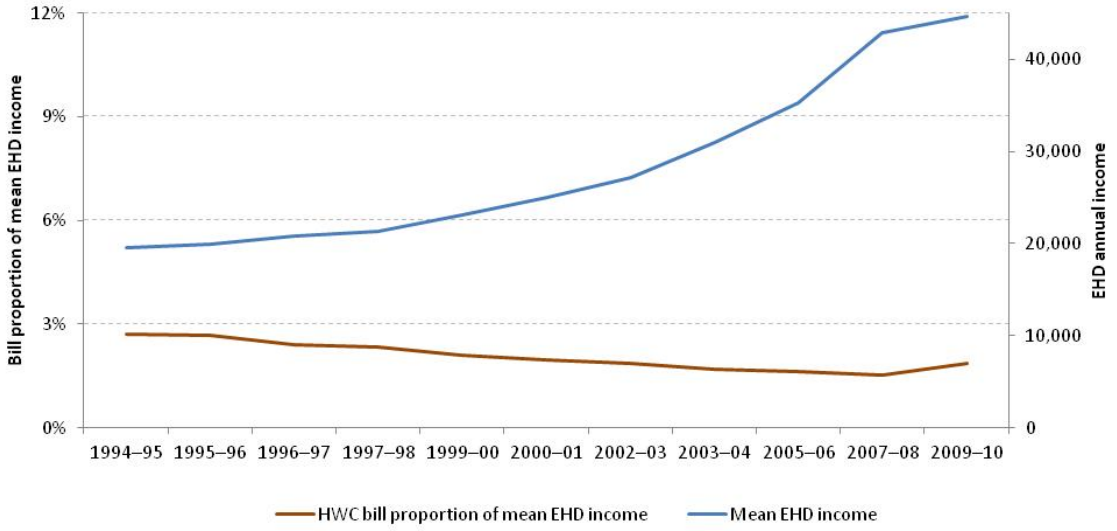
For this submission, affordability of water bills is measured by comparing bills with the Australian Bureau of Statistics (ABS) data on equivalised disposable household income for New South Wales from 1994-95 to 2009-10.[120] This analysis does not purport to present a definitive picture of affordability but rather to indicate the trends in bill changes relative to trends in disposable household income over time and the approximate proportion of disposable income required to pay a typical Hunter Water bill.

Hunter Water recognises that some customers in financial hardship simply may not have money to pay the bills or increases in bills. For these customers, Hunter Water has a range of assistance measures available and these measures are outlined in section 11.5.

The latest available ABS data for equivalised household disposable income is for 2009-10. Analysis of residential water and sewer bills against these data shows that water bills, as a proportion of mean equivalised disposable household income, declined steadily from around 2.7 per cent in 1994-95 to 1.5 per cent in 2007-08 and then rose slightly in 2009-10 to around 1.8 per cent. This trend is shown in Figure 11.1.

[120] 2009-10 is the latest year of ABS data available at the time of preparing this submission.

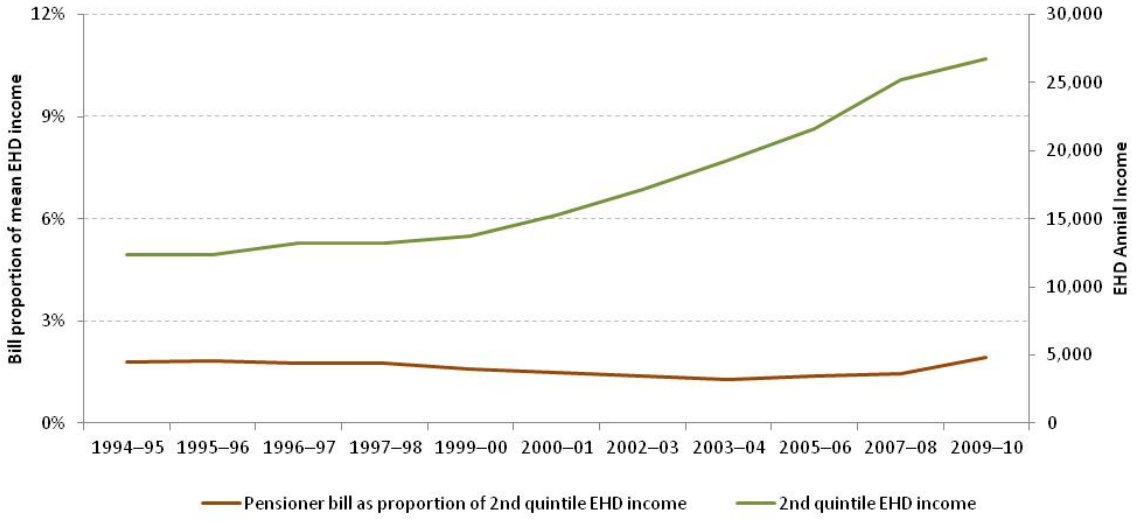
Figure 11.1 Typical HW bill as a proportion of mean EHD income



Sources: HWC & Australian Bureau of Statistics, 2011 (a)

A lower mean income level was used to compare the relativity of bills for pensioners and lower levels of water consumption were used to estimate typical pensioner water bills.[121] Pensioner bills were assessed against the ABS mean equivalised disposable income for second quintile of the ABS sample population.[122] Pensioner bills as a proportion of the mean disposable income for the second quintile declined very slowly from 1.8 per cent of the mean income level in 1994-95 to 1.3 per cent in 2003-04 then increasing again to 1.9 per cent in 2009-10. This trend is shown in Figure 11.2.

Figure 11.2 Pensioner bill as a proportion of 2nd quintile EHD income



Sources: HWC & Australian Bureau of Statistics, 2011(a)

[121] 140 kilolitres was used as average pensioner household water use based on information from IPART's 2008 survey of water use in the Hunter, Gosford and Wyong. See figure 6.6 of IPART, 2008.

[122] The second quintile is the 20 per cent of the ABS sample population who, when ranked in ascending order of disposable income, fall between 20 per cent and 40 per cent of the sample. The first quintile is the 20 per cent of the sample population with the lowest disposable income. See Australian Bureau of Statistics, 2011 (b).

Because the current ABS equivalised household disposable income series ends with the 2009-10 data, it is not possible to make these comparisons for the price period beginning in 2013. To provide an indication of the future relativity of bills and disposable income, the available ABS data has been projected to 2013-14. Based on this projected data, typical household bills in 2013-14 will be around 1.8 per cent of mean disposable income and pensioner bills will be around 1.9 per cent of second quintile disposable income.[123] This suggests that the prices proposed in this submission will not alter the current relativity between bills and disposable income.

Hunter Water also tested customer's perceptions about the affordability of its services as part of its 2012 pricing consultation. Overall, 6 out of 10 respondents said Hunter Water's services were affordable. This proportion held true also for concession card customers (pensioners) as well as the overall result. A slightly higher proportion of business customers, 64.4 per cent, said Hunter Water's bills were affordable. Only 24 per cent of business customers said bills were not affordable compared to around 32 per cent for residential customers and pensioners.

11.4 Impact on non-residential customers

It is difficult to generalise about the incidence impacts of price changes on non-residential customers. Meter configurations for non-residential customers vary from business to business making it difficult to define a "typical" non-residential service charge. For most non-residential customers with consumption in excess of 1,000 kilolitres, usage charges are the main determinant of their total bill.

In addition, not all non-residential customers are connected to the sewer system and there can be a wide range of the volumes of water used, sewer discharge factors and trade waste composition – all of which are key parameters in determining the final bills of non-residential customers.

To provide an incidence comparison, this submission includes an analysis of non-residential water bills for a sample of small, medium and large non-residential businesses. The sample businesses pay a different mixes of water, sewer, stormwater drainage and trade wastewater charges. Bills for these customers are tracked from the current year, 2012-13, to the end of the proposed determination period in 2016-17.

Table 11.5 shows that, after four years, bills for non-residential customers will change by quite different amounts. Bills for the sample customers in the table range from a reduction of almost 30 per cent over the four years to an increase of around 26 per cent. The extreme impacts in this table mainly affect small non-residential customers as a result of IPART's proposal to set the sewer service charge for these customers at the same charge as that applying to a house. Where existing small customers have high discharge factors, the effect of the IPART proposal is to cap their sewer service charge and these customers benefit from a reduction in overall bills as a consequence. The small industrial business, small Newcastle shop and service station in the table all fall in this group.

[123] Projection using ordinary least squares regression. Hunter Water is reluctant to project disposable income beyond the first year of the price period (2013-14) and this projection is provided for indicative purposes only. Other methods of projecting disposable income, such as linking to expected wage growth, GDP growth etc are also not considered to be sufficiently robust for projection beyond 2013-14.

Table 11.5 Non-residential bills for sample businesses ($2012-13)

Business	Charges[a]	2012-13	2013-14	2014-15	2015-16	2016-17	Av annual change
Small industrial	w,s,d,t	1,298	907	911	915	922	(94)
Small shop - Newcastle	w,s	1,363	994	1,011	1,026	1,043	(80)
Small retail nursery	w,s	1,607	1,921	1,960	1,991	2,030	106
Shop - Cessnock	w,s,d	1,774	1,804	1,849	1,906	1,956	46
Service Station	w,s,d	1,799	1,412	1,424	1,433	1,447	(88)
Regional office - Maitland	w,s,	6,488	6,593	6,756	6,928	7,098	153
Medium licenced hotel	w,s,d,t	7,814	7,892	8,039	8,173	8,328	129
Large office - Newcastle	w,s	18,679	18,906	19,300	19,655	20,063	346
Large licenced club	w,s,d,t	68,472	69,116	70,302	71,308	72,530	1,014
Regional shopping centre	w,s,d,t	100,970	101,662	102,895	103,925	105,264	1,074
Medium industrial	w,s,t	197,581	200,331	204,157	206,584	210,653	3,268
Large industrial no sewer	w,d,t	343,550	350,567	358,271	363,611	371,761	7,053
Large industrial with sewer	w,s,d,t	473,775	478,986	486,651	490,925	499,132	6,339

Source: HWC

a) This column indicates the charges applicable to each customer. w = water, s= sewerage, d=stormwater drainage and t = trade wastewater.

However, where small customers currently have a very low discharge factor, the IPART proposal to set the service charge at equal to that of a house makes this charge a minimum charge. Thus, as a result of this change, these customers will see an increase in bills. This is the case for the retail nursery shown in the table.

Most other non-residential customers will generally see price increases of between 5 per cent and 10 per cent over the four years. A detailed summary of impacts on non-residential customers is provided in Appendix L.

Stormwater service charges for non-residential customers will be based on land area only. Like residential customers, non-residential customers will see reductions in stormwater drainage charges of around 30 per cent by the end of the four-year price period.

11.5 Managing customer impacts

Hunter Water has programs for customers who require assistance for particular financial or other reasons. Some of this assistance is universally available to specific groups of customers who meet specific eligibility criteria. This type of assistance includes:

- assistance to concession card holders, mainly as a rebate of their bill
- water usage bill concessions for customers with health and special needs, and
- assistance to nursing homes, religious, charitable and public benevolent bodies religious organisations.

Other assistance is provided to individual customers on application. This type of assistance includes:

- account assistance for customers in financial hardship
- access to the Hunter Region No Interest Loans Scheme, and
- water efficiency initiatives that assist customers reduce water consumption and usage charges.

Assistance to concession card holders

Customers who hold a Pensioner Concession Card or certain types of Department of Veterans' Affairs Gold Card are entitled to a pensioner rebate. This rebate is designed to provide relief for the pensioners' personal water and sewer charges and applies to properties owned and occupied by them.

For many years, the pensioner rebate was a fixed amount linked to the rebate provided by local government water agencies. In early 2009, the NSW Government announced that, from 2009-10 onwards, future rebates would be linked to movements in water and sewer bills. In keeping with this policy, the combined water and sewer rebate was increased from $175 in 2008-09 to $207 in 2009-10. The rebate has increased in each subsequent year to $221 in 2010-11, $239 in 2011-12 and $258 in 2012-13.

Pensioners who are water and sewer customers and are entitled to 100 per cent of the rebate and, in 2012-13, receive a reduction in charges of $258. The rebate is applied to each bill issued at $86 per bill. Water only or sewer only customers receive 50 per cent of the standard rebate.

The environmental improvement charge (EIC) is also waived for pensioners eligible for the rebate, providing further bill relief to these customers. The combined benefit of the pensioner rebate and waiving the EIC is $293.89 in 2012-13.

A free tap re-washering service is available to customers who receive a pension rebate on their account.[124]

Health and special needs customers

Hunter Water recognises that certain customers require additional water to maintain their health because they are dialysis patients and are able to dialyse from their own homes. These customers are offered financial support in the form of the dialysis rebate. The Renal Unit of Hunter New England Area Health provides Hunter Water with the details of customers who are able to dialyse at their own home.

The rebate provides a free "water allowance" of 250 kilolitres per year. The rebate is split and applied to each four-monthly bill.

Nursing homes

For eligible nursing homes, relief in charges is granted in the following ways:

- reduction of water and sewer service charges
- waiving of EIC, and
- waiving of drainage charges.

[124] In some circumstances, the free tap re-washering service is also available to customers who are not pensioners but who are in receipt of assistance through the Payment Assistance Scheme.

Properties owned by religious, charitable and public benevolent organisations

For properties owned and occupied by religious, charitable and public benevolent bodies, Hunter Water may grant service charge relief to customers if they are eligible in accordance with NSW Treasury guidelines. Relief from charges may be granted in the following ways:

- reduction of water and sewer service charges
- waiving of the EIC
- waiving of drainage charges, and
- a reduction in water usage charges in certain circumstances.

Bill management options for residential customers

Hunter Water recognises it is sometimes difficult for individual customers to find the money to cover all their household bills. These periods of financial pressure may be short or long term and usually cause considerable stress for both individuals and families.

Hunter Water's telephone contact centre and customer service staff offer assistance to customers by discussing support options that will assist them manage their ongoing payment commitments during these difficult times. Hunter Water always prefers to help customers by reaching an agreement with them and has developed a credit management process that provides options for customers.

Customers initially have 21 days to pay their account. However if they are concerned about meeting a payment on time, they are encouraged to contact the Corporation to discuss their situation. Hunter Water aims to help customers identify solutions to sort out their current account as well as discuss ongoing options to help keep their account at a manageable level. The options offered to customers are:

- an extension of time to pay their account
- a payment plan (pay plan) of regular instalments over an agreed timeframe
- a budget plan where regular manageable amounts are debited from their bank account, and
- access to the Payment Assistance Schemes (PAS) that operates through local welfare agencies – see Box 11.1 for details about the scheme.

Since the last IPART price review in 2008, Hunter Water has been developing ways to improve its account assistance for customers experiencing financial hardship. These improvements are outlined in the flowing section.

Improving account assistance for customers in financial hardship

Hunter Water is developing and implementing a new hardship (account assistance) policy. This policy outlines the process for identifying and assisting customers in financial hardship as well as the training requirements for all customer service staff. This policy has been discussed with the Energy and Water Ombudsman (EWON), the Public Interest Advocacy Centre (PIAC) and Lifeline. Also, it has been benchmarked with other water and energy utilities in Australia and the United Kingdom as well as with the hardship policies of local councils and within the banking industry.

Identification of customers in hardship remains the greatest challenge. Customers often avoid contact with Hunter Water due to a lack of understanding about the options available to them.

Communicating personally with customers who miss bill payments can be difficult, particularly with the recent rapid growth in the number of people relying solely on mobile phones in place of fixed-line home phones. Contact in these instances must be initially made by mail or the customer contacting Hunter Water.

Box 11.1 Payment Assistance Scheme

Residential customers experiencing financial difficulties may be eligible for support through Hunter Water's Payment Assistance Scheme (PAS). The scheme operates through registered community welfare agencies with staff and volunteers trained to assist customers experiencing hardship. The agency will assess the customer's individual needs and circumstances and may issue payment assistance vouchers to help the customer pay their Hunter Water account. The welfare agencies currently participating in the scheme are:

- St Vincent de Paul
- Salvation Army
- Northern Settlement Services
- The Samaritans
- Maitland Neighbourhood Centre

Customers are encouraged to contact the welfare agencies directly. However Hunter Water's telephone contact centre and customer centre staff can provide information and referral where required. Hunter Water provides information to customers about PAS on its website and also publishes information in brochures and newsletters.

As further discussed in Chapter 12, Hunter Water is committed to involving the community in its decision making process and, as part of the 2012 pricing consultation, sought the views of the community about the Hunter Water PAS. Specifically, the details of the PAS program were explained as was the cost, which equated to 14 cents per bill. The results of the consultation showed that 70 per cent of customers are happy with this program and the cost and would like to maintain the PAS. Interestingly, 19 per cent thought that the program should be either doubled or tripled.

The account assistance program seeks to improve communication with customers through increased promotion of the program in a variety of ways. Currently the program is advertised in *Making Waves*, Hunter Water's newsletter bill insert. The program has also been promoted through PAS agencies and financial counsellors in the region. Future promotion is planned using print media, community networks, EWON, PIAC, Centrelink, schools, aged-care networks such as the Australian Government's Home and Community Care (HACC), and councils.

Hunter Water is also developing monitoring systems that will help predict customers who may be in hardship. These systems will identify changes in payment behaviour and will provide the opportunity to contact customers and provide payment options before unmanageable debts accrue.

This bill monitoring is also identifying customers with high water usage or atypical increases in water usage. These customers then can be contacted to provide water efficiency advice or referrals as well as an assessment of hardship, if relevant to the customer's circumstances. Hunter Water engaged consultants in July 2012 to improve its aged debtor data with a view

to proactive hardship identification and reduce aged debt held by customers. Staff in the contact centre, and at the front counters, have been trained to identify customers in hardship. This training will be ongoing and will be supported with Lifeline training for all internal customer service staff. Once identified, customers are referred to the account assistance team, who follow a process of assessment, planning, referral and follow up.

Assessment is discrete and establishes the basic cause of hardship including, but not limited to family breakdown, low income, poor health and unemployment. The account assistance team also reviews water usage and the number of people in the household to ensure that usage is not excessive. Where water usage appears high, staff will suggest that customers check for leaks or review water use. Where customers are concession card holders, staff will provide referral information to the NSW Home Power Savings Program, which provides an energy and water audit of the home and replaces shower heads and tap aerators to reduce water use.[125]

Staff also assess a customer's capacity to pay and discuss with the customer the amount required per week or fortnight to cover ongoing bills. Where the customer is able to afford this, a payment plan will be set accordingly. Customers adhering to the agreed pay plan will not be liable for interest on overdue amounts. Customers are requested to call back at any time if they are not able to make a payment or if the agreed pay plan is no longer affordable.

When a customer is not able to meet minimum payments to cover ongoing bills, a revised pay plan will be based on their own assessment of their capacity to pay. Customers will be informed that the debt on their account will continue to accrue, however no interest will be applied. Once a pay plan has been set, staff will discuss Payment Assistance Scheme (PAS) and other referral options with the customer.

The Payment Assistance Scheme is explained in Box 11.1. If the customer agrees, a "warm referral" is made to the PAS agency. A warm referral is valuable because it introduces a customer to the agency and ensures immediate contact. Hunter Water has found that this method ensures that more customers access PAS. Hunter Water has also changed the way in which it discusses PAS with customers and ensures customers are aware that the money is provided by Hunter Water, not the PAS agency. This explanation reduces customer concerns about receiving charity, which has often inhibited referrals in the past.

Referrals are also made to Lifeline, financial counsellors, the Credit and Debt Hotline[126] and other community agencies to ensure that the social and emotional needs of customers can also be met. Hunter Water understands that it is not in the position to assist customers beyond their bill but recognises the importance of providing customers with options for assistance with their other concerns.

The process for PAS has been reviewed and communication with PAS agencies has increased. A PAS Forum was held in March 2012 to invite feedback on the PAS program and how it could be improved.

Hunter Water has implemented a system of contact by the PAS agency while the customer is attending the agency. This ensures that customers receive the maximum amount allowed when they first receive PAS. This system also provides an opportunity to set a pay plan in the presence of the PAS staff member or volunteer who can advise on capacity to pay. Most PAS agencies also have financial counsellors on site that can assist in establishing the customer's capacity to pay.

[125] See www.savepower.nsw.gov.au for full details of the Home Power Savings Program.
[126] This hotline is operated by the Consumer Credit Legal Centre NSW and provides financial counselling information, advice and referral service available to individual consumers in NSW on credit, debt and banking issues. See www.cclcnsw.org.au

Hunter Water will also provide training to all PAS agency staff and volunteers in water efficiency to build their knowledge of water-efficient products and programs, such as the NSW Home Power Savings Program.

Financial counsellors play an important role in Hunter Water's account assistance program. Where a customer has defaulted on pay plans three times, a financial counselling appointment is required to ensure that a viable payment plan is in place. Financial counsellors also play an important role in contacting Hunter Water to negotiate on a customer's behalf, where they are unable to do so themselves.

Hunter Water understands that tenants can be affected by the costs of water and by the payment behaviour of landlords. To provide better information and assistance to tenants, Hunter Water has established a relationship with the Hunter Tenants Advice and Advocacy Service. Where tenants are concerned about their rights, they are advised to seek advice from the service to ensure the advice they receive is independent.

Hunter Region No Interest Loans Scheme

In response to a submission by the Public Interest Advocacy Centre to the 2009 price review, Hunter Water provided seed funding to the Hunter Region No Interest Loans Scheme (HR NILS), prior to the scheme's formal launch in October 2009.

The scheme assists low-income residential customers, who cannot access mainstream credit, purchase essential household appliances. Hunter Water initially funded loans for water-efficient washing machines but the program has been enhanced over time to include other items, such as replacement toilets.

Hunter Water is currently working with Ausgrid[127] to provide HR NILS clients with access to more affordable washing machines through Ausgrid's purchasing agreement with a major appliance supplier. By working with Ausgrid, HR NILS is able to provide Hunter Water-funded loans to customers to purchase water-efficient washing machines at a significant discount on normal retail prices. All the parties believe that this initiative will ensure greater take up of no-interest loans for the purchase of water-efficient washing machines.

Water efficiency initiatives

Water efficiency initiatives assist customers contain their water bill by reducing water usage. In 2012-13, water usage charges make up around 95 per cent of the water component of typical residential bills, so water-efficiency measures offer potential to reduce bills.

Hunter Water has conducted a number of water efficiency programs during the current price determination period. These initiatives have included residential refit programs refitting houses, units and flats with water efficient showers and tap aerators, a subsidised toilet replacement program that resulted in over 1700 old single-flush toilets being replaced with dual-flush models and a residential shower head exchange program.

In 2011-12, the residential refit program was heavily promoted to landlords and real estate agents to encourage improving water efficiency in rental properties. This program was linked to changes in the residential tenancies regulations, which now only allow the usage component of water bills to be passed on to tenants if the properly has water-efficient fittings.

Probably the most popular residential initiative has been the showerhead exchange program. This program enables residents to exchange older showerheads using 16 litres per minute or more for water-efficient models using 7.5 litres per minute. The program allows

[127] Ausgrid is the electricity network operator serving homes and businesses throughout Sydney, the Hunter and the Central Coast.

residents a free exchange or the option to select more expensive models at heavily discounted prices. Thirteen exchange events were held in 2011-12 and more than 5,000 showerheads have been exchanged since the program began in June 2010.

11.6 Price trends beyond 2017

Hunter Water believes prices in the following price period (from 1 July 2017) will follow a similar trend to that displayed for the coming price determination period. As outlined in Chapter 6 on capital expenditure, the capital expenditure budget for the determination period from 1 July 17 will be in the order of $300 million ($2012-13) for a four-year determination period. Barring major unforeseen influences on the operating context and operating expenditures, this long-term capital investment goal should see price increases contained for the next 8 years.

The chapters discussing water, wastewater and drainage prices also have provided indicative prices for 2017-18, as requested by IPART. Clearly when projecting prices six years in advance, there is a loss in rigour in the quality of the base assumptions, particularly future movements in input costs. Hunter Water has invested significant effort into projecting prices for the proposed price period to 2016-17. The same level of cost detail is not available for prices beyond that period so less certainty can be attached to projections beyond mid-2017.

11.7 Impact on Hunter Water's financial position

To ensure financial viability, Hunter Water needs to achieve an adequate return on its assets, be able to service its debts, and to be able to generate sufficient cash to invest in assets for the future growth requirements in the lower Hunter. An adequate rate of return ensures that Hunter Water is also able to meet the dividend requirements of its shareholder, the NSW Government.

NSW Government policy requires that State-owned corporations maintain an investment-grade credit rating. In developing its future price proposals, Hunter Water takes into consideration customer affordability, appropriate dividend distributions to the shareholder and the maintenance of an investment grade credit rating. The prices proposed in this submission aim to meet Hunter Water's obligations in each of these areas. Deterioration in the credit rating below investment grade would impact the financial viability of Hunter Water in the short to medium term.

IPART's June 2012 issues paper points out that it is currently reviewing its approach to testing the impact of its price decisions on the financial viability of regulated businesses.[128] In the absence of an outcome from this review, the following section presents the relevant financial ratios (and their respective weightings) and the credit rating benchmarks used by the credit rating agency Moody's in assessing the relevant stand-alone credit rating of Hunter Water for NSW Treasury.

Hunter Water uses Moody's rating methodology as a reference point because it is internationally recognised. The four key rating factors that constitute Moody's analytical framework for rating regulated water utilities are:

- regulatory, environment and asset ownership model – 40 per cent
- operational characteristics and asset risk – 10 per cent
- stability of business model and financial structure – 10 per cent, and

[128] IPART, 2012(c), section 4.6

- key credit metrics – 40 per cent.[129]

In Moody's methodology *"…the first three rating factors aim to capture the credit strengths and weaknesses afforded by the water utility's fundamental business and its financial policies. However, a company's ultimate credit profile must also incorporate its financial metrics. Two otherwise identical water utilities may exhibit radically different credit profiles due to different financial metrics*"[130].

The leverage ratios used aim to capture a different measure of how easily an issuer can repay its debt while coverage ratios focus more on the ability to service the debt prior to repayment.

Key financial ratios

Table 11.6 details the key financial ratios, their weighting and the indicative range of the credit rating score to achieve a minimum of an investment grade credit rating (Baa or BBB) used by Moody's:

Table 11.6 Key financial ratios

	Weighting	Range
Funds from operations interest cover	15%	2.5 – 4.5 (times)
Net debt / regulated asset base	15%	55 - 70%
Funds from operations / net debt	5%	10 - 15%
Retained cash flow / capital expenditure	5%	1.0 – 1.5 (times)
Credit Rating		Baa / BBB

Source: HWC

Table 11.7 details the key financial ratio results for Hunter Water over the price period covered by this submission.

Table 11.7 Financial ratio results

	2013-14	2014-15	2015-16	2016-17	Credit Rating [a]
Funds from operations interest cover	2.1	2.0	2.1	2.0	Ba / BB
Net debt / regulated asset base	46%	47%	47%	47%	A / A
Funds from operations / net debt	7.6%	7.2%	7.5%	7.6%	Ba / BB
Retained cash flow / capital expenditure	0.4	0.4	0.5	0.5	B / B
Overall credit rating					Baa / BBB

Source: HWC

a) The ratings are calculated from Hunter Water's base financials. Any other adjustments that Moody's may make to the financials are not forecast.

In light of the uncertainty around the financial sustainability of the business and with consideration to customer affordability issues experienced by the community, Hunter Water has changed focus over the past 12 months. For example, the capital portfolio originally proposed for the coming price period was in the order of $600 million ($2012-13) at September 2011. The revised capital portfolio contained within this submission is now

[129] Moody's Global Infrastructure Finance, 2009.
[130] Moody's Global Infrastructure Finance, 2009, p19

approximately 50 per cent of that originally proposed. While this does expose Hunter Water to some degree of operational risk, the reduction in the level of the portfolio has assisted in stabilising the financial metrics as shown in Table 11.7.

Although the financial metrics are forecast to be stable based on this price submission, Hunter Water is on the cusp of investment grade meaning there is minimal revenue headroom to respond to changes in the economic environment such as fluctuations in interest rates or seasonal influences reducing the demand for water and so Hunter Water is susceptible to being downgraded to below investment grade at any time during the coming price period.

This situation can be seen in Table 11.7, as Hunter Water is below investment grade in all but one of the four credit metrics. It is only the 'Net debt/regulated asset base' ratio (an assessment of the gearing of the business) that ensures Hunter Water maintains an overall investment-grade credit rating, albeit borderline. Sufficient headroom and adequate pricing support is essential to ensuring Hunter Water does not fall below investment grade.

Looking internationally, Hunter Water's current rating is below the rating that OFWAT considers sufficient for companies to raise debt finance on reasonable terms (being BBB+) and a report in 2009 by Europe Economics on the cost of capital and financeability concluded that, given the changes in the cost of raising debt finance driven by the global financial crisis, OFWAT's financeability analysis should be based on a credit rating assumption of A minus (A-).[131] So, Hunter Water does not meet the current OFWAT credit rating measure (BBB+) let alone the A- recommended by the Europe Economics report.

Any reduction in Hunter Water's proposed WACC of 5.6 per cent will weaken Hunter Water's long-term financial viability.

Price sensitivity

This submission outlines the substantial constraints that Hunter Water has placed on its operating and capital expenditure for the next four years. As pointed out in Chapters 3, 5 and 6, these reductions come with risks of running close to the limits of regulated standards and increasing operating expenditure on maintenance activities. Even with these cost constraints, real price increases of 2.1 per cent per year are necessary to maintain service standards and meet community expectations.

IPART's 2012 determination for Sydney Water resulted in real price reductions over the Sydney Water determination period. Given the constraints that Hunter Water is imposing on its operating and capital expenditure, further significant reductions in expenditure would be required for Hunter Water to limit price increases to CPI movements over the next four years. Sensitivity modelling shows that to achieve a CPI outcome only, expenditure over the price period would need to be adjusted as follows:

- no capital expenditure and a further reduction of $11.9 million ($2012-13) in operating expenditure (from $476.3 million to $464.4 million), or
- fifty per cent reduction in proposed capital expenditure and a further reduction of $51.9 million in operating expenditure (from $476.3 million to $424.4 million), or
- acceptance of a reduced real post tax WACC from 5.6 per cent to 4.7 per cent. This WACC estimate is well below the lower end of the WACC range outlined in Chapter 7.

These sensitivities illustrate that substantial changes to the expenditure outlined in this submission would be required to achieve a CPI only price outcome.

[131] Europe Economics, 2009, page 159

12 Customer engagement

Main Points

- *Hunter Water is focused on customer engagement and has an ongoing engagement strategy to involve the community in its decision making process.*
- *Hunter Water recognises that affordability is a pertinent issue in the context of increasing household costs and that customers have an increasing expectation around consultation and involvement in decision making.*
- *In addition to the ongoing engagement strategy, Hunter Water undertook a comprehensive customer engagement and research program around pricing issues, including affordability, service level standards and willingness to pay. This work was carried out in June and July 2012 and is referred to as the 2012 pricing consultation.*
- *1910 people responded to the 2012 survey and the majority of demographics gained a robust sample size. The results have a high level of statistical significance.*
- *The results of the work have been used to inform the price submission and ensure that customers' views and willingness to pay are reflected in the pricing proposals contained in this submission.*

12.1 Introduction

Hunter Water values the input of the community to its decision making processes on a wide range of activities. At any time, there are a number of consultation processes underway including community reference groups on major construction projects, customer surveys, customer panel activities, regular forum meetings with developers and consultation at a variety of community events. Hunter Water also consults with the community through its standing Community Consultative Forum.[132] Continuous feedback is also received from customers through Hunter Water's telephone contact centre, website contact page, correspondence from customers and reports from external parties such as the water industry ombudsman, EWON. All these vehicles serve to inform Hunter Water about customers concerns and expectations.

[132] Information about the forum is available on Hunter Water's website, www.hunterwater.com.au and by referring to clause 5.5 of the operating licence (see Hunter Water Corporation, 2012 (a)).

IPART's price submission guidelines require Hunter Water to consult with customers on proposed price increases, affordability and willingness to pay around discretionary spending.[133] In May 2012, IPART wrote to Hunter Water further setting out expectations on customer engagement for the 2012 price review. The letter highlighted that proposals for discretionary expenditure should be supported by evidence of customer engagement. In response to these requirements, Hunter Water has undertaken a specific consultation program to inform its 2012 price submission.

Hunter Water has not proposed to undertake any large discretionary expenditure in pricing period starting in July 2013 but has identified some areas of spending that could be considered discretionary. These areas of spending have been taken to the community to understand their views and willingness to pay for this expenditure. Community views from the 2012 pricing consultation have been incorporated into this submission.

12.2 Hunter Water's engagement activities

The UK water industry regulator, OFWAT, has identified that good customer engagement is a continuous wide-ranging process, which builds knowledge, insight and understanding between utilities and customers.[134]

Hunter Water undertakes a wide range of customer engagement activities on an ongoing basis to understand customer's needs and expectations. Specifically, this involves providing opportunities for customers and the community to input into decisions about business activities and investments. Some examples which demonstrate this approach have been identified in the CEPA report[135] and include, but are not limited to:

- a customer reference panel set up to determine the location for a reservoir near Cessnock[136]
- the development of a powdered activated carbon treatment option for water from Chichester Dam in light of customer feedback about taste and odour issues[137]
- the community reference group for the upgrade of the Burwood Beach wastewater treatment works, and[138]
- customer panel views on the relative importance of service rebates for inclusion in the current customer contract. [139]

Hunter Water's Consultative Forum is an advisory body made up of key community representatives from across the area of operations, who provide feedback from a community perspective on customer and consumer interests and operational matters. The forum consists of representatives from six local councils as well as representatives of major customer, environmental and community groups. The forum provides two-way open communication to discuss Hunter Water's activities with these important stakeholders and community representatives.

For the delivery of the capital works program, Hunter Water undertakes community consultation during the planning and delivery phase of projects. Community consultation

[133] IPART, 2011 (a)
[134] OFWAT, 2011 (b)
[135] CEPA, 2011
[136] CEPA, 2011, p 121
[137] CEPA, 2011, p 122
[138] CEPA, 2011, p 124
[139] Residential and business customers can volunteer to be part of the customer panel which provides views via surveys to Hunter Water throughout the year.

activities undertaken include information sessions for the community, door knocking of directly affected residents, the distribution of letters and factsheets to surrounding areas and newspaper advertising the commencement of work. The community can access further information, photographs and video about capital projects via the Major Projects page of the Hunter Water website. The website also features an interactive map for the community to identify projects happening in their local government area.

In addition to the ongoing customer engagement strategy, Hunter Water developed an engagement program for the current price review. This work is referred to as the 2012 pricing consultation in this submission. This was developed in the context of IPART's new requirement and with the intention gaining greater community input to the price review process and issues around pricing such as affordability, willingness to pay and service level standards.

12.3 Methodology

Hunter Water engaged Insync Surveys, an external, independent and expert consultant, to develop a comprehensive research and engagement strategy for the price submission. The primary objective of this work was to involve the community in the price setting process through consultation on areas of discretionary spend and service levels. The findings of the work have been analysed and have informed the framing of the submission. Earlier chapters have made specific reference to where the findings of this work have influenced the position proposed by Hunter Water.

The methodology and approach was comprehensively developed to ensure that Hunter Water reached the entire customer base to provide them with the opportunity to be involved in the price setting process.

The specific methodology is detailed below.

Focus groups

Four focus groups were held across different segments of the population, which included families, people experiencing financial hardship and the elderly. In addition, a focus group was held with a sample of customer panel members. The purpose of the focus groups was to test the response to key pricing issues in order to understand the views of the community on the issue of pricing, service levels and affordability. The focus group respondents highlighted gaps in knowledge and understanding on the topic of pricing and this information was used to develop questions for a major survey and content for an information brochure. This approach allowed Hunter Water to develop messages that were relevant to, and understood by, the community.

Stakeholder interviews

Stakeholder interviews were conducted with key stakeholder groups and representatives to discuss the pricing process and pricing issues. In addition to this, Hunter Water also consulted with its major customers and its Consultative Forum on the topic of pricing.

Interviews were held with the following stakeholder groups:

- Ethnic Communities Council - Newcastle and Hunter Region
- Urban Development Institute Australia
- Hunter Region Landcare Network
- Hunter Environmental Institute

- Mandurah Hunter Indigenous Business Chamber,
- Master Plumbers Association of NSW
- Catchment Management Authority
- Hunter Chamber of Commerce, and
- Local government.

Brochure distribution

In June 2012, an information brochure was distributed to all billable customers within Hunter Water's area of operations. The distribution of the brochure had two purposes. Firstly, to use the insights gained in the focus groups to distribute information to the community about the pricing process and secondly, to explain how customers could be involved in this process and have their say, directing them to an online survey. Readers were directed to the survey via a web address listed on the brochure, in addition there was a QR code which allowed smart-phone users to directly link to the survey. The QR code provided an immediate and convenient way to access the survey and was a tool used to reach the younger segment of the customer base who are typically a difficult segment to engage. A copy of the brochure is attached in Appendix M.

Survey of residential and business customers

In addition to the online survey, a random telephone survey of 500 residential customers and 200 business customers was conducted. The telephone survey asked identical questions to the online survey.

As mentioned above, the issues raised in the focus groups were used to further develop the survey questions. There were three sets of questions, demographic information, views of Hunter Water and views about discretionary spend areas. Differences in awareness and/or understanding amongst customers about the pricing process, Hunter Water services and the potential for change, required that a degree of contextual information be provided in the information brochure and with the questions, where appropriate.

The survey focused on gauging customers' willingness to pay for spending that could be considered discretionary. Examples of discretionary expenditure included the removal of graffiti from conspicuous Hunter Water facilities (e.g. buildings, above ground reservoirs and pumping stations), odour control from the sewerage system and service levels above the mandated standards.

Pilot online and telephone surveys were conducted prior to launching the survey. The pilot surveys tested that respondents understood the questions and were able to respond and complete the survey. The pilot demonstrated that the questionnaire was well developed and that the questions provided sufficient context for respondents to answer the questions confidently. The survey questions are included in Appendix M.

Library consultation sessions

To further support the information brochure and the survey, Hunter Water representatives conducted drop in sessions at libraries across all seven local government areas. Sessions were held at:

- Cessnock
- Maitland
- Dungog
- Raymond Terrace
- Newcastle
- Toronto
- Swansea
- Belmont
- Charlestown

These sessions were spread over a week and included morning, afternoon, evening and weekend sessions to reach as many customers as possible.

The purpose of the sessions was to ensure that members of the community who did not have internet access and who were not randomly selected in the telephone survey had the opportunity to complete the survey. It also provided the opportunity for collaborative engagement, enabling customers to seek more information or further discuss issues of interest. In total, 60 people attended these sessions.

To support the information contained in the brochure, reinforce the online survey and library sessions and reach any members of the community who may not have received the brochure, Hunter Water undertook various advertising initiatives throughout the process. Advertising included:

- A banner on the Hunter Water website, which clicked through to the survey.
- Advertising banners on the websites of local newspapers, which clicked through to the survey. These sites included; Maitland Mercury, Port Stephens Examiner, Cessnock Advertiser, Dungog Chronicle and the Newcastle Herald.
- Printed advertisements in the Newcastle Herald over two consecutive Saturday editions. This included information about the survey (including the QR code which provided a direct link to the online survey) and the library session dates and times.
- Printed advertisements in the Maitland Mercury, Port Stephens Examiner, Cessnock Advertiser and Dungog Chronicle during the first week of the survey.

12.4 Summary of findings

The survey attracted 1910 respondents, including 701 telephone interviews and 1209 online surveys. The response rate makes the findings highly reliable – providing 99 per cent confidence that the reported statistics are within 3 per cent of the actual views held by the entire community.

The majority of demographics gained robust sample sizes, with the exception of Dungog local government area residents and flat renters. Renters are less likely to have land-line telephones, which make them difficult to reach via the telephone survey. In addition renters are not account holders with Hunter Water, so were reliant on landlords or real estate agents to pass on the information brochure. Table 12.1 shows a snapshot of the profile of the respondents, which is of particular relevance to pricing issues.

Table 12.1 Profile of respondents

	Frequency	% of respondents (unweighted)
All respondents	1,910	100%
Customer type:		
Residential	1,719	90%
Non-residential	178	9%
Unspecified	13	1%
Do you have a concession card?		
Yes	527	28%
No	1,175	62%
Unspecified	208	11%

Source: Insync Surveys, 2012

The customer engagement and research findings have been analysed and the results used to inform the submission. The overall findings are tabled below in Table 12.2 including a brief summary of how the results have been interpreted in the submission where relevant.

Table 12.2 Customer engagement survey results

Survey question	Result
Should Hunter Water charge all houses, flats and units the same fixed sewerage charge?	
Yes	63.1%
No	36.9%
Are you in favour of spending an extra $2 per bill for catchment protection projects?	
Yes	71.1%
No	28.9%
Would you like to save money by Hunter Water relaxing service levels whilst still meeting the mandated standards?	
Yes	30.9%
No	69.1%
Should Hunter Water spend less on odour reduction from sewerage pipes and pumping stations?	
Yes	17.6%
No	60.5%
I don't know	21.9%
Should Hunter Water spend less on odour reduction from sewerage treatment works?	
Yes	18.7%
No	61.9%
I don't know	19.5%
Should Hunter Water spend less on removing graffiti?	
Yes	37.8%
No	47.0%
I don't know	15.2%
Hunter Water provides a Payment Assistance Scheme which costs customers 14 cents per bill. Should this program be:	
Stopped	11.4%
Maintained	69.8%
Doubled	11.4%
Tripled	7.4%

Source: Insync Surveys, 2012

Discretionary spend items

As mentioned at the beginning of this chapter, IPART wrote to Hunter Water in May 2012 setting out expectations on customer engagement for the 2013 price review. The letter highlighted that proposals for discretionary expenditure should be supported by evidence of customer engagement. Six areas of discretionary spend were presented to the community for consideration in the survey.

The relative sewer pricing for houses and units and flats is a key issue that has been considered as part of this pricing submission. The results of the 2012 pricing consultation have shown that almost two-thirds of survey respondents favoured equalisation of the service charge across all household types. It is important to note that this result was heavily influenced by 88 per cent of respondents being house owners. When house owners, unit owners and tenants are weighted equally, only 38 per cent are in favour of equalisation. As discussed in Chapter 9, this information was considered in developing the pricing proposal for residential sewer service charges and Hunter Water has proposed that the service charge for home units and flats should be set at 75 per cent of the service charge applying to houses. Hunter Water has balanced the results of the survey, equity and cost reflective pricing to arrive at this proposal.

Additional catchment protection expenditure is arguably discretionary as the number and type of catchment protection programs implemented are at the discretion of the utility. On this note, Hunter Water proposes to spend approximately $4 million over the course of the price period on additional catchment protection projects. The survey provided real examples of how this money would be used and provided an approximate cost of $2 per bill. Over 70 per cent of respondents favoured this expenditure despite the financial impost on their bill. In balancing the feedback from the customer survey with the issue of affordability, Hunter Water is proposing to invest $3 million on catchment management initiatives for the pricing period starting in 2013.

Hunter Water currently provides levels of service to customers that are above its operating licence standards. This headroom essentially provides a “risk buffer” which may be required when adverse events threaten delivery of the standards.[140] The standards were set by IPART in 2010 on a risk assessment provided by Hunter Water indicating that they would be met in 19 years out of 20.

Hunter Water has met these standards since they were set in 2010 and, as a result of this performance, there is now some questioning as to whether the risk basis used to set the standards, and the associated headroom, is driving expenditure to exceed the standards. In this context, the spending that provides this level of risk coverage (headroom) may be interpreted as discretionary spending.[141]

The survey tested this issue by asking the community if they wish to save money by relaxing service levels while still meeting mandated standards. With 69 per cent of respondents in favour of the status quo, Hunter Water recognises that the community values the high standards of service provided. Over the next price period, Hunter Water will be operating prudently to balance affordability concerns within the community with its expenditure in order to manage increases to customer’s bills. Hunter Water will continue to achieve its mandated standards, perform within the parameters of the operating licence and other regulatory requirements and maintain excellent customer service.

In testing the discretionary expenditure around odours, respondents demonstrated that customers are willing to invest money in odour reduction from sewerage pipes, pumping stations and sewage treatment works. The results showed that spending on managing the risk of sewer odours is very price inelastic. Accordingly, Hunter Water will continue to control and manage odours from its infrastructure.

The community’s views on the topic of graffiti removal from Hunter Water property were mixed and on balance the community support the current levels of expenditure.

[140] For example, a failure in a major water trunk main supplying an outlying township may use much of the water supply continuity headroom in a single event.
[141] See IPART, 2012 (d), section 3.4, p 18 and Appendix B question 20

Hunter Water's Payment Assistance Scheme ("PAS") costs approximately 14 cents per bill.[142] In the context of discretionary spending, this scheme was discussed with the community and views sought on the maintenance of the scheme. Respondents recognised that there are instances of genuine need within the community and were supportive of the current levels of expenditure. The respondents demonstrated overwhelming support for this scheme to be maintained with 70 per cent in favour. Interestingly, an additional 19 per cent of respondents were in favour of increasing expenditure on the PAS, by either doubling or tripling expenditure and in turn the cost of this on the bill. Hunter Water will continue to spend approximately $100,000 per year on the PAS.

Community views of Hunter Water

This section of the survey set out to understand what the community think about Hunter Water and its current prices and pricing structure.

Affordability was addressed in this section of the survey. Respondents were asked to compare the affordability of their water bill with other home utility bills. Around six in ten customers find their bill to be reasonable in comparison to other utility bills. Hunter Water also sought to understand why respondents felt that water bills had been rising and, on the whole, the community understands that this is driven by Hunter Water's expenditure on inputs.

Control over bills continues to be a contentious issue amongst customers with the majority of customers feeling that they should have more control over their bill. Two prominent concerns are that the fixed sewer charge is too high and that there is no financial incentive for being water efficient and reducing water consumption. Hunter Water has responded to this feedback in this price submission by ensuring that water price increases are confined to the water usage price rather than the fixed service charge. This will ensure a stronger emphasis on usage charges in the coming period so that around 40 per cent of the combined water and sewer bill of a customer using 185 kilolitres of water per year is within their control.

Corporate citizenship of Hunter Water was tested and more than half of the respondents consider Hunter Water to deliver good social, environmental and ethical performance in the lower Hunter community. Ninety per cent of respondents consider Hunter Water to be a reliable service provider.

[142] The PAS is described in detail in Box 11.1 in Chapter 11.

13 Trade wastewater charges

Main Point

- *Hunter Water's overall approach to trade wastewater charging underwent a major review for the 2009 price determination. This included an external review by consultants appointed by IPART (Halcrow).*
- *Only minor modifications to the pricing structures are proposed for the coming determination period,*
- *Eleven of the 12 existing administration and inspection fees are being reduced following a review of the costs of performing these functions.*
- *A variation to Trade Wastewater Policy charge is proposed. This will enable Trade Wastewater Agreements to be more easily altered when conditions for a single trade wastewater customer change.*
- *It is proposed that 'Ship Waste' be removed from the list of road tanker delivered waste types. Loads currently charged under this waste type would then be charged under 'high strength tankered waste'.*

13.1 Background

Customer management

Hunter Water provides trade wastewater and tankering services to commercial and industrial customers where capacity and capability are available at wastewater treatment works (WWTW). Trade wastewater and tankering discharges are higher than domestic strength and represent a proportionally greater imposition on wastewater treatment facilities than residential discharges. Hunter Water's acceptance of higher strength discharges increases the costs of treatment. There are also administrative costs to manage customers and monitor their discharges to ensure Hunter Water complies with regulatory obligations in the wastewater collection system and treatment plants.

In 2007, the water industry through the Water Services Association of Australia (WSAA), developed a new preventative risk management framework for managing risks to wastewater systems and published the National Wastewater Source Management Guidelines.[143]

In the current price determination period, Hunter Water adopted the nationally recognised approach to the application of risk assessment to customer management by using the risk

[143] Water Services Association of Australia, 2008

assessment methodology in the WSAA guidelines, as adapted to Hunter Water's operating context. The risk assessment methodology involves identification of hazards by reviewing historical data on the quality and quantity of a customer's trade wastewater discharges then estimating the level of risk posed by the hazard. The assessed level of risk is a combination of the likelihood of an event occurring and the potential impact on the objectives of:

- safety of water agency personnel and the public
- protection of assets (pipes, plant and equipment)
- protection of treatment processes
- facilitation of regulatory and licence compliance, and
- facilitation of recycling.

The risk categorisation governs management and administrative effort as well as sampling frequency. The benefits of utilising this industry-wide approach include more focused customer management, improved risk mitigation and the adoption of a common management framework for these customers, regardless of their location in the country.

Pricing of trade wastewater and tankering services

Hunter Water has charged additional fees for trade wastewater discharges since 1994. In past price determinations, the fees have been based on a number of factors, which can vary over time and by wastewater treatment works, including:

- treatment plant operating costs
- capital costs of the wastewater treatment works
- load-based licensing (LBL) fees that are imposed by the Environment Protection Authority (EPA), and
- administration costs.

The additional costs associated with managing higher than domestic strength discharges from trade wastewater and tankering customers are recovered via fixed and variable fee components, as shown in Figure 13.1. Broadly, the fixed charges ($ per year) have been used to recover fixed costs, like labour that is directly employed to assist in monitoring and management of these customers. The variable charges ($ per kilogram) for high-strength wastewater and specific constituents (e.g. heavy metals, phosphorus, sulphate) recover costs that vary on the basis of the discharge quality, such as the energy and chemical costs associated with treating the additional load.

At each price review, Hunter Water reviews and updates its trade wastewater charges to reflect movements in the operating costs of treatment plants and changes to its regulatory operating environment. In particular, the upgrade of wastewater treatment plants to comply with EPA licence conditions and pollution reduction programs has significant impacts on the costs of accepting and treating trade wastewater.

13.2 Efficiencies and cost pressures

The costs of transport and treatment of discharges to Hunter Water's sewer system are expected to increase at a faster rate than inflation in the coming four-year price period. Key drivers of the cost increases are:

- increasing contractor rates for essential services to treatment facilities (e.g. chemicals, biosolids management and biosolids transport)

- increasing labour costs due to the competitive labour market
- more stringent environmental regulation driving significant upgrades to treatment processes and higher operating costs for the additional processing stages, and
- climate change driving alternative operating strategies to minimise carbon emissions and increasing energy costs.

Hunter Water adopts a culture of continuous improvement to drive efficiency improvements that reduce operating costs or limit increases in costs. Contractors are also provided with incentives to minimise the cost of services. For example, biosolids management contractors are paid incentive bonuses to find end-use sites closer to treatment plant sites in order to minimise transport costs.

13.3 Overview of proposed charges

The current pricing structure for trade wastewater customers is shown in Figure 13.1. This structure will remain unchanged for the coming price period.

Agreements

Trade wastewater agreement fees cover administrative costs for over 2,300 customers. Customers on a major agreement are charged additional discharge fees based on the volume and quality of wastewater being discharged to sewer. These fees are shown in Table 13.1. For customers on minor and moderate agreements, the fixed fee also covers treatment costs.

Trade wastewater customers are currently issued five-year agreements. These agreements are categorised as minor, moderate or major depending on the individual customer's risk profile (assessed in terms of quality and volume of discharge) when the initial agreement is created (see Figure 13.1).

There are presently 2,344 trade wastewater customers comprising 2,143 minor, 63 moderate and 138 major agreement customers.

In order to keep agreements up to date, Hunter Water issues a new Trade Wastewater Agreement whenever a customer updates the details that are stated in their agreement. This is usually a small alteration to the existing agreement such as a change of ownership. The creation of a new agreement can be contentious due to the substantial charges associated with the creation of a new agreement. This is particularly so if the only change is a change of ownership with no changes to the customer's treatment process or what they discharge to sewer.

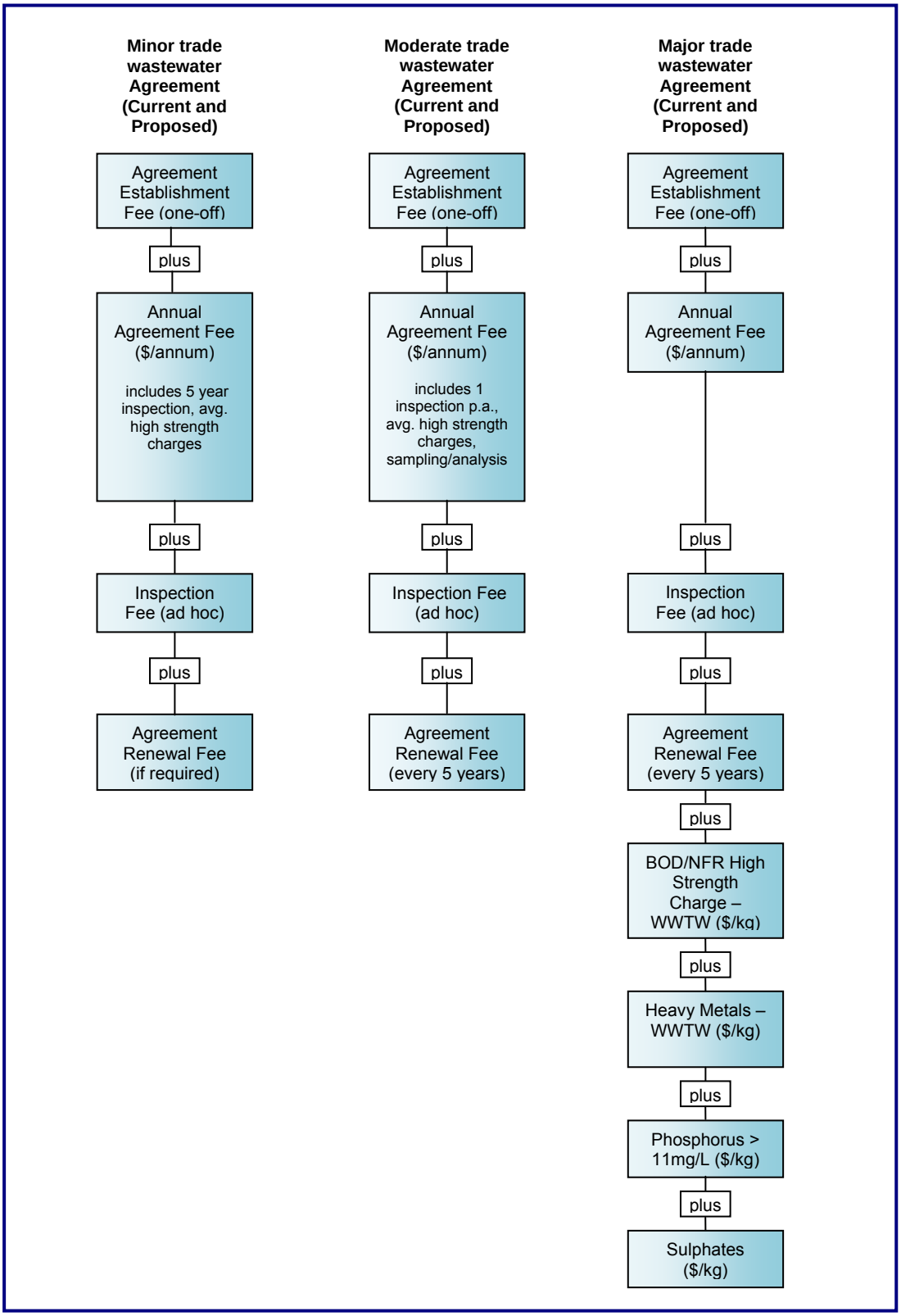
To address this issue, Hunter Water proposes introducing a new fee that more accurately reflects the time required to make the minor alteration to an existing agreement. This proposed new fee is to be called a 'variation to the agreement fee' (see Table 13.1).

Hunter Water has also undertaken a revised assessment of the administration and inspection costs associated with each trade waste fee. This has resulted in proposed reductions in 11 of the 12 existing fees.

Hunter Water's trade wastewater agreement charges proposed for the price period commencing 1 July 2013, are detailed in Table 13.1. The derivation of the charges makes no allowance for the effect of inflation and the charges should be increased annually in line with CPI.

Total income from trade wastewater agreements and inspection fees for 2012-13 is projected to be around $386,000.

Figure 13.1 Trade wastewater pricing structure



Source: HWC

Table 13.1 Trade wastewater agreement and inspection fees ($2012-13)

	2012-13	2013-14 to 2017-18
Minor Agreements		
New minor agreement establishment fee	127.49	127.62
Existing minor agreement holders:		
Annual agreement fee	121.37	104.35
Inspection fee	117.61	110.91
Existing Renew/Reissue	105.76	94.25
Variation to agreement fee	-	100.42
Moderate Agreements		
New moderate agreement establishment fee	667.25	453.36
Existing moderate agreement holders:		
Annual agreement fee	949.76	762.84 [a]
Inspection fee	117.61	110.91
Existing Renew/Reissue	482.30	255.40
Variation to agreement fee	-	100.42
Major Agreements		
New major agreement establishment fee	667.25	513.35
Existing major agreement holders:		
Annual agreement fee	488.15	424.84 [b]
Inspection fee	117.61	110.91
Existing Renew/Reissue	482.30	363.08
Variation to agreement fee	-	100.42

Source: HWC

a) Annual agreement fee includes high-strength charges for the average discharge quality of these customers.

b) Separate high-strength and constituent charges for heavy metals, phosphorus and sulphate apply and are not included in the annual agreement fee.

BOD/NFR strength charges

Biochemical oxygen demand (BOD)/non-filterable residue (NFR) high-strength charges are designed to recover the additional costs associated with treating the component of load that exceeds the equivalent domestic load strength in trade wastewater customers' discharges. BOD/NFR load (in kilograms) provides a suitable surrogate for a range of pollutants in wastewater that result in a treatment impost on Hunter Water.

The BOD/NFR charge is applied to whichever of either the BOD or NFR makes up the higher load in the waste from an individual customer. Since 1994, separate BOD/NFR charges have applied for each of Hunter Water's wastewater treatment works (WWTW) catchments, reflecting treatment cost differences at each works. This pricing structure creates incentives for new industrial/commercial trade wastewater customers to undertake new business in areas where the existing infrastructure will support their activities.

The proposed charges for the next price determination period across Hunter Water's 19 treatment works show an increase in charges for nine of the works by an average of 17 per cent and a decrease in charges at 10 of the works by an average of 39 per cent. These

changes reflect the changing capacities and operating costs of the respective treatment plants. See Table 13.2 for these proposed charges.

Trade wastewater customers tend to produce wastewater that is highly variable in nature. They also tend to be transient in that businesses can move between WWTW catchments. Hunter Water's treatment facilities are primarily designed to treat domestic quality wastewater. Designing WWTW for trade wastewater loads is not an efficient balance between the investment required to treat high-strength wastewater and risk of customers ceasing operations or initiating on-site treatment. The transient nature of trade wastewater customers also means that the high-strength charge revenue is not a very secure source of recovery of the capital costs of long-life assets.

Load limits are applied to trade waste agreements as required. This is usually only when an industry has sufficiently high volume and trade wastewater strength to have potentially serious impacts on the receiving treatment facility and only if the agreement load limits are exceeded. Exceeding the specific load limit in the agreement could have serious consequences, including failure of the treatment process, environmental regulatory breaches, environmental damage and subsequent litigation and could compromise safety of the community and Hunter Water's workers. It therefore could potentially impose significant costs on Hunter Water.

In the current price period Hunter Water introduced an 'incentive charge' to encourage customers to maintain compliance with limits specified in trade waste agreements. The incentive charge was introduced to offset the decrease in high strength charges that occurred when the return on/return of capital element was removed from the BOD/NFR pricing methodology at the last price review in 2009.

Large industries seek to minimise costs and the significant decrease in load fees in the current price period due to the removal of capital cost elements may have reduced a significant incentive for customers to control the quality of discharges. It was important that the reduction in high-strength fees was not seen as an opportunity for industries to pollute and avoid the expenses they had traditionally encountered (before 2009) through high-strength load fees.

The incentive charge only applies when new load limits have been set or existing load limits have been agreed with the customer in full knowledge of the incentive charge.

The incentive charge is applied for loads exceeding an agreed load limit for each pollutant specified on a major trade wastewater agreement. The incentive fees only apply to the proportion of load above the load limit for each billing cycle.

To make the incentive reasonable and effective, the 'incentive' load rate is set at triple the base load rate for loads beyond the load limit for each applicable pollutant set in the agreement. As the incentive charge is set at an appropriate rate to motivate compliance with agreement limits, no material level of additional revenue is expected.

The proposed charges are shown in Table 13.2. The derivation of the charges makes no allowance for the effect of inflation and the charges should be increased annually in line with the change in the CPI.

Heavy metals

The current heavy metal charge has been calculated using the original methodology adopted by IPART in all determinations since 1994. The charge is based on the costs associated with environmental monitoring, sludge and effluent/influent heavy metal monitoring, a portion of the EPA's LBL fees and the administration costs of treating and accepting heavy metals.

The charge is based on the total mass of heavy metals discharged into Hunter Water's sewerage system from local industries. Due to the low level of metals discharged to sewer from local industries, and the high level of treatment at Hunter Water's wastewater treatment plants, the LBL metal fees imposed by the EPA are generally low.

Table 13.2 Trade wastewater high-strength charges for BOD/ NFR ($2012-13)

Wastewater Treatment Works	2012-2013	2012-2013 Incentive Charge	2013-14 to 2017-18 Base Charge	2013-14 to 2017-18 Incentive Charge[b]
	$/kg ($ 2012-13) [a]			
Belmont WWTW	1.18	3.53	1.25	3.74
Boulder Bay WWTW	1.65	4.95	1.69	5.06
Branxton WWTW	4.29	12.86	4.66	13.98
Burwood Beach WWTW	0.78	2.32	0.70	2.10
Cessnock WWTW	1.81	5.45	1.57	4.72
Clarence Town WWTW	15.91	47.74	13.33	39.98
Dora Creek WWTW	1.10	3.29	1.85	5.56
Dungog WWTW	10.42	31.28	2.93	8.80
Edgeworth WWTW	0.83	2.49	1.23	3.70
Farley WWTW	1.06	3.16	1.20	3.61
Karuah WWTW	32.09	96.25	13.36	40.07
Kearsley WWTW	14.84	44.51	2.52	7.56
Kurri Kurri WWTW	2.57	7.71	2.69	8.06
Morpeth WWTW	1.18	3.53	0.93	2.78
Paxton WWTW	19.25	57.74	7.39	22.16
Raymond Terrace WWTW	1.80	5.42	1.83	5.49
Shortland WWTW	2.39	7.17	1.41	4.23
Tanilba Bay WWTW	3.28	9.86	2.87	8.61
Toronto WWTW	1.50	4.51	1.51	4.54

Source: HWC

a) These charges apply where the concentration strength is greater than 350mg/L for BOD or NFR, whichever is the higher

b) These charges apply for loads beyond the load limit set the trade waste agreement

Hunter Water proposes to retain the structure previously adopted of two metal charges, one for the Burwood Beach catchment and the other for all other WWTW catchments. Burwood Beach WWTW uses a different treatment process, which results in a difference in LBL fees imposed by the EPA.

The proposed charges are shown in Table 13.3. The derivation of the heavy metal charges makes no allowance for the effect of inflation and the charges should be increased annually in line with the CPI.

Phosphorous

Phosphorus charges have been included in the trade wastewater charges determined for Hunter Water since 2000. The costs associated with phosphorus discharges from industries are made up of the following components:

- the use of chemicals and administrative costs associated with accepting the discharge of phosphorus into the sewerage system
- costs associated with EPA LBL fees (where applicable), and
- the costs of managing additional biosolids from the precipitation of solid compounds as a result of chemical processing to remove phosphorus.

Continuing growth in inland catchments, coupled with requirements by EPA to reduce phosphorus levels discharged from inland WWTW, has resulted in additional costs in treating and removing phosphorus. The increases in phosphorus-related treatment costs are offset by relatively low LBL fees.

The proposed charge to apply from 1 July 2013 is shown in Table 13.3. This table also compares the proposed charge with that applying in 2012-13. The derivation of the phosphorus charge makes no allowance for the effect of inflation and the charges should be increased annually in line with the CPI.

Sulphate

In 2003, a new sulphate charge for trade waste customers was determined for all catchments.

Trade wastewater dischargers of sulphate contribute to the production of sewage gases and odours within the wastewater transport system. Most sewer odour problems are due to the presence of hydrogen sulphide. The concentration of the gaseous hydrogen sulphide is related to the sewer conditions and the level of dissolved sulphides present in the sewage. Sulphates are converted to sulphides under the anaerobic conditions that occur within the pipe network.

The presence of odours causes customer complaints and generally indicates that assets are being subjected to corrosion from the acids produced. Sulphides have led to corrosion of metal fittings in pump stations and treatment works and attack concrete structures within the sewerage system overall. Sulphides not only cause considerable damage and lead to significant maintenance costs but also pose occupational health and safety hazards.

Since the production of these gases is generated under a range of conditions, which vary with pH, flows and temperatures, it is difficult to develop an accurate cost-reflective charging methodology. It is more appropriate to use an incentive-based charge to encourage dischargers to minimise sulphate levels in their wastewater. The IPART-approved Sydney Water sulphate incentive charge method was adopted as Hunter Water's charge rate in 2003. Similarly, the proposed charge is as follows ($2012-13):

$$\${0.154 \times (SO_4/2000)\}/kg$$

This sulphate charge applies for trade wastewater customers who discharge higher sulphate concentrations than domestic customers. The cost methodology incorporates the nominal minimum price with the sulphate (SO_4) concentration linked to the national acceptance standard of 2,000 milligrams per litre and increases as the concentration increases. The converse is the result when the concentration is lower than the national standard.

The proposed sulphate charge is shown in Table 13.3. The derivation of the below charges make no allowance for the effect of inflation and the charges should be increased annually in line with the CPI.

Table 13.3 Trade wastewater services variable quality charges ($/kg $2012-13)

	2012-13	2013-14 to 2017-18
Heavy Metals:		
Burwood Beach WWTW catchment	$18.04	$21.89
All other catchments	$20.80	$36.10
Phosphorus >11mg/L ($/kg)	$1.99	$2.51
Sulphate formula ($/kg)	0.15 x (SO_4/2000)	0.15 x (SO_4/2000)

Source: HWC

13.4 Tanker received wastewater

Currently, a number of different types of wastewater are trucked to Hunter Water's wastewater treatment plants for treatment, including septic tank effluent and sludge, portable toilet waste and industrial waste. Fees for waste received by road tanker were introduced in 2000 and are made up of the following components:

- the capital costs of dedicated equipment installed to accept tanker waste
- administration costs associated with managing tanker waste, and
- treatment plant operating costs.

The current pricing structure for tanker waste is shown in Figure 13.2. Hunter Water currently recovers a component of administrative costs through fixed charges and the rest through volume-based charges.

Application of the current tanker waste charges relies on an honour system whereby tanker drivers indicate the discharge type and volume on paper dockets. There is a financial incentive for tanker operators to claim discharge of septic effluent only as this is the lowest price tanker waste type to discharge. Dockets that claim a load was high strength waste will typically result in a charge 5-10 times higher than a load with an accompanying docket stating that only septic waste had been discharged.

Hunter Water proposes two changes to the pricing structure for the next price period. The first is the removal of the 'Ship Waste' category of tanker waste. Currently only one tanker company is charged this rate and based on an analysis of their discharges over the past three years, the quality of their loads can be classified as "high strength tanker waste". The average price for one of their tanker deliveries using the "Ship Waste" price will increase by two per cent when using the 'high strength tanker waste' charges proposed in Table 13.4 for the next price determination period.

The second proposed change is the reduction in return on/of capital costs for the installation of automated tankering receival facilities. These costs were incorporated into the tanker water volume charges for all types of tanker waste types for the current price period. This reduction is due to only one automated tanker receival facility being installed in the current price period instead of the two receival facilities that were expected to be installed in this price period.

The reduction in return on/off capital costs for the installation of automated tankering receival facilities in the next price period has resulted in a decrease in 5 of the 6 proposed tankering services charges for the next price period. Following further investigations, it was concluded

that it would not be cost effective to install automatic facilities at two plants only when there are eight plants in total that can receive waste. The installation of these systems has been deferred so that Hunter Water can consider new available technology and collect more data. Indications are that recent developments in automatic receival technology may offer substantial savings in installation costs.

In the interim, improved delivery management, sampling and accounting systems have been put in place. These processes will also improve the knowledge of tanker movements, waste types being discharged and collect the appropriate income. These solutions will also provide important data for Hunter Water to make an informed decision as to the most appropriate and cost-effective automated system. The proposed pricing structure for tanker waste is shown in Figure 13.3. Changes to the charges used are highlighted in orange.

The proposed tankering services charges are shown in Table 13.4. The derivation of the tankering services charges makes no allowance for the effect of inflation and the charges should be increased annually in line with the CPI.

Table 13.4 Tankering services charges ($2012-13)

	2012-13	2013-14 to 2017-18
Establish tankering agreement	$213.65	$195.91
Renew agreement	$136.35	$125.03
Delivery processing fee	$4.21	$3.86
Portable toilet effluent ($/kL)	$13.54	$12.80
Septic waste ($/kL)	$4.06	$5.04
Ship waste ($/kL)	$7.55	-
High-strength waste ($/kL):		
Volume charge ($/kL)	$3.75	$3.26
Load charge ($/kg)	see Table 13.2	see Table 13.2

Source: HWC

13.5 Customer Incidence

Aggregate impact of proposed trade wastewater charges

The most significant changes to trade wastewater fees are:

- the introduction of a variation to trade wastewater policy charge, and
- a reduction in 11 of the 12 existing trade waste fees.

Both of these changes can be seen in Table 13.1.

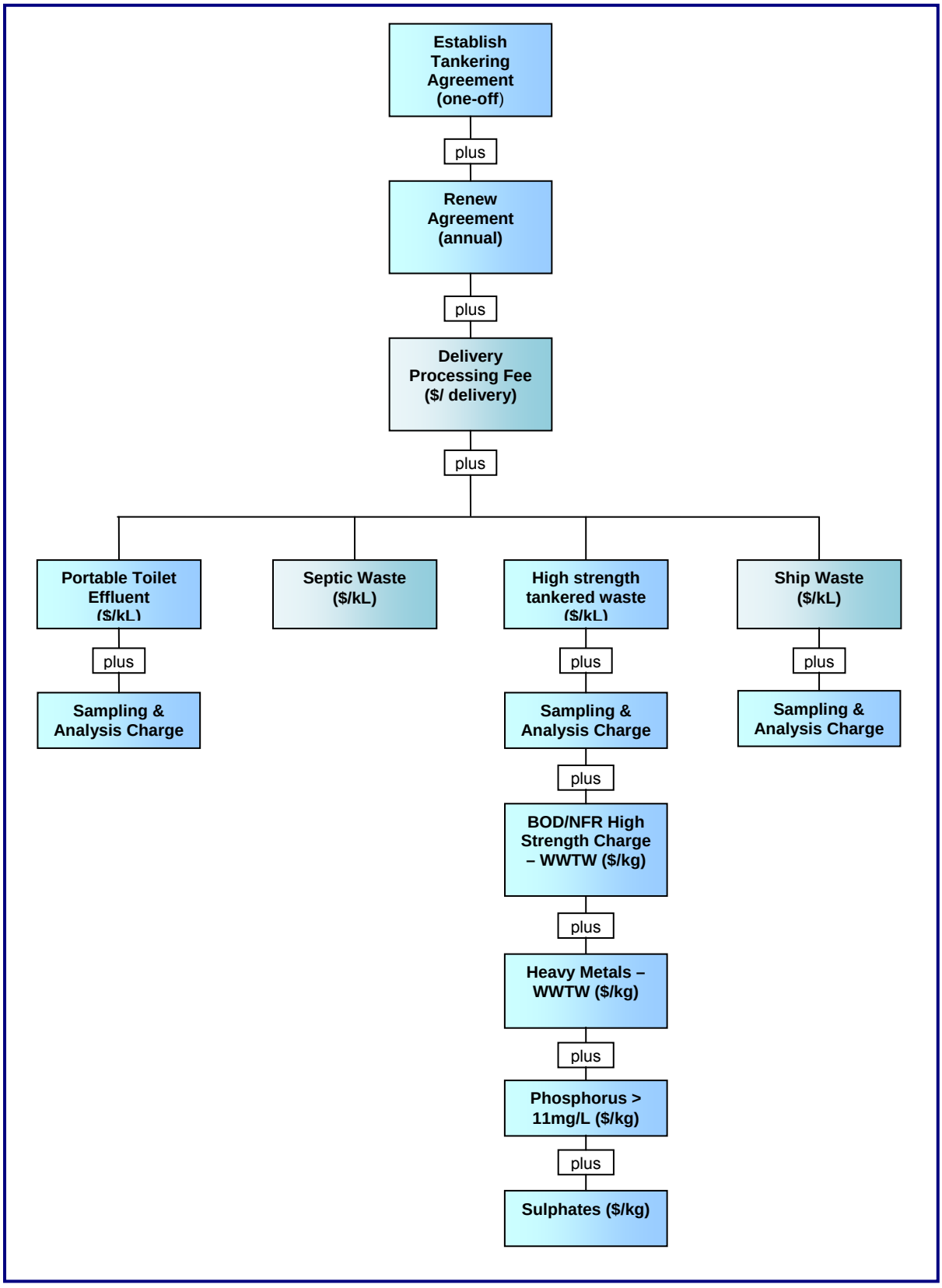
Aggregate impact of proposed tankering charges

The greatest change for tanker wastewater customers is:

- the proposed removal of “ship waste” as a service charge type, and
- a decrease in 5 of the 6 ongoing tankering charges.

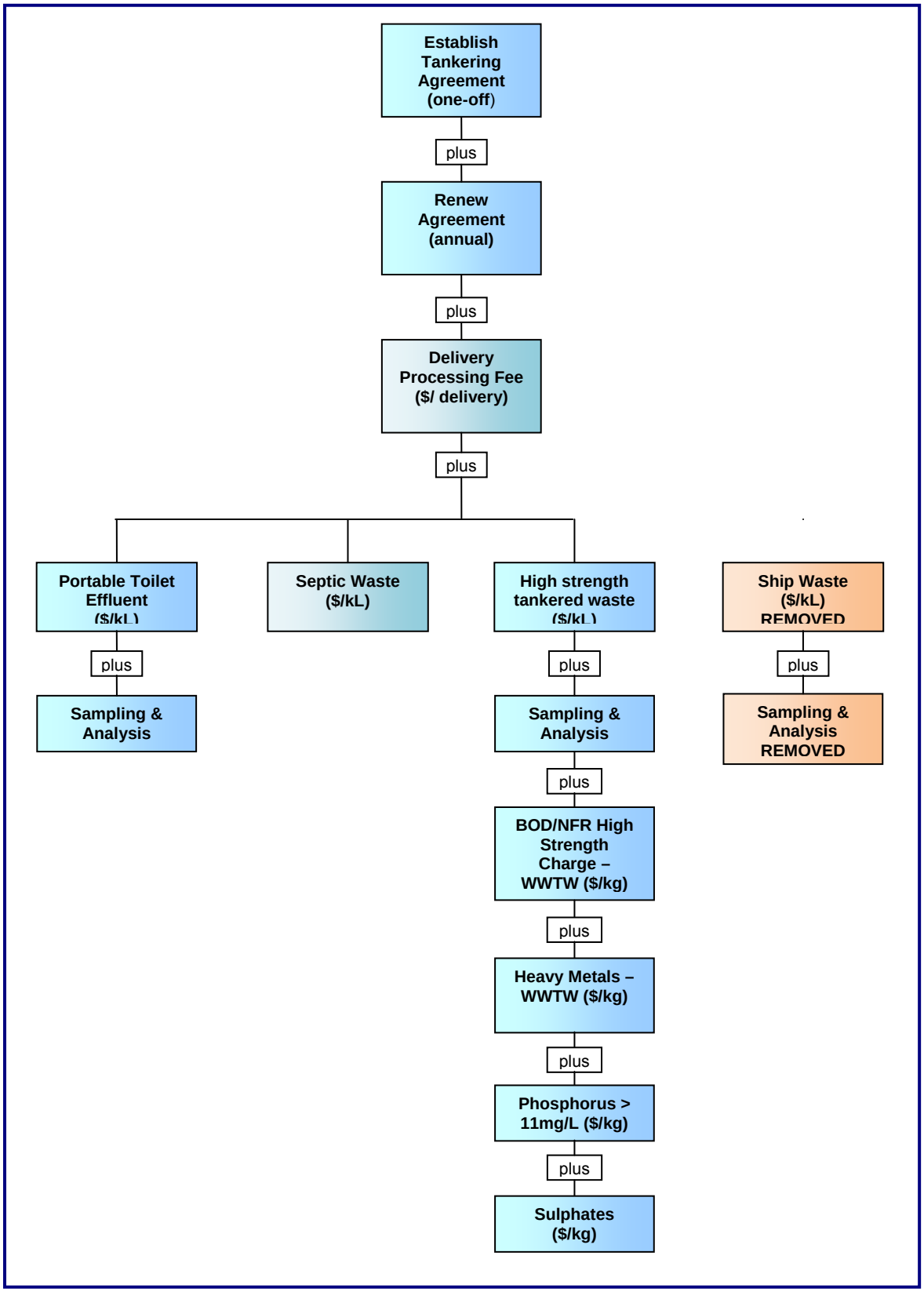
Both of these changes can be seen in Table 13.4.

Figure 13.2 Current tanker services pricing structure



Source: HWC

Figure 13.3 Proposed tankering services pricing structure



Source: HWC

14 Miscellaneous services

Main Points

- *Hunter Water offers a range of non-contestable, one-off services to customers on a direct cost recovery basis.*
- *Charges for miscellaneous and ancillary services are only incurred by a very small number of customers and, generally, only one service at a time.*
- *In preparing the fee structure for the next four years, Hunter Water has taken the opportunity to review its business processes to ensure costs are aligned with service delivered.*
- *Price increases are proposed for 14 services, reductions are proposed for 21 services and five existing services have components with proposed increases and decreases in prices.*
- *Hunter Water is proposing to discontinue three existing charges, primarily due to reconfiguration of a range of charges brought about by introduction of new legislation for regulation of the plumbing industry.*
- *The only new fee proposed is a sub-set of Charge 55 (Servicing Strategy Review).*
- *Overall total annual income expected from the proposed miscellaneous charges is $3.9 million. Approximately $1.6 million is from customer services charges and $2.3 million is from development application fee charges.*

14.1 Background

This section of Hunter Water's submission relates to miscellaneous charges, which constitute around $3.9 million, or 1.4 per cent of Hunter Water's total annual revenue. In line with the user-pays philosophy, these charges have been reviewed to reflect the current services provided and the cost structures associated with providing these services. The prices in this submission are all consistent with IPART's review of miscellaneous charges and the guidelines forming Appendix C to IPART's 2011 Sydney Water issues paper.

Hunter Water's miscellaneous charges proposed for the price period commencing on 1 July 2013, including the derivation of each individual charge, are outlined in Appendix N. In accordance with the IPART pricing model, the proposed charges are based on a cost-reflective methodology. The pricing model contains the following components:

- direct labour costs, including on-costs
- other direct costs (i.e. materials, contract costs, etc), and

- indirect overheads.

The proposed charges in this section are quoted in 2012-13 terms and should be increased annually in line with the CPI.

The miscellaneous charges fall broadly in two areas:

- Customer Service – These are charges for largely administrative services with individual properties such as special meter readings, provisions of sewer location diagrams etc. Customer service charges are summarised in Appendix N, which shows the existing and proposed charges as well as the predicted income for each charge, and
- Development Application Fees – These charges cover the administrative and application processing costs associated with managing potential new developments, such as advice on servicing requirements, statements of available pressure etc. Commercial development-related charges are summarised in Appendix O, which shows the existing and proposed charges as well as the predicted income for each charge.

As part of the 2000 price determination, IPART and the agencies developed a common set of core services provided by all four agencies to achieve a higher level of commonality between the miscellaneous services provided by the agencies. As a result, there are now 20 services that are commonly defined across the four agencies. These changes were reviewed at an Inter-Agency Working Group meeting in February 2011. The meeting determined that while these charges were common to the four agencies, it was not practical to implement common pricing structures due to variations in topography, population density, work practices and wage rates. The common numbering system derived by IPART has been used in this submission.

Hunter Water still has a number of customers who prefer to pay Hunter Water directly and often use cash. For this reason, Hunter Water has adopted policies related to rounding bill totals and charges.

Hunter Water believes a sensible and pragmatic approach to the annual indexation of miscellaneous charges and the need to cater for rounding of cash transactions is as follows:

- If charges are submitted by the water agency and set by IPART rounded to the nearest whole dollar, charges are indexed each year to the nearest whole dollar.
- In this submission Hunter Water has rounded all charges greater than or equal to $100 to the nearest whole dollar (see Appendixes N, O and P).
- If charges are submitted by the water agency and set by IPART rounded to the nearest five cents, charges are indexed each year to the nearest five cents.
- In this submission, Hunter Water has rounded all charges less than $100 to the nearest five cents (see Appendixes N, O and P).

Further information on the rationale supporting this approach can be found in Hunter Water's January 2009 price submission.

14.2 Efficiencies and cost pressures

In preparing the fee structure for miscellaneous charges for the next four years, Hunter Water has taken the opportunity to review its business processes to ensure costs are aligned with service delivery. The prices reflect not only the labour costs associated with the efficient delivery of the service, but other costs directly related to the delivery of the service. The cost pressures facing Hunter Water and efficiencies delivered are outlined in detail in Chapter 5 (Operating Expenditure). The key cost pressures impacting on miscellaneous

charges are increasing labour and contract rates as well as, in some instances, an increase in the complexity of the process for a particular service.

14.3 Customer services charges

There are 46 proposed customer service ancillary and miscellaneous charges, of which 15 are within the group of services commonly defined by IPART in consultation with the four agencies. The common numbering system established by IPART has been used.

The proposed customer service charges relate to the services provided in:

- water supply
- recycled water supply
- wastewater services
- plans and statements
- ancillary services, and
- irregular and dishonoured payments.

Following review of the existing 47 customer service charges, it is proposed that one (Charge 65 – Plumbing Non-compliance Follow Up Inspection Fee) be discontinued. As a result of the new plumbing legislation passed by the NSW Government in 2012, this service now will be provided by NSW Fair Trading (Department of Finance and Services). This legislation has also had minor impacts on a number of Hunter Water's other existing miscellaneous charges. In addition, several charges have been restructured or amended where it has been identified the previous methodology did not fully recover costs incurred in providing the service. Details are provided in Appendix O.

The work processes involved in each of the proposed customer services miscellaneous charges have been reviewed. When compared to the current list of charges, the changes proposed for the coming price period are as follows:

- 21 charges have decreased
- 14 charges have increased
- five charges have components within that have increased and decreased
- three charges have been restructured/amended, and
- three charges have remained the same.

The proposed changes and improvements are detailed in Table 14.1, Table 14.2, Table 14.3 and Table 14.4.

In total, revenue from customer service miscellaneous charge in 2013-14 is expected to be around $1.6 million ($2012-13). Details of the activity levels and expected revenue from each charge are provided in Appendix N.

Table 14.1 Reduced customer services charges

Service No	Function	Reason For Variation
1a).	Conveyancing Certificate – Over The Counter	Minor reduction in overhead rates applied.
1b).	Conveyancing	Minor reduction due to rounding.

Service No	Function	Reason For Variation
	Certificate - Electronic	
3a).	Service Location Diagram – Over The Counter	Minor reduction in overhead rates applied
3b).	Service Location Diagram – Electronic	Rounding.
5a).	Billing Record Search Statement – up to and including 5 years	Minor reduction in overhead rates applied.
5b).	Billing Record Search Statement for Multiple Properties	Rounding.
6.	Building Over or Adjacent to Sewer Advice	More accurate costing of staff time.
8a).	Workshop Flow Rate Test of a Mechanical Water Meter	Reduction in contractor rates.
8b).	Workshop Flow Rate and Strip Test of a Mechanical Water Meter	Reduction in contractor rates.
9a).	Application for Water Disconnection	Reduction in plumbing inspection costs.
9b).	Application for Recycled Water Disconnection	Minor reduction in overhead rates applied.
10.	Application for Water Service Connection	Reduction in plumbing inspection costs.
20	Statement of Available Pressure & Flow	Reduction in plumbing inspection costs.
21.	Application to Connect/Disconnect Sewer Services	Reduction in plumbing inspection costs.
22.	Application to Connect/Disconnect Water & Sewer Services (combined application)	Reduction in plumbing inspection costs.
24.	Request for Separate Metering of Units	More accurate costing of staff time.

Service No	Function	Reason For Variation
25.	Unauthorised Connections	Reduction in plumbing inspection costs.
26.	Building Plan Stamping	Minor reduction in overhead rates applied.
28a).	Application to Hire a Metered Standpipe	More accurate costing of staff time and reduction in overhead rates applied
28b).	Breach of Standpipe Hire Conditions	Minor reduction in overhead rates applied
45a)	Connect to Existing Water System – Major Works (Valve Shutdown)	More accurate costing of staff time.
52	Technical Services Hourly Rate	More accurate costing of staff time
60.	Inaccessible Meter-reading Agreement	More accurate costing of staff time
61.	Inaccessible Meter – Imputed Charge for Breach of Meter Reading Agreement	Minor reduction in overhead rates applied.
64.	Recycled Water Meter Affix Fee	Reduction in contractor rates.

Source: HWC

Table 14.2 Increased customer service charges

Service No	Function	Reason For Variation
2.	Property Sewerage Diagram (up to A4)	Increase in postage costs and more accurate costing of staff time.
7a).	Water Reconnection After Restriction (during business hours)	Increase in contractor rates.
7b).	Water Reconnection After Restriction (outside business hours)	Increase in contractor rates.
17.	Backflow Prevention Device Application and Registration Fee	More accurate costing of staff time
18a).	Backflow Prevention Device Annual Administration Fee	More accurate costing of staff time.
18b).	Backflow Device Test	Increase in external contractor test fee.
27.	Determining Requirements for	More accurate costing of staff time.

Service No	Function	Reason For Variation
	Building Over/Adjacent to Hunter water Sewer or Easement	
29.	Meter Affixtures / Handling Fee	Increase in contractor rates.
30.	Inspection of Non-compliant Meters	Increase in contractor rates.
32.	Connecting to or Building Over/Adjacent to a Stormwater Channel for a Single Residence	More accurate costing of staff time.
45b).	Connect to Existing Water System – Major Works (Non-valve Shutdown)	Minor increase due to rounding
46a).	Insertion or Removal of Tee & Valve (Valve Shutdown & Charge Up)	More accurate costing of staff time.
46b).	Insertion or Removal of Tee & Valve (Non-valve Shutdown & Charge Up)	More accurate costing of staff time.
48.	Tee & Valve Connection	More accurate costing of staff time
59b).	Re-inspection of Water Cart Tanker Due to Non-Compliance	Increase in plumbing inspection costs. Note this inspection is not carried out by NSW Fair Trading inspectors.
63.	Affix a Separate Meter to a Unit	Increase in contractor rates.

Source: HWC

Table 14.3 Charges with components that have increased and decreased

Service No	Function	Reason For Variation
4.	Meter Reading – Special Reads and By Appointment	During Business Hours – minor reduction in overhead rates applied.
4.	Meter Reading – Special Reads and By Appointment	Outside Business Hours – increase in contractor rates.
15.	Standpipe Hire – quarterly and monthly fees	Reductions and increases both due to new contractor rates and variation in asset cost recovery component of charge.
23.	Irregular & Dishonoured Payments	Reductions in direct debit decline (Bank) & irregular/dishonoured cheques (Australia Post) both due to minor reduction in overhead rates applied.
23.	Irregular &	Increase in irregular/dishonoured cheques (Bank) due to

Service No	Function	Reason For Variation
	Dishonoured Payments	omission of $10.00 Bank Fee in the 2009 submission.
62.	Damaged Meter Replacement	Reductions and increases both due to new contractor rates.

Source: HWC

Table 14.4 Restructured/Amended customer services charges

Service No	Function	Description
31.	Services Requirement Audit (previously Standard Plumbing Inspections)	This charge has been restructured following the recent introduction of new plumbing legislation. As a consequence, a number of plumbing inspection activities previously undertaken by Hunter Water will now be performed by the NSW Fair Trading.
34.	Hydraulic Design Assessment	This charge has also been restructured following the recent introduction of new plumbing legislation.
66.	Application for Recycled Water Service Connection – Domestic	Both components of this charge have reduced significantly as the plumbing inspections required are now undertaken by the NSW Fair Trading.

Source: HWC

14.4 Development application charges and inspection fees

Development-related miscellaneous charges aim to recover the costs for the administration of development applications and associated services.

All development-related miscellaneous charges were reviewed for this price submission. After assessing the time involved and costs associated with these charges, it was identified that there is significant under recovery. Hunter Water is recommending significant increases in prices to reduce and limit the under recovery to be $0.4million ($2012-13) per annum. These price increases represent a transition to full cost recovery, as at present any shortfall is recovered by general water and sewer charges.

Forecast volumes are consistent with the long-term trends and are not the major determining factor for price increases.

The review also identified specific fees where the cost of the work involved in providing the service is significantly lower than the charge. In two instances changes have been made to better reflect the effort required for the service and to influence the quality of design and other technical information that developers provide to Hunter Water for review.

Currently there is one charge for reviewing servicing strategies submitted by developers. Poor quality strategy documents trigger substantial additional review effort by Hunter Water's technical staff, but with no recourse for further cost recovery. In order to create appropriate incentives and to apply cost-reflective charges, an additional charge will be introduced for servicing strategy resubmissions. The anticipated outcome is an improvement in the quality of servicing strategy submissions and a reduction in the work effort in reviewing them.

The review also identified that there is significant cost under-recovery across the major works inspection fees. The price increases proposed better reflect the effort involved in providing these services and are a move towards full cost recovery. The proposed fee increases for this group of charges will result in an additional $0.197 million ($2012-13) per year in income.

Within the group of major works inspection fees, additional changes are proposed to the recycled water main inspection fee. The current fee was based on the estimated work effort required prior to the development of a number of dual reticulation residential areas. During the review of developer related miscellaneous charges, it was identified that the work effort involved in recycled water main inspections is significantly understated. The proposed fee increase will result in an additional $0.045 million ($2012-13) per annum in income.

Total income from developer-related miscellaneous charges for 2013-14 is projected to be $2.3 million ($2012-13). This is an increase of $0.4 million ($2012-13) on the prior year. At present, there is significant under recovery of costs, and these increases are aimed at reducing the shortfall that is presently recovered through general water and sewer prices.

Table 14.5 New development application fee charges

Service No	Function	Description
55b).	Servicing Strategy Review	It is proposed that this charge be levied on developers who submit Servicing Strategies which require additional review iterations (beyond the two reviews included in Charge 55a).

Source: HWC

The impact of the Global Financial Crisis is still being felt by the development industry, which is reflected in the volatility of the volume of development assessment applications received over recent years. A downward trend appears to be continuing, resulting in the forecast annual number of development assessment applications for the new price period falling from approximately 1,600 to 1,400. This is supported by comparison of activity levels over the past and current price period.

Projections of activity levels and revenue for developer-related miscellaneous charges are provided in Appendix P.

14.5 Activity levels and incidence

In summary, Hunter Water is proposing 75 charges for ancillary and miscellaneous services. This represents a reduction of 2 charges from the existing 77 charges in the current price determination.

Activity levels, incidence and revenue projections are provide in Appendix N for customer service charges and Appendix P for development application and inspection fees.

15 Glossary

The glossary is in two sections. Section 15.1 provides a general glossary of terms used in this submission and section 15.2 provides definitions of the capital expenditure drivers.

15.1 General terms

ADWG	Refers to National Health and Medical Research Council (NHMRC) and Natural Resource Management Ministerial Council (NRMMC) 2011 Australian Drinking Water Guidelines. Hunter Water's operating licence states that drinking water supplied to customers must meet the performance requirements set out in the ADWG or other standards set by NSW Health.
Annual Information Return (AIR)	Annual Information Return submitted each year to IPART to assist in monitoring the performance of water agencies and to provide sales and connection data and expenditure and asset information to enable IPART to review the revenue requirements of each agency and set prices.
Area of Operations	As specified in Section 16 of the *Hunter Water Act 1991*, a description of which is included in Schedule B of Hunter Water's 2012 – 2017 operating licence.
Ausgrid	Ausgrid is the electricity network operator serving homes and businesses throughout Sydney, the Hunter and the Central Coast.
Average residential customer.	In this submission, annual residential customer refers to a customer living in a detached house with water and sewer services only (not including stormwater services) and using 185 kilolitres of water per year. The customer is not eligible for the pensioner rebate.
Backlog sewerage areas (and related programs)	These are generally well established areas that have been connected to reticulated water supply for many years but are not connected to the sewerage system. They may be communities in smaller rural villages or small pockets of within larger urban areas.
BASIX	Building Sustainability Index. BASIX is a NSW Government initiative to ensure new and renovated (from 1 July 2006) homes are designed and built to use less potable water and produce fewer greenhouse gas emissions.

BOD	Biochemical oxygen demand is an indirect measure of the organic matter present in an effluent.
Brownfield development	Redevelopment or upgrade of buildings or facilities on an existing developed site. In this submission, it generally refers to upgrading wastewater treatment facilities on the site of existing wastewater treatment facilities.
CO_2-e	CO_2 –equivalent: measures different greenhouse gas emissions in terms of the equivalent amount of carbon dioxide.
Common meter	See “master meter” definition.
The Corporation	Hunter Water Corporation.
CPI	Consumer Price Index, as defined in section 1.2 of Schedule 8 IPART’s Determination No4, 2009 for Hunter Water’s prices, means the All Groups index number for the weighted average of eight capital cities as published by the Australian Bureau of Statistics.
CTGM	The Chichester Trunk Gravitation Main is the 85 kilometre pipeline connecting Chichester Dam with the water distribution system at Buttai and Stoney Pinch Reservoirs (serving Maitland and Cessnock) and Waratah Reservoir (serving Newcastle and Lake Macquarie). Sixty-seven kilometres are above ground and two critical sections making up the balance of the distance have been replaced with a buried pipeline during the price period to June 2013.
Demand management	Strategies to reduce water demand and consumption by residential, commercial and industrial sectors.
Developer charges	Developer charges are paid by developers/new entrants at or before the time of development/connection and are levied for the provision, or upgrading, of water supply and sewerage infrastructure required to service new developments. Developer charges were abolished for water and sewerage services in 2008 but are still in place for recycled water infrastructure.
DoH	NSW Department of Health, also known as NSW Health.
DSP	Development servicing plan as defined by IPART Determination No 9 of 2000 is a document that contains information used to calculate developer charges for developments in a defined DSP area. The only current DSPs apply to reticulated residential recycled water systems.
Discharge factor	Is a measure of the volume of wastewater discharged to the wastewater system expressed as a percentage of water delivered to the property via drinking water meters.
Discounted cash flow	An investment analysis tool that takes account of the time in the future when specific expenditures and/or receipts occur and uses discount rates to calculate a single present value for total

	expenditures and/or receipts over a designated investment period.
Dual reticulation	Term used interchangeably with reticulated recycled water scheme.
Economic level of leakage	Is the level of leakage at which it would cost more to reduce the leakage than to produce water from another source.
Energy and Water Ombudsman of NSW (EWON)	Means the NSW industry complaints scheme for the water industry of that name and any successor to that scheme.
Environmental Impact	Any change to the environment, whether adverse or beneficial, wholly or partially resulting from an organization's activities, products and services.
Environmental Management Plan (EMP)	The EMP sets out Hunter Water's environmental improvement strategies and objectives and details targets and timeframes for environmental activities to be undertaken over the term of the plan.
EPA	Environment Protection Authority of NSW. From March 2012, the EPA became the regulatory body for protection of the environment licences issued for Hunter Water's wastewater pipe network and treatment plants. EPA licences can be accessed on the EPA website.
FAR	Fixed Asset Register.
Filtration	A process for removing particles from a solution by passing it through a porous structure or medium, such as a screen, membrane, sand or gravel.
FTE	Full-time equivalent. A measure that takes account of an organisation's composition of full- and part-time employees by treating part-time employees as a proportion of a full-time employee.
GL	Gigalitre, measure of volume equal to a billion litres.
Gosford/Wyong Councils' Water Authority	(GWCWA). A joint water authority that manages the water supply system that supplies water to the Gosford City and Wyong Shire local government areas.
Greenfield site or development	Development on a previously undeveloped site, for example an urban subdivision or industrial development on rezoned rural land.
Greenhouse gas emissions	Gases, such as carbon dioxide and methane and other forms of air pollutants, resulting from burning of fossil fuels such as coal, natural gas or oil, which contribute to the warming of the earth's atmosphere. See also CO_2-e.
Headroom	In this submission refers to the difference between actual operational performance and standards set by various regulatory instruments. For example, Hunter Water generally performs well within the standards set in its operating licence, resulting in large perceived "headroom". See Chapter 3 for a discussion of

	operational performance.
$H_2$50 Plan	Also named the Integrated Water Resource Plan (IWRP), the $H_2$50 was produced in 2008 as Hunter Water's blueprint for managing demand and supply over the next decade by balancing available resources in a sustainable manner.
Inland wastewater treatment plants	Hunter Water's wastewater treatment plants that do not discharge to the ocean but rather to rivers and creeks.
IPART	Independent Pricing and Regulatory Tribunal of NSW, the independent body that oversees regulation in the water, gas, electricity and public transport industries in NSW.
IPART Act or IPART Act,1992	*Independent Pricing and Regulatory Tribunal Act, 1992* (NSW)
kL	Kilolitre, measure of volume equal to one thousand litres.
LGA	Local government area – Hunter Water's area of operations covers the LGAs of Cessnock, Dungog, Lake Macquarie, Maitland, Newcastle, Port Stephens and parts of Singleton.
LRMC	Long-run marginal cost of supplying water.
Lower Hunter Water Plan	A plan being developed by the Metropolitan Water Directorate to identify options to secure the lower Hunter region's water supply.
LHWP	See Lower Hunter Water Plan
Master meter	This refers to a water meter that services multi-occupancy premises such as blocks of home units or flats. Master meters are also sometimes referred to as "common meters".
ML	Megalitre, measure of volume equal to one million litres.
Meter equivalent (ME)	Meter equivalent means the relationship between a particular meter size and a 20 mm meter. It expresses larger meter in terms of an equivalent number of 20 mm meters. For example, a 40 mm meter is equivalent to four 20 mm meters.
Metropolitan Water Directorate (MWD)	The Metropolitan Water Directorate (MWD) leads a whole-of-government approach to water planning for Sydney and the lower Hunter; provides policy advice on water industry competition and reform; delivers recycling funding and support; and implements the Water for Life education and engagement program.
NFR	Non-filterable residue is a measure of suspended particles in an effluent. It is sometimes also referred to as "suspended solids".
NOW	NSW Office of Water. The Office issues and administers the water access licences for extracting water from rivers and groundwater sources.
NSW Health	NSW Department of Health, sometimes also referred to as DoH.

NPV	Net present value – the difference between the present value of cash inflows or benefits and the present value of cash outflows (costs).
OH&S	Occupational health and safety, protection of the health, safety and welfare of employees, contractors and visitors who are at, or may be affected by, a worksite.
Ocean outfall wastewater treatment works	Hunter Water's wastewater treatment plants that discharge directly to the ocean. These are Boulder Bay, Burwood Beach, Edgeworth, Toronto and Belmont.
OEH	NSW Office of Environment and Heritage develops policy in all environmental matters and regulates biodiversity, Aboriginal cultural heritage, waters and rivers, wildlife and native vegetation. From March 2012, regulatory responsibility for environmental licences was transferred to the EPA.
Operating Licence	A licence issued under the *Hunter Water Act 1991* defining many of Hunter Water's performance standards
PAS	Payment Assistance Scheme operated by Hunter Water. This scheme provides financial assistance for paying water and sewer bills. Eligibility for assistance is determined by local welfare agencies. Further detail is provided in Box 11.1 in Chapter 11.
Potable	Fit or suitable for drinking
PSP	Priority Sewerage Program. This is a NSW Government program that provides funding assistance for the provision of sewer services to existing areas that do not have sewer services. Priority for funding is based on environmental and health criteria.
Rainwater tank	On-site storages to collect rainwater for beneficial use.
Receiving water	A stream, river, lake or ocean that receives stormwater or wastewater discharges.
Recycled water	Highly treated wastewater that can be used in industrial processes, to irrigate agriculture, urban parks and landscapes, and in the home for flushing toilets, car washing and watering gardens. It is not used for drinking or personal use.
RAB or Regulatory Asset Base	The value of Hunter Water's assets used to provide regulated services, determined by IPART and used in estimating the rate of return on investment as an input to assessing Hunter Water's annual revenue requirement.
Reticulated recycled water scheme	Refers to schemes where the water agency provides recycled water to a large number of customers using a distribution system similar to that used for reticulating potable water. These schemes are sometimes called "dual reticulation" schemes because customers can access both reticulated potable water and recycled water from

	separate pipe networks. They are also called “third pipe” schemes referring to the three pipe networks servicing customers – potable water, recycled water and wastewater service networks.
SCI	Refers to the Statement of Corporate Intent. The SCI is essentially a performance agreement between the Board and senior management of a government-owned corporation and its “shareholders”. It provides a summation of the corporation’s strategic and performance commitments to the shareholders and is based on its business plan.
Sewage	Term used interchangeably with wastewater. The wastewater from homes, offices, shops, factories and other premises discharged to the sewer. About 99 per cent of sewage is water.
Sewerage overflow	Any liquid that escapes from the sewerage system, as well as partially treated sewerage that is discharged from a sewerage (wastewater) treatment plant.
Sewerage system	The network of pipes, pumping stations and treatment plants used to collect, transport, treat sewage (wastewater) for disposal or recycling.
SIR	Special Information Return required by IPART in a price review year to assist in determining prices.
Source(s)	Sources are raw water sources such as dams, river extraction points, groundwater bores, desalination plants or other sources such as stormwater harvesting arrangements, recycling etc.
SPS	Is abbreviation for “system performance standards” when used in the context of operating licence standards and performance (mainly in Chapter 3).
SPS	Is abbreviation for “sewer pumping station” when used in the context of capital expenditure and wastewater operations (mainly in Chapter 6).
Stormwater	Rainwater that runs off the land, frequently carrying various forms of pollution, such as litter and detritus, animal droppings and dissolved chemicals. This untreated water is dissolved in stormwater channels and discharged directly into creeks, rivers, the harbour and the ocean.
Sustainable water supply	Achieving a long-term balance between the ability of the system to capture and store supplies of water and the demand of current and future users, including the environment.
TCorp	The New South Wales Treasury Corporation (TCorp) is the central financing authority for the New South Wales public sector.
The Tribunal	Independent Pricing and Regulatory Tribunal of NSW (IPART).
Third pipe scheme	Refers to reticulated recycled water scheme that provides recycled water directly to customers, usually in residential areas. The

	recycled water pipe network is the third pipe after water supply and sewer pipes.
TOC	Total outturn cost is base cost estimate + contingency + escalation.
Trade waste	Industrial or commercial wastewater that contains significant quantities of potential contaminants, commonly controlled by trade waste agreements limiting contaminant inputs to the sewerage system at the source.
WACC	Weighted average cost of capital.
Wastewater	Term used interchangeably with sewage.
Wastewater overflow	A discharge of wastewater from the wastewater system. These overflows may occur in wet or in dry weather.
Wastewater system	Term used interchangeably with sewerage system.
WAMC	The NSW Water Administration Ministerial Corporation. The WAMC is the legal entity that issues water access licences and its day-to-day activity is carried out by the NSW Office of Water (NOW).
Water conservation target	The five year rolling average for annual residential water consumption calculated for each financial year. The target is currently set at 215kL per year.
Water demand	Total water use requirements for drinking, agriculture, industry, recreation and gardening, seasonal and highly influenced by the weather.
Water efficiency	Preventing and reducing wasteful, uneconomical, impractical or unreasonable use of water resources.
Water supply network	System of water sources, including dams, bores, treatment plants, pump stations and distribution pipes, used to supply drinking water on demand to customers.
WELS	Water Efficiency Labeling Scheme – a star rating scheme for the efficiency of water using appliances and fixtures.
WICA	*Water Industry Competition Act, 2006* (NSW)
WSAA	Water Services Association Australia.
WWTW	Wastewater treatment works. Term used interchangeably with wastewater treatment plant or sewage treatment plant.
2012 pricing consultation	This refers to the focus group and customer survey work carried out in June and July 2012 by Insync Surveys to provide customer views on the pricing proposals in the submission. Details can be found in Chapter 12.

15.2 Capital expenditure drivers

Driver	Definition
Growth	Capital expenditure to meet the requirements of new customers or increased requirements of existing customers in accordance with mandatory standards. Expenditure is funded through cash income from charges other than developer charges.
Mandatory standards	Capital expenditure as a result of an existing or new mandatory standard. A mandatory standard is an obligation imposed by statute or the imposition of a requirement by a regulator that is mandatory on the agency and is enforceable. Examples include expenditure to improve the reliability of assets to ensure compliance with existing or newly-imposed mandatory standards.
Business decisions	Capital expenditure that is wholly justified on the grounds of expected reductions in operating expenditure. The resulting savings should be reflected in the operating budget.
Asset and service reliability	Capital expenditure intended to enhance asset and service reliability.
Discretionary standards	Capital expenditure as a result of a discretionary standard. A discretionary standard is a decision taken by the agency itself that is not imposed or enforceable by any regulatory instrument. These standards include but are not limited to a level of service higher than the level enforceable under a mandatory standard. Agencies may need to supply additional justification for this type of expenditure such as “community willingness to pay” analysis.
Government programs	Capital expenditure to meet specific Government programs or directives. The expenditure is driven by the Government program which may override other objectives such as commercial return.

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HUNTER WATER CORPORATION

Submission to IPART on prices to apply from 1 July 2013

Appendixes

SEPTEMBER 2012

Appendixes

APPENDIX A SALES AND REVENUE

The actual sales, revenue and connections realised during the current determination period compared to the corresponding projections used for setting prices in 2009 are provided in Tables A.1 to A.3 below.

Table A.1 Sales (ML)

		2009-10	2010-11	2011-12	2012-13 [a]
HWC Actual/Projected [b]		60,979	57,227	55,779	58,125
IPART Determination [c]		63,313	61,353	59,000	60,202
	Difference	(2,334)	(4,126)	(3,221)	(2077)

Source: HWC

a) Actual figures for 2009-10, 2010-11 and 2011-12. Budgeted figure for 2012-13

b) Annual Information Return, Non-financial data, Table 1.3 Water consumption, Total metered consumption (row 342)

c) IPART,2009 (a), p 112, Table 8.4 and Section 8.3.4

Table A.2 Customer water connections

		2009-10	2010-11	2011-12	2012-13 [a]
HWC Actual/Projected [b]		224,725	225,637	228,682	232,310
IPART Determination [c]		236,003	239,958	243,987	248,090
	Difference	(11,278)	(14,321)	(15,305)	(15,780)

Source: HWC and IPART

a) Actual figures for 2009-10, 2010-11 and 2011-12. Budgeted figure for 2012-13

b) Annual Information Return, Non-financial data, Table 1.2 Customer Profile, Water supplies – total properties

c) IPART 2009 (a), p 120, Table 8.6 and Section 8.4.3. It is assumed that this Table 8.6 refers to water connections.

Table A.3 Revenue

	$ terms	2009-10	2010-11	2011-12	2012-13
HWC Actual/Projected [a]	Nominal	213.4	217.9	225.1	261.0
IPART Projections: [b]					
2009 Determination [c]	$08-09	217.1	224.1	232.5	247.2
2010 RAB Model [d]	$08-09	212.6	219.3	227.6	241.8
2010 RAB Model [e]	Nominal	219.2	234.2	246.0	267.9
Variance	Nominal	(5.8)	(16.3)	(20.9)	(6.9)

Source: HWC and IPART

a) Actual figures for 2009-10, 2010-11 and 2011-12. Budgeted figure for 2012-13. See Annual Information Return – Revenue – Gross sales revenue – Row 60.

b) Two versions of the target revenue are presented, the 2009 Determination version and the post Tillegra refund version

c) IPART, 2009 (a), p 58, Table 5.2

d) Post Tillegra refund adjustment figures provided by IPART in model: Hunter Water 2009 FINAL price model NO TILLEGRA.XLS – Scenario worksheet – Combined business target revenue Row 394.

e) Indexed using CPI figures – 2009-10 -3.1%, 2010-11 -3.6%, 2011-12 -1.2%, 2012-13 -2.5%.

APPENDIX B IMPACT OF CARBON PRICE

From 1 July 2012, the carbon price has become part of the Australian business landscape as a result of the commencement of the Australian Government's carbon pricing mechanism (CPM). The carbon price will start at $23 a tonne in 2012-13, rising by 2.5 per cent in real terms for each year of the three-year fixed-price period and, from 1 July 2015, it is proposed that a cap and trade emissions trading scheme will commence.

The CPM and Clean Energy Future package will affect Hunter Water's cost base in a number of ways. Water utilities have potentially large carbon risk exposure due to high energy requirements for water and wastewater operations, fugitive gas emissions from wastewater treatment processes, and carbon supply chain pass-through costs.

Hunter Water's carbon emissions intensity is approximately 400 tonnes of carbon dioxide equivalent (t CO_2-e) per million dollars of revenue. This is based upon scope 1 and scope 2 emissions only and places Hunter Water amongst Australia's most carbon-intensive businesses[1].

Due to a range of factors including topography, network configuration and embedded treatment processes, Hunter Water's carbon emissions per 1,000 customers is relatively high when compared to other similar-sized water utilities[2].

As for many other companies, a significant proportion of Hunter Water's carbon price exposure rests within the organisation's supply chain. Quantifying scope 3 emissions that are embedded in the supply chain can be difficult due to the fact that the emissions data, if it exists, is held by other companies. Hunter Water has been able to use a nationally recognised tool developed for the water industry to estimate a supply chain carbon footprint.

Types of emissions

Greenhouse gas emissions are commonly categorised into three types or 'scopes' as follows:

Scope 1: release of greenhouse gas into the atmosphere as a direct result of activities at facilities owned or controlled by Hunter Water

Scope 2: release of greenhouse gas as a result of the generation of purchased electricity by Hunter Water

Scope 3: release of greenhouse emissions into the atmosphere that are generated in the wider economy as a consequence of Hunter Water's activities but are physically produced by another entity/company

Methodology Used to Estimate Impact of Carbon Pricing

In order to estimate its full supply chain carbon footprint, Hunter Water has used an eco-footprint tool developed by the Integrated Sustainability Analysis (ISA) research group at the University of Sydney. The eco-footprint tool uses a methodology known as hybrid Environmentally-Extended Input Output Analysis (EEIOA) to estimate a full supply chain carbon footprint. The methodology uses the macro-economic technique of input-output analysis. The main input data required for the footprint calculation was the annual financial accounts using budget forecasts for operating and capital expenditure.

Expenditure on goods and services for each financial year was allocated to industry sectors listed within the tool. The tool converts dollar amounts into material consumption using the National Accounts and input-output tables provided by the Australian Bureau of Statistics. The tool accounts for purchases from Hunter Water's immediate supplier, the supplier's supplier and so on, through the fully supply chain. Data for fugitive emissions and emissions as a result of electricity purchase were able to be loaded directly into the model.

[1] Energetics, 2011, Carbon Change Matters newsletter , "Carbon hot spots – Australia's emissions intensive industries", 10 July2011

[2] National Water Commission, 2012, **National Performance Report 2010-11: Urban water utilities**, April .

The EEIOA methodology is consistent with international standards for greenhouse emissions calculations and recognises the inherent uncertainty in supply chain emission estimation. This methodology does not model projected changes in economic behaviour or emissions if a carbon cost is introduced.

The eco-footprint tool has been developed in conjunction with the Water Services Association of Australia and 14 utilities across Australia have been using the tool to estimate ecological and full supply chain carbon footprints[3].

This methodology was also used by Sydney Water for its 2011 IPART price submission. The methodology is also outlined in a paper by Sydney Water, presented at the 2012 Ozwater Conference. [4]

Impact of Carbon Pricing

Hunter Water is not currently expected to exceed the annual threshold of 25,000t C02-e direct greenhouse gas emissions, which would have necessitated the purchase of carbon permits.

However the indirect impact of carbon price will flow to most purchases made by Hunter Water. The indirect impact upon purchases from suppliers (excluding electricity) is forecast to be approximately $1.5 million per annum or $6 million from commencement over the price period. This estimate is based on Hunter Water's particular mix of purchases. This amounts to an increment of $0.8 million, if the 2012-13 carbon price payment is extrapolated over the price period.

Around $2 million per annum represents the estimate of the impact of carbon price on electricity prices paid by Hunter Water. This amounts to an increment of $0.5 million over the new price period relative to the 2012-13 base year. As 2012-13 is the last year of the current price path there will be no opportunity for Hunter Water to recover the additional expenditure incurred from this nor any other unforeseen cost pressures which were not originally provided for in IPART's 2009 price determination.

Table B.1 Estimate of the impact of carbon price on regulated operating expenditure ($m 2012-13)

	2012-13	2013-14	2014-15	2015-16	2016-17	4Yr Total[1]
Carbon Permits	-	-	-	-	-	-
Electricity	2.0	2.1	2.2	2.1	2.1	8.5
Suppliers Pass-Through	1.3	1.4	1.4	1.6	1.6	6.0
Total	**3.3**	**3.5**	**3.6**	**3.7**	**3.7**	**14.5**

Source: Hunter Water

[1] Total excludes 2012-13; it represents estimated impacts on 'regulated' operating expenditure for the price determination period only (Excludes impact on all recycled water)

The carbon price is also anticipated to add around $1million to Hunter Water's annual capital expenditure projections for 2012-13 and beyond. However no additional allowance has been made for this with the impact to be absorbed by Hunter Water.

[3] Dey and Drzewucki, 2012, "Full Carbon and Ecological Footprints for Water Organisations" Ozwater 2012 Proceedings.

[4] Hartley and Woods, 2012 "Examining the Likely Impacts of a Carbon Price Using Supply Chain Carbon Footprints" Ozwater 2012 Proceedings

Table B.2 Hunter Water's estimate of the total carbon cost (real $2012-13)

	2013-14	2014-15	2015-16	2016-17
Carbon Price ($ nominal per tonne CO_2-e)	24.15	25.40	29.00	29.73
Carbon Price ($ 2012-13 real dollars per tonne CO_2-e)	23.56	24.18	26.93	26.93
Direct (scope 1) emissions carbon costs				
Total direct emissions (excl. fuel) ie 'Fugitive' (scope 1) (t CO2-e)	23,925	24,449	22,689	23,213
ie Direct Methane & Nitrous Oxide emissions requiring carbon permits	-	-	-	-
Taxable emissions (Where total (excl fuel) exceed 25000t)	-	-	-	-
Total cost of carbon permits required ($m)	-	-	-	-
Reduction in fuel tax credits ($m)	0.008	0.008	0.010	0.012
Carbon price on heavy vehicles from 1/7/14 ($m)	-	0.008	0.009	0.010
Total equivalent carbon costs on fuels used ($m)	0.008	0.016	0.019	0.022
Total direct emissions carbon cost	**0.008**	**0.016**	**0.019**	**0.022**
Electricity carbon cost pass-through				
Electricity emissions (full fuel cycle - scope 2 and 3) (t CO2-e)	88,538	94,026	96,429	96,783
% anticipated pass-through in electricity contract	100%	100%	100%	100%
Net carbon cost pass-through on electricity ($m)	2.09	2.27	2.60	2.61
Less: Electricity contract savings due to NSW GGAS finishing ($m)			(0.30)	(0.30)
Total Electricity emissions carbon cost	**2.09**	**2.27**	**2.30**	**2.31**
Operations supplier carbon cost pass-through				
Operations supply chain emissions (scope 3) (t CO2-e)	74,777	76,277	77,349	78,286
% operations supply chain emissions covered by carbon price	79%	78%	78%	78%
Total carbon cost pass-through on operations supply chain ($m)	**1.39**	**1.44**	**1.62**	**1.64**
Total carbon price impact on operational costs ($m)	**3.49**	**3.73**	**3.94**	**3.98**
Capital works supplier carbon cost pass-through				
Capital works supply chain emissions (scope 3) (t CO2-e)	61,171	58,024	52,440	45,677
% captial supply chain emissions covered by carbon price	68%	68%	68%	67%
Total carbon cost pass-through on capital supply chain ($m)	0.98	0.95	0.96	0.82
Total carbon price impact on capital costs ($m)	**0.98**	**0.95**	**0.96**	**0.82**

Source: Hunter Water

APPENDIX C MAJOR CAPITAL PROJECTS

Table C.1 Comparison of actual capital expenditure to IPART-determined capital expenditure (revised Appendix D) ($m 2009-10)

Project Name	Actual 2009-10	Actual 2010-11	Forecast 2011-12	Forecast 2012-13	Cumulative over period	Determination	Variance	Explanation
Wastewater								
Upgrade of Farley WWTW (Stage 3)	0.68	1.61	6.12	17.11	25.52	24.19	0.68	Project under construction, expected commissioning date mid 2013.
Upgrade of Burwood Beach WWTW (Stage 2 excl. UV)	17.49	18.49	3.11	0.19	39.27	39.64	(0.37)	Project in construction, expected commissioning date in July 2012.
Upgrade of Branxton WWTW (Stage 3)	10.96	28.79	1.82	-	41.58	44.75	(3.17)	Project commissioned March 2011. Savings realised on construction of the recycled water pipeline due to competitive pricing from successful contractor.
Upgrade of Morpeth WWTW (Stage 2)	0.09	(0.01)	-	1.11	1.18	0.81	0.37	Project in development phase, expected commissioning date June 2015. Expenditure in price path is higher due to revised scope works.
Upgrade of Boulder Bay WWTW (Stage 2)	3.01	15.14	3.80	0.09	22.05	22.70	(0.65)	Project commissioned September 2011.
Upgrade of Dora Creek WWTW and Effluent Main to Toronto (Stage 2)	19.27	2.16	0.28	-	21.71	22.26	(0.54)	Project commissioned October 2010.
Upgrade of Paxton WWTW (Stage 1)	4.98	10.78	0.71	-	16.47	16.90	(0.43)	Project commissioned March 2011.

Project Name	Actual 2009-10	Actual 2010-11	Forecast 2011-12	Forecast 2012-13	Cumulative over period	Determination	Variance	Explanation
Upgrade of Raymond Terrace WWTW (Stage 2/3)	7.55	0.20	0.12	-	7.87	8.15	(0.28)	Project commissioned July 2010.
Upgrade of Shortland WWTW (Stage 3)	0.31	1.80	7.14	0.93	10.18	8.90	1.28	Project in construction, expected commissioning date August 2012. Increased spend due to better defined compared with submission.
Upgrade of Tanilba Bay WWTW (Stage 1)	0.00	-	-	-	0.00	0.19	(0.19)	Project deferred due to lower growth projections highlighting the plant has capacity for a longer period.
Upgrade of Toronto WWTW - Inlet Works	0.22	3.81	6.17	0.17	10.36	9.05	1.31	Project commissioned in May 2012. Increase spend was due to better defined scope for TOC.
Upgrade of Karuah WWTW (Stage 1-2)	-	0.00	0.47	1.25	1.73	2.75	(1.03)	Concept design complete, detailed design to commence August 2012, with project commissioning expected December 2013. Project delayed due negotiations with EPA on monitoring location. The successful licence variation has resulted in reducing the capacity of the future UV system from potentially 250 L/s to 42 L/s which will provide significant capital and O&M savings.

Project Name	Actual 2009-10	Actual 2010-11	Forecast 2011-12	Forecast 2012-13	Cumulative over period	Determination	Variance	Explanation
Upgrade of Raymond Terrace WWTW (Stage 4)	0.03	-	-	-	0.03	0.36	(0.33)	Project will go into development phase in next price path, expected commissioning date is 2023. Expenditure in price path period is lower due to delay due to revised growth projections highlighting slower than expected growth.
Upgrade of Edgeworth WWTW - Inlet Works/Disinfection Unit	1.36	2.87	1.14	-	5.37	5.70	(0.33)	Inlet works upgrade completed in 2010. Commissioning of UV system expected in August 2012.
Newcastle WWT System Upgrade (Stage 1)	3.32	4.03	11.91	9.90	29.15	32.24	(3.08)	Project in construction, expected commissioning date is July 2012. Expenditure in price path is lower due to reduced scope of network upgrades after holistic review of strategy and savings during construction due to their being lesser than expected quantity of contaminated materials encountered on site.
Morpeth WWT System Upgrade (Stage 2)	1.76	10.04	3.38	-	15.18	15.09	0.09	Project commissioned July 2012.

Project Name	Actual 2009-10	Actual 2010-11	Forecast 2011-12	Forecast 2012-13	Cumulative over period	Determination	Variance	Explanation
Aberglasslyn WWT System Upgrade (Stages 1-3)	3.29	0.13	1.42	1.66	6.49	3.29	(4.51)	Project in construction, expected commissioning date is March 2013. Works were originally proposed to address all customer complaint issues and environmental issues as well as catering for the future growth. Scope reduced, allowance for future growth minimised.
Newcastle WWT System Upgrade (Stage 2)	0.01	-	0.05	1.51	1.56	3.69	(2.12)	Scope reviewed due to revised modelling and prioritisation with other wastewater projects.
Windale/Gateshead System upgrade (Stages 1-2)	0.42	3.31	0.67	2.96	7.36	8.58	(1.22)	Stage 1 commissioned in February 2012. Stage 2 in development, expected completion in November 2013. Expenditure in price path is due to stage 2 reduced scope and deferred works.
Annual Provisions - I/I works	0.22	1.96	2.40	1.55	6.15	6.09	0.05	Project in construction, multiple projects in provision. Expected commissioning date is June 2013.
Williamtown/Tomago WWT System	0.06	1.04	2.26	2.83	6.19	8.90	(2.71)	Project in construction, expected commissioning date is March 2014. Expenditure in price path period is lower due to delay finalising details with third parties.

Project Name	Actual 2009-10	Actual 2010-11	Forecast 2011-12	Forecast 2012-13	Cumulative over period	Determination	Variance	Explanation
Backlog Sewerage for Millfield/Ellalong (PSP)	6.43	0.94	0.03	0.48	7.87	4.60	3.28	Project commissioned October 2010. Increased budget required due to cost increases in Contractor, Project Management and land acquisition. Design funds totalling $1.7m were reallocated from a separate project number.
Annual Provisions - Sewermain Rehabilitations	0.86	2.31	1.47	1.62	6.26	6.03	0.23	Project in construction, multiple projects in provision. Expected commissioning date is June 2013.
Dora Creek WWT System Upgrade (Stages 1-2)	0.03	-	-	-	0.03	0.04	(0.01)	Scope reduced based on good actual performance.
Branxton WWT System Upgrade (Stage 2)	1.18	0.14	0.28	-	1.61	1.39	0.22	Project commissioned March 2011.
Backlog Sewerage to Clarencetown (CTWSS)	3.15	6.41	1.86	-	11.41	8.60	2.81	Project commissioned June 2012. Increased budget required due to contractor going into receivership and having to engage new contractor to finalise works.
Kurri Kurri WWT System Upgrade (Stages 1-2)	1.78	1.63	-	-	3.41	3.39	0.02	Stage 1 in construction, expected commissioning date is November 2012. Stage 2 delay due to updated information showing acceptable system performance and low growth in the catchment.

Project Name	Actual 2009-10	Actual 2010-11	Forecast 2011-12	Forecast 2012-13	Cumulative over period	Determination	Variance	Explanation
Edgeworth System Upgrade: Cardiff 1 WWPS and Gravity Mains	0.16	1.16	3.34	-	4.65	3.72	0.93	Project commissioned May 2012.
Toronto WWT System Upgrade (Stage 1)	0.22	2.28	0.58	-	3.08	2.95	0.13	Project commissioned October 2011.
Raymond Terrace/Medowie WWT system upgrade (Stages 1-2)	1.16	0.51	0.87	-	2.53	3.89	(1.35)	Raymond Terrace 2 commissioning has been delayed in order to resolve power supply upgrade issues. Medowie 11 component deferred to next price path as a result of slower than expected growth, and recent information showing the pump station is performing better than expected in wet weather.
Cessnock System Upgrade: Nulkaba 1 WWPS & Cessnock 1 Gravity Mains	0.96	0.03	0.03	0.56	1.58	1.45	0.12	Tenders are expected to be called in October 2011 with expected commissioning date March 2013.
Dudley/Charlestown WWT System Upgrade (Stage 1) – Construction	3.16	0.14	0.09	0.03	3.42	3.28	0.13	Project commissioned in March 2010.
Sandgate/Shortland WWT System Upgrade (Stage 2)	0.14	0.17	0.97	0.09	1.36	1.30	0.07	Project commissioned June 2012.
Maryland/Minmi WWT System Upgrade (Stage 1)	0.17	0.74	0.04	-	0.95	1.52	(0.58)	Project commissioned in June 2011. Under expenditure due to project savings.

Project Name	Actual 2009-10	Actual 2010-11	Forecast 2011-12	Forecast 2012-13	Cumulative over period	Determination	Variance	Explanation
Swansea WWT System Upgrade (Stage 2)	-	-	0.14	0.37	0.51	0.62	(0.11)	Construction has been deferred as works are considered less urgent due to low levels of customer complaints and limited short term growth. Expected commissioning date is June 2017.
Burwood Beach WWTW - UV system	-	0.01	0.28	0.39	0.69	6.81	(6.12)	Project in development phase, expected commissioning date is June 2016. Expenditure in price path period is lower to allow Hunter Water to fully understand what the subsequent Stage 3 upgrade will be for Burwood Beach. The EPA and Department of Health agreed with the longer timeframe to ensure a holistic approach.
WWT - Network E&M Replacements - 09/10 - 12/13	1.67	1.36	2.42	1.67	7.12	4.36	2.76	Increase in reactive maintenance required.
Development & Delivery of WWT Operating Capital Projects 09/10 - 12/13	0.7	1.6	1.4	2.5	6.2	7.40	(1.2)	Underspend due to reduced scope.
Water								
DN 900 CTGM Trunkmain Replacement - Tarro to Shortland	0.81	7.53	2.28	-	10.62	11.68	(1.06)	Project commissioned February 2012. Savings due to competitive tenders.

Project Name	Actual 2009-10	Actual 2010-11	Forecast 2011-12	Forecast 2012-13	Cumulative over period	Determination	Variance	Explanation
Cessnock System Upgrades - West Cessnock, Trunkmains (Stage 1)	7.28	1.30	2.85	4.44	15.88	18.91	(3.03)	Project in construction, expected commissioning date is June 2013. Savings due to reduction in scope.
Annual Provisions – Watermain Replacements	3.42	2.01	3.04	2.87	11.35	8.91	2.43	Project in construction, multiple projects in provision. Expected commissioning date is June 2013. Increased expenditure due to greater length of mains than expected meeting the costs benefit criteria for the replacement.
Annual Provisions - Trunkmain Management	1.7	1.8	2.8	3.8	10.1	8.51	1.49	Project in construction, multiple projects in provision. Expected commissioning date is June 2013. Extra projects delivered.
Tarro/Stoney Pinch System - Beresfield WPS to Stoney Pinch	2.40	1.27	2.23	-	5.91	10.62	(4.72)	Project commissioned July 2012. Decreased budget is due to principal supplying pipe and very competitive tenders.
Tomago/Shortland System - Ash Island DN1350 Watermain	6.36	0.41	0.15	0.02	6.94	5.93	1.01	Project commissioned September 2011. Expenditure in price path period is higher due to allowance for minimal contingencies at the time of determination.
Maitland/North Rothbury System - Windella Res + System (Stage 3)	0.51	1.17	1.90	7.14	10.72	8.54	2.18	Additional expenditure due to inadequate allowance for site conditions and land acquisition. Part of Stage 3 deferred to contain budget.

Project Name	Actual 2009-10	Actual 2010-11	Forecast 2011-12	Forecast 2012-13	Cumulative over period	Determination	Variance	Explanation
Maitland/North Rothbury System - Harpers Hill Res, Lochinvar (Stage 4 excl. Stage 4a)	0.23	0.21	0.76	1.85	3.05	3.91	(0.86)	Development of all stage 4 and delivery of Lochinvar WPS completed. All other work to be deferred due to revised growth projections.
Cessnock System Upgrades - incl. Heddon Greta WPS (Stage 2)	0.06	(0.02)	0.88	1.40	2.32	2.50	(0.18)	Project deferred due to revised demand projections. Design has commenced and construction scheduled for 2012/13 pending final review.
Annual Provisions - Network E&M Replacements	1.25	1.24	1.14	1.11	4.74	4.24	0.50	On schedule.
Wallsend Pump Station - Pump and Header Pipe Work Upgrade	0.91	1.69	2.69	-	5.29	4.38	0.91	Over expenditure due to increased construction costs. Work is scheduled to be complete by mid 2012.

Project Name	Actual 2009-10	Actual 2010-11	Forecast 2011-12	Forecast 2012-13	Cumulative over period	Determination	Variance	Explanation
South Wallsend System Upgrade - incl. Macquarie High Level System (Stage 1)	0.22	0.10	0.63	1.66	2.61	4.69	(2.08)	Concept Design identified issues with constructability of the new reservoir given site constraints. Investigations were undertaken to identify alternative sites, however project cost estimates remained higher than original identified in the strategy. The best strategy for servicing this area is being revised with respect to the revised costs and will be completed in 2012. The expected completion date of works is yet to be identified. Some minor works are currently being undertaken to ensure new and existing customers are provided adequate capacity and reliability prior to a major upgrade.
Maitland/North Rothbury system - DN500 to Four Mile Ck (Stage 1)	0.11	0.00	0.29	0.17	0.57	0.35	0.22	Slow development in area leading to deferral of upsizing of trunkmains.
Trunkmain Relocations - Shortland SH23	0.82	1.65	0.76	-	3.23	2.49	0.74	Additional expenditure due to revised project estimate. Work is progressing in stages based on RTA's program. It's now expected that all work will be complete by June 2013.
Tomaree system upgrade - incl. 7ML Anna Bay Reservoir (Stage 1)	0.64	2.43	0.08	-	3.15	3.03	0.11	Project commissioned, June 2012.

Project Name	Actual 2009-10	Actual 2010-11	Forecast 2011-12	Forecast 2012-13	Cumulative over period	Determination	Variance	Explanation
Edgeworth/West Wallsend System Upgrade - Cameron Park High Level Reservoir	0.56	0.12	-	-	0.68	0.80	(0.12)	Construction deferred until demand increases. Preliminary work completed.
Tomaree System Upgrade - incl. 3km DN375 Nelson Bay Rd (Stage 2)	0.07	0.00	0.21	0.04	0.32	0.20	0.11	Commissioned in September, 2009.
Maitland/North Rothbury System - incl. 3.3km trunkmains (Stage 2)	3.88	0.12	-	-	4.01	4.31	(0.30)	Project commissioned, August 2010.
Tillegra Dam - Design and Construction	13.15	(23.49)	-	-	(10.34)	276.81	(287.15)	Project cancelled. Development approval refused by NSW Planning.
Tomaree/Tilligerry Supply Upgrade (excl. Grahamstown - Tomago Transfer Main)	0.34	0.43	0.97	0.89	2.63	15.61	(12.98)	Development progressing in readiness for drought response, actual delivery deferred pending trigger levels. Tomaree Tilligerry Drought Management Plan will determine revised timing.
Grahamstown WTP - Tomago Main and Pre-treatment Upgrade	0.00	0.61	0.94	1.38	2.93	9.35	(6.42)	Construction of facility and raw main has been deferred because the risk of a drought or a severe water quality event in Grahamstown is considered to be low. Construction of Grahamstown switchroom upgrade in progress - expected commissioning March 2013.
Upgrade of Grahamstown Dam - Newline Road, Spillway (Stage 2)	1.96	0.14	0.24	-	2.34	2.33	0.02	Project commissioned in February 2012.

Project Name	Actual 2009-10	Actual 2010-11	Forecast 2011-12	Forecast 2012-13	Cumulative over period	Determination	Variance	Explanation
Dungog WTP - Interim Upgrades	0.28	0.93	-	-	1.22	1.72	(0.51)	Project timeframe met. Project under budget.
Dungog WTP - Additional CWT Storage	1.95	8.52	0.53	-	10.99	10.61	0.39	Project commissioned in September 2011.
Telemetry Replacement Project	0.19	0.33	0.85	1.30	2.67	4.80	(2.13)	Project in construction to be phased over extended period. Expenditure in price path period is lower due to delay in development phase to finalise specification and standards.
Grahamstown WTP Upgrade (Stage 3)	0.65	0.94	0.09	0.41	2.10	5.52	(3.42)	Project deferred due to revised growth projections.
Recycled Water								
Kooragang Island Recycled Water Scheme	0.31	0.99	3.61	13.90	18.81	60.28	(41.48)	Project in design phase, commissioning expected June 2014. Expenditure is lower due to delays in signing commercial agreement with end user.
Thornton North Recycled Water Scheme	0.29	0.03	-	-	0.32	5.40	(5.08)	Slow development leading to deferral of project.
Gillieston Heights Recycled Water Scheme	-	-	0.05	0.49	0.54	7.04	(6.50)	Slow development leading to deferral of project.
North Cooranbong Recycled Water Scheme	(0.01)	-	-	-	(0.01)	(0.02)	0.00	Project cancelled.
Corporate								

Project Name	Actual 2009-10	Actual 2010-11	Forecast 2011-12	Forecast 2012-13	Cumulative over period	Determination	Variance	Explanation
Corporate – High Voltage Upgrade	0.41	0.79	1.61	12.04	14.86	13.57	1.29	Project in construction / development. Expected commissioning date is June 2014. Expenditure in price path is higher due better definition of project.
Annual Provision - Meters and Standpipes	0.95	1.41	1.00	0.97	4.32	4.36	(0.04)	Project on track
ICT	8.47	8.59	9.94	6.84	33.83	27.78	6.05	Delivery on schedule. Additional spending required due to revised scope.
Drainage								
Annual Provision - Stormwater Channel Rehabilitations	0.31	0.11	0.75	0.82	1.98	1.96	0.02	Project in construction, multiple projects in provision. Expected commissioning date is June 2013. Expected to be on budget.

Source: Hunter Water Corporation

APPENDIX D PHYSICAL OUTPUT MEASURES 2009-10 TO 2012-13

Table D.1 Water Services

Output (or activity) Measure	Target Output (or Activity) (a)	Driver	Output delivered 2009-10	Output delivered 2010-11	Output forecast 2011-12	Output forecast 2012-13	Output Forecast 2009-13 (b)	Variance 2009-13 (b – a)	Comments
Length of critical trunk mains undergoing condition assessment	160km	Maintaining Standards	34	26	50	45	155	-5	110km delivered to date with additional 45km scheduled by June 2013. Decreased output is due to a slight increase in the rate per kilometre over the price path and more complex site conditions as assessments are carried out in higher density suburbs.
Length of trunk mains for renewal/ upgrade	3.5km	Maintaining Standards	1.17	0.47	2.74	2.2	6.58	3.08	4.38km delivered to date with an additional 2.2km scheduled by June 2013. Increased output is due to renewal by sliplining rather than replacement being used for two of the projects, and another project being partially funded from outside of the price path provision.

Output (or activity) Measure	Target Output (or Activity) (a)	Driver	Output delivered 2009-10	Output delivered 2010-11	Output forecast 2011-12	Output forecast 2012-13	Output Forecast 2009-13 (b)	Variance 2009-13 (b – a)	Comments
Length of distribution mains for renewal/ upgrade	46km	Maintaining Standards	10.3	6.4	9.3	9.8	35.8	-10.2	26km delivered to date with additional 9.8km scheduled by June 2013. Decreased output due to a slight increase in contractor rates, more complex site conditions and a number of larger diameter mains (DN200) replaced under the price path provision.
Pump stations constructed/upgraded to increase capacity for growth									
West Cessnock	Complete		Jun-12	Dec-12	Feb-13	Feb-13	Complete		Project in construction phase, commissioning scheduled for February 2013.
Telarah	Complete			Dec-14	Jun-14	Jun-14	Jun-14	12 mths	Design work commenced, commissioning scheduled for June 2014. Deferred due to revised growth projections.
Cameron Park	Complete		Sep-10	Complete	Complete	Complete	Complete		Project commissioned in April 2010.
Wallsend	Complete			Jun-12	Jun-12	Jun-12	Complete		Project commissioned in June 2012.
New reservoirs constructed									
Windella	Complete			Mar-13	Mar-13	Mar-13	Complete		Project in construction phase, commissioning scheduled for March 2013.
Anna Bay	Complete			Jun-11	Jun-11	Jun-11	Complete		Project commissioned in June 2011.

Output (or activity) Measure	Target Output (or Activity) (a)	Driver	Output delivered 2009-10	Output delivered 2010-11	Output forecast 2011-12	Output forecast 2012-13	Output Forecast 2009-13 (b)	Variance 2009-13 (b – a)	Comments
West Cessnock	Complete		Jun-12	Dec-12	Jan-13	Jan-13	Complete		Project in construction phase, commissioning scheduled for February 2013.
North Wallarah	Complete		Jun-13	Jun-14	Jun-14	Jun-14	Jun-14	12 mths	Design work commenced, commissioning scheduled for June 2014 delay due to developer reconsideration of land development.
Water treatment upgrades									
Anna Bay	Complete	Growth & Maintaining Standards		Jan-13	Dec-13	Dec-13	Dec-13	6 mths	Design work commenced, commissioning scheduled for December 2013. Deferred due to difficulty in obtaining approval for upgrade of high voltage power supply.
Grahamstown	Complete	Growth & Maintaining Standards		Jun-21	Jun-21	Jun-21	Jun-21	8 years	Design work commenced, commissioning scheduled for June 2021. Deferred due to revised demand projections and better understanding of water quality risks.
Construction of Tillegra Dam	Commence construction	Growth & Maintaining Standards	Cancelled						Project cancelled. Development approval refused by NSW Planning

Table D.2 Wastewater services

Output (or activity) Measure	Target Output (or Activity) (a)	Driver	Output delivered 2009-10	Output delivered 2010-11	Output forecast 2011-12	Output forecast 2012-13	Output Forecast 2009-13 (b)	Variance 2009-13 (b – a)	Comments
Length of critical sewer mains to undergo condition assessments	120km	Maintaining Standards	37.5km	42.1km	12km	41km	132.6km	12.6km	91.6 km inspected to date with additional 41 km scheduled by June 2013. Increased output is due to a review of the critical sewer program. The total length of critical sewers is now 175km.
Length of critical sewer mains renewed/refurbished	6km	Maintaining Standards		1.6km	0.308km	3.23km	5.1	-0.9km	1.9 km replaced to date with additional 3.2 km scheduled by June 2013. Decreased output is due to focus on cast iron sewers. There have been concerns about the equipment and processes used to effectively manage the risks of descaling with equipment becoming stuck. In the last 12 months the relining contractor purchased improved descaling equipment, however there is now a backlog of work.

Output (or activity) Measure	Target Output (or Activity) (a)	Driver	Output delivered 2009-10	Output delivered 2010-11	Output forecast 2011-12	Output forecast 2012-13	Output Forecast 2009-13 (b)	Variance 2009-13 (b – a)	Comments
Length of non-critical sewer mains renewed/refurbished	32km	Maintaining Standards		30.1km	20.35km	17.55km	68km	36km	50.5 km replaced to date with additional 17.5 km scheduled by June 2013. Increased output is due to focus on the relining of assets that experience multiple tree root related blockages. Change to the licence limit, whereby only 45 properties may experience 3 overflows per year has influenced decision making.
Priority sewerage programs									
Millfield/Ellalong scheme	Complete	Government programs	Sep-10	Sep-10	Sep-10	Sep-10	Complete		Project commissioned in September 2010.
Clarence Town scheme	Complete	Government programs		Sep-11	Jun-12	Jun-12	Complete		Project commissioned in June 2012.
Sewerage treatment plant upgrades									
Burwood Beach (Stage 2)	Complete	Growth & Maintaining Standards		Mar-11	Mar-11	Mar-11	Complete		Project commissioned in March 2011.
Branxton	Complete	Growth & Maintaining Standards		Mar-11	Mar-11	Mar-11	Complete		Project commissioned in March 2011.
Boulder Bay (Stage 2)	Complete	Growth & Maintaining Standards		Nov-11	Oct-11	Oct-11	Complete		Project commissioned in October 2011.
Raymond Terrace (Stages 2&3)	Complete	Growth & Maintaining Standards	Jun-10	Jun-10	Jun-10	Jun-10	Complete		Project commissioned in June 2010.

Output (or activity) Measure	Target Output (or Activity) (a)	Driver	Output delivered 2009-10	Output delivered 2010-11	Output forecast 2011-12	Output forecast 2012-13	Output Forecast 2009-13 (b)	Variance 2009-13 (b – a)	Comments
Toronto (inlet works)	Complete	Growth & Maintaining Standards		Jan-12	Mar-12	Mar-12	Complete		Project commissioned in March 2012.
Shortland (Stage 3)	Complete	Growth & Maintaining Standards		Mar-12	Sep-12	Sep-12	Complete		Project in construction phase, commissioning scheduled for September 2012.
Paxton	Complete	Growth & Maintaining Standards		Mar-11	Mar-11	Mar-11	Complete		Project commissioned in March 2011.
Dora Ck	Complete	Growth & Maintaining Standards	Sep-10	Sep-10	Sep-10	Sep-10	Complete		Project commissioned in September 2010.
Farley (Stage 3a)	Complete	Growth & Maintaining Standards	Jun-13	Jun-13	Dec-13	Dec-13	Complete		Project in construction phase, commissioning scheduled for December 2013.
Sewerage pumping station upgrades									
30 upgrades	Complete	Growth & Maintaining Standards	1	3	8	4	16	-14	16 Stations will have been upgraded by June 2013 with a further 4 substantially complete. Improved system performance and revised strategies to address overflow issues have allowed the remainder to be deferred.

Output (or activity) Measure	Target Output (or Activity) (a)	Driver	Output delivered 2009-10	Output delivered 2010-11	Output forecast 2011-12	Output forecast 2012-13	Output Forecast 2009-13 (b)	Variance 2009-13 (b – a)	Comments
Reduce wet weather overflows in the following catchments:									
Newcastle (Stage 1)	No. of o/flow events	Growth & Maintaining Standards	3	24	28	Weather dependent	n/a	n/a	Overflow events are related to wet weather more so than asset condition. The period 2010 to 2012 has been particularly wet.
Dudley-Charlestown (Stage 1)	No. of o/flow events	Growth & Maintaining Standards	3	18	16	Weather dependent	n/a	n/a	
Cardiff	No. of o/flow events	Growth & Maintaining Standards	0	3	0	Weather dependent	n/a	n/a	
Dora Creek (Stages 1&2)	No. of o/flow events	Growth & Maintaining Standards	0	2	0	Weather dependent	n/a	n/a	
Windale (stages 1 & 2)	No. of o/flow events	Growth & Maintaining Standards	1	5	3	Weather dependent	n/a	n/a	
Kurri Kurri (stages 1&2)	No. of o/flow events	Growth & Maintaining Standards	0	1	0	Weather dependent	n/a	n/a	
Raymond Terrace (stages 1&2),	No. of o/flow events	Growth & Maintaining Standards	0	0	0	Weather dependent	n/a	n/a	
Sandgate/Shortland	No. of o/flow events	Growth & Maintaining Standards	0	0	0	Weather dependent	n/a	n/a	
Maryland/Minmi (Stages 1&2)	No. of o/flow events	Growth & Maintaining Standards	3	24	28	Weather dependent	n/a	n/a	
Improve biosolids management									
Amount of biosolids produced	Record in dry tonnes per annum	Maintaining Standards	4920	4911	5532	5611	20974	n/a	Biosolids produced recorded annually

Output (or activity) Measure	Target Output (or Activity) (a)	Driver	Output delivered 2009-10	Output delivered 2010-11	Output forecast 2011-12	Output forecast 2012-13	Output Forecast 2009-13 (b)	Variance 2009-13 (b – a)	Comments
Amount of biosolids disposed	Record in dry tonnes per annum	Maintaining Standards	5123	4668	4738	4805	19334	n/a	Biosolids disposed recorded annually
Design biological capacity of treatment works with a licence requiring biochemical oxygen demand and suspended solids removal only (EP)									
Note: These plants are the only plants that have been designed to remove BOD and TSS only. A licence requirement does not necessarily correspond to design intent.									
Burwood Beach	---------- See comments ----------								Provided annually in the Periodic Pricing Report
Kearsley									
Design biological capacity of treatment works with a licence requiring nutrient removal (nitrogen only or both nitrogen and phosphorous) (EP)									
Note: These plants are the only plants that have been designed to remove BOD and TSS only. A licence requirement does not necessarily correspond to design intent.									
Belmont	---------- See comments ----------								Provided annually in the Periodic Pricing Report
Boulder Bay	---------- See comments ----------								Provided annually in the Periodic Pricing Report
Branxton	---------- See comments ----------								Provided annually in the Periodic Pricing Report
Cessnock	---------- See comments ----------								Provided annually in the Periodic Pricing Report
Dora Creek	---------- See comments ----------								Provided annually in the Periodic Pricing Report
Dungog	---------- See comments ----------								Provided annually in the Periodic Pricing Report

Output (or activity) Measure	Target Output (or Activity) (a)	Driver	Output delivered 2009-10	Output delivered 2010-11	Output forecast 2011-12	Output forecast 2012-13	Output Forecast 2009-13 (b)	Variance 2009-13 (b – a)	Comments
Edgeworth			---------- See comments ----------						Provided annually in the Periodic Pricing Report
Farley			---------- See comments ----------						Provided annually in the Periodic Pricing Report
Karuah			---------- See comments ----------						Provided annually in the Periodic Pricing Report
Kurri Kurri			---------- See comments ----------						Provided annually in the Periodic Pricing Report
Morpeth			---------- See comments ----------						Provided annually in the Periodic Pricing Report
Paxton			---------- See comments ----------						Provided annually in the Periodic Pricing Report
Raymond Terrace			---------- See comments ----------						Provided annually in the Periodic Pricing Report
Shortland			---------- See comments ----------						Provided annually in the Periodic Pricing Report
Tanilba Bay			---------- See comments ----------						Provided annually in the Periodic Pricing Report
Toronto			---------- See comments ----------						Provided annually in the Periodic Pricing Report

Table D.3 Drainage

Output (or activity) Measure	Target Output (or Activity) (a)	Driver	Output delivered 2009-10	Output delivered 2010-11	Output forecast 2011-12	Output forecast 2012-13	Output Forecast 2009-13 (b)	Variance 2009-13 (b – a)	Comments
Stormwater drainage channel rehabilitations									
Newcastle system	1.5km	Growth & Maintaining Standards	0.35km	0.02km	0.223km	0.13km	0.73km	-0.77km	0.6km delivered to date with additional 0.13km scheduled by June 2013. Decreased output is due to transfer of funds to complete other projects such as the installation of a CDS unit on the Merewether Stormwater System and the use of rock revetment instead of replacing concrete panels. Concrete panels are no longer acceptable due to environmental and aesthetic reasons.
Cessnock system	0.6km	Growth & Maintaining Standards	0.05km	0.035km	0km	0.6km	0.69km	0.09km	0.09km delivered to date with additional 0.6km scheduled by June 2013. Increased output due to condition assessment indicating that a greater length of stormwater channels needed rehabilitation than originally thought.
Lake Macquarie system	0.3km	Growth & Maintaining Standards	0.003km	0	0.03km	0.27km	0.3km	0km	0.03 delivered to date with additional 0.27km scheduled by June 2013.

Table D.4 Corporate

Output (or activity) Measure	Target Output (or Activity) (a)	Driver	Output delivered 2009-10	Output delivered 2010-11	Output forecast 2011-12	Output forecast 2012-13	Output Forecast 2009-13 (b)	Variance 2009-13 (b – a)	Comments
Replace customer meters 20mm	44,000	Business Efficiency	13,492	11,000	13,758	9,000	47,187	3,187	38,187 replaced to date with additional 9,000 scheduled by June 2013. Increased output due increase in unscheduled exchanges due to higher failure to register rates.
Replace customer meters >20mm	2,000	Business Efficiency	486	337	450	400	1673	-327	1,273 replaced to date with additional 400 scheduled by June 2013. Decreased output due to unforseen level of performance from meters in-service.

Source: Hunter Water
Note: Detailed commentary available in the 2012 Periodic Pricing Report

APPENDIX H PROPOSED OUTPUT MEASURES 2013-14 TO 2016-17

Table H.1 Water Services

Output (or activity) measure	Target Output
Renewal/reliability of distribution mains	18 kms
High voltage electricity upgrade	28 sites
Critical trunkmain replacement	3 km
Telemetry upgrade	138 sites
Water treatment plant upgrades - chemical storage systems	3 systems

Table H.2 Wastewater services

Output (or activity) measure	Target Output
Renew non-critical mains	41 kms
Switchboards replaced	45 sites
Wastewater pumps replacement	195 pumps
High voltage electricity upgrade	3 sites

Table H.3 Drainage

Output (or activity) measure	Target Output
Stormwater drainage channel rehabilitations	0.6 kms

Table H.4 Corporate

Output (or activity) measure	Target Output
Replace customer meters 20mm	13,200 meters

Source: Hunter Water

APPENDIX I WEIGHTED AVERAGE COST OF CAPITAL PARAMETERS

Under IPART's new building block model, tax liability is included as a price building block and as such the return on capital needs to be based on a real post-tax WACC. Below is IPART's post-tax WACC calculation formula:

Formula for post-tax WACC

$$r = \frac{\left(1 + \left\{R_e.(\frac{E}{D+E}) + R_d.(\frac{D}{D+E})\right\}\right)}{(1+\Pi)} - 1$$

r is the post-tax WACC
R_d is the nominal cost of debt,
R_e is the nominal cost of equity
D is the level of debt
E is the level of equity
Π is expected inflation

For the purposes of this submission, Hunter Water has adopted a post tax WACC of 5.6 per cent (range tabled below).

	Long-term averages[1]	Hunter Water parameters (market values)
Nominal risk-free rate	5.4%	3.1%
Inflation	2.5%	2.5%
Debt margin	2.0%	3.5% to 4.8%
Debt to total assets	60%	60%
Market Risk Premium	5.5% to 6.5%	5.5% to 6.5%
Gamma	0.25	0.25
Equity Beta	0.6 to 0.8	0.8 to 1.0
Cost of equity	8.7% to 10.6%	7.5% to 9.6%
Cost of debt	7.4%	6.6% to 7.9%
WACC range (real post-tax)	5.3% to 6.0%	4.3% to 5.9%
WACC midpoint (real post-tax)	5.6%	5.1%
WACC point estimate (real post-tax)	**n/a**	**5.6%**

In order to cater for a high level of current market uncertainty and volatility, Hunter Water has considered long-term averages for WACC parameters as well as current market values. This is similar to the approach that IPART has taken in the 2012 Sydney Water determination. As such, a WACC of 5.6 per cent is situated in the upper bound of the WACC range of 4.3 per cent to 5.9 per cent, aligned with long-term averages. It is considered that this approach is appropriate in setting prices for the next four years as IPART itself has identified that current market volatility has potentially created a disparity between short-term WACC parameters (the risk-free rate and debt margin), and long-term WACC parameters (the market risk

[1] Independent Pricing and Regulatory Tribunal of NSW (IPART), June 2012, **Review of Prices for Sydney Water Corporation's water, sewerage, drainage and other services**, Sydney, Table C.3

premium).[2] At a WACC of 5.6 per cent, the cost of equity is 9 per cent, while the cost of debt is 7.9 per cent.

Hunter Water acknowledges that market based parameters including the risk-free rate, inflation and debt margin will need to be updated at the time of Hunter Water's final determination to reflect prevailing market conditions and potential changes in methodology to reflect current regulatory practice.

In April 2011, IPART released a research paper indicating is final decision on debt margin.[3] This decision included shortening the term assumptions for the market-based WACC parameters (risk-free rate, debt margin and inflation) from 10 years to 5 years. IPART commented in this paper that '*managers of regulated assets are free to choose higher or lower risk funding strategies. By not synchronising the regulatory period and the term of the debt margin they will be taking on additional risk*.'[3] This is a valid theoretical option, but not commercially practical. Such a strategy would put considerable risk on an agency's ability to renegotiate all its debt at a particular point in time. Also it is not a strategy supported by Hunter Water's financial asset and liability manager (TCorp). Depending on the price determination cycles of the various agencies, it would put significant pressure on the State to renegotiate large portions of debt within a short window.

TCorp's role is to source the debt that represents the best value for money. TCorp aims to take advantage of market conditions to source the cheapest funds of debt. At present Hunter Water is lengthening the average duration of its debt portfolio and is currently moving closer to a 10-year duration. The duration is not determined on the price determination period. It is an outcome of sourcing the cheapest debt in the market, and moves depending on the type of debt, as well as the term to maturity of the debt. Sydney Water expressed a similar view stating *'…a utility's debt structure is primarily driven by…prevailing financial market conditions, not the length of the price determination period.*'[4] '*Sydney Water also submits that setting the term to maturity to match the regulatory period makes the utility's commercial decisions a product of the regulatory system, not the underlying market conditions'*.[5] Hunter Water agrees with this view, as shortening the term does not deliver the best financing cost outcome for an agency.

TCorp uses benchmark fair values for the nominal rate, real rate and inflation. By comparing the rates prevailing in the markets with the benchmark fair values, TCorp identifies which is the cheapest debt.

Figure I.1 below highlights the movement in the nominal interest rates, CPI-linked (real) interest rates and breakeven inflation rates over the last 10 years. Over the last 10 years, the implied breakeven inflation rate has been 2.5 per cent per year.

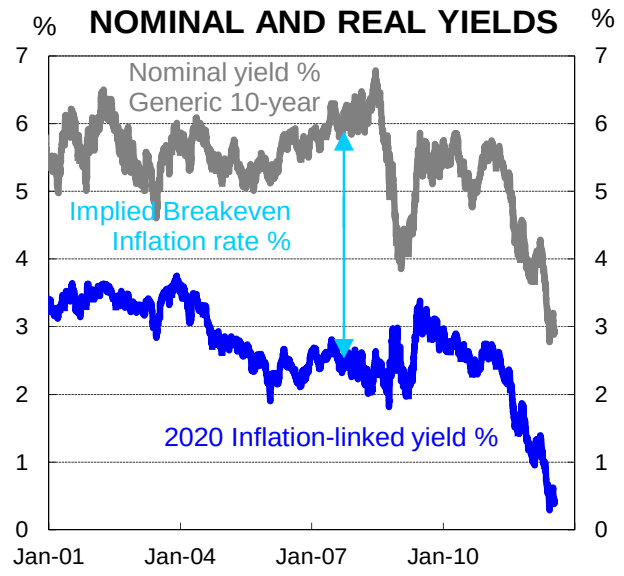
[2] Independent Pricing and Regulatory Tribunal of NSW (IPART), March 2012, **Review of Prices for Sydney Water Corporation's water, sewerage, drainage and other services**, Sydney, page 179

[3] Independent Pricing and Regulatory Tribunal of NSW (IPART), April 2011, **Developing the approach to estimating the debt margin**, Sydney

[4] Independent Pricing and Regulatory Tribunal of NSW (IPART), April 2011, **Developing the approach to estimating the debt margin**, Sydney, page 9

[5] Independent Pricing and Regulatory Tribunal of NSW (IPART), April 2011, **Developing the approach to estimating the debt margin**, Sydney, page 9

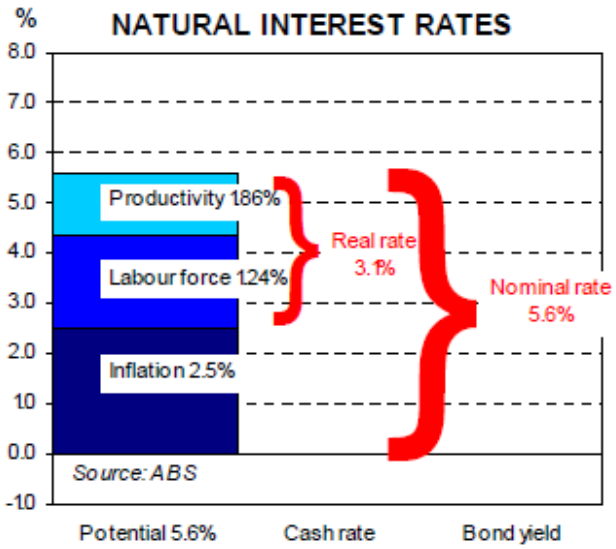
Figure I.1 Nominal and real yields



Source:TCorp

Figure I.2 depicts the long-term benchmark fair values for nominal risk-free rate (5.6 per cent), real risk-free rate (3.1 per cent) and inflation rates (2.5 per cent).

Figure I.2 Natural Interest Rates



At particular points in time rates prevailing in the market can be out of step with the long-term benchmark rates. TCorp identifies these mismatches to source the cheapest debt, and in doing this, ensures lower interest costs for Hunter Water.

Hunter Water has previously expressed concern to IPART that setting market-based parameters on 20-day averages at the time of the determination may not appropriately reflect the medium term outlook relevant to a price path, nor the long-term outlook relevant to duration of Hunter Water's debt portfolio.[6] This is evident in the wide variation in some

[6] Concerns relating to the use of the 20–day average have been raised previously in Hunter Water's June 2009 response to IPART's discussion paper on the debt margin, Hunter Water's October 2010 response to the

parameters adopted by IPART in various pricing decisions. The issue of the parameters reflecting current market conditions and not a medium- to long-term outlook has been of particular concern following the global financial crisis. TCorp recognises that prudent borrowing involves achieving a smooth debt profile over the funding horizon and it would be '*imprudent (and indeed impossible) to finance the entire debt portfolio within a 20-day averaging period.*'[7] Hunter Water supports the use of long-term benchmark fair values, like those utilised by TCorp, rather than 20-day averages. Or, at the very least if the 20-day averages produce significant variations to the long-term benchmarks, then adjustments should be made to ensure that wide variations do not occur across various IPART pricing decisions. This approach was adopted by IPART in the 2012 decision on Sydney Water's prices. Rather than adopting the midpoint WACC based on current market estimates, IPART chose a WACC at the upper bound of the range, as it was more reflective of long-term averages for the risk-free rate, inflation rate and market risk premium. Hunter Water supports IPART's approach to determine the WACC with reference to long-term averages, as it is more reflective of a utility's debt structure.

Nominal Risk-Free Rate

IPART uses a 20-day average of the 5-year Bloomberg Australian risk-free index (GACGB10 Index) to estimate the risk-free rate.

Hunter Water agrees with the index used, however as mentioned previously, Hunter Water believes that a 10-year index is more relevant. A review undertaken by Deloitte on Hunter Water WACC parameters states;

> '*In relation to the tenor of the bond to be considered, we consider the 10-year bond rate, being a longer term measure, to be appropriate, given the long-term nature of Hunter Water's operations. Furthermore, the 10-year bond rate is a widely used and accepted benchmark for risk-free rate in Australia.*'[8]

The nominal risk-free rate applied to Hunter Water's WACC calculation is 3.1 per cent. This value was based on the 20-day average of the 10 year index to 12 June 2012.

Figure I.3 demonstrates that by taking a 20-day average in setting the risk-free rate, utilities are exposed to significant market volatility. If the WACC had been set even one month earlier, the 20-day average would have been at least 0.6 per cent higher. As TCorp highlights, '*A more robust, transparent, market-based and internally consistent alternative would calculate debt costs from 10-year average and 10-year parameters*.'[9]

Inflation Rate

IPART bases inflation on the average rates prevailing in the swap market for a 20-day period. As mentioned above, this approach may result in rates somewhat different than long-term estimates, as it measures market conditions at a point in time.

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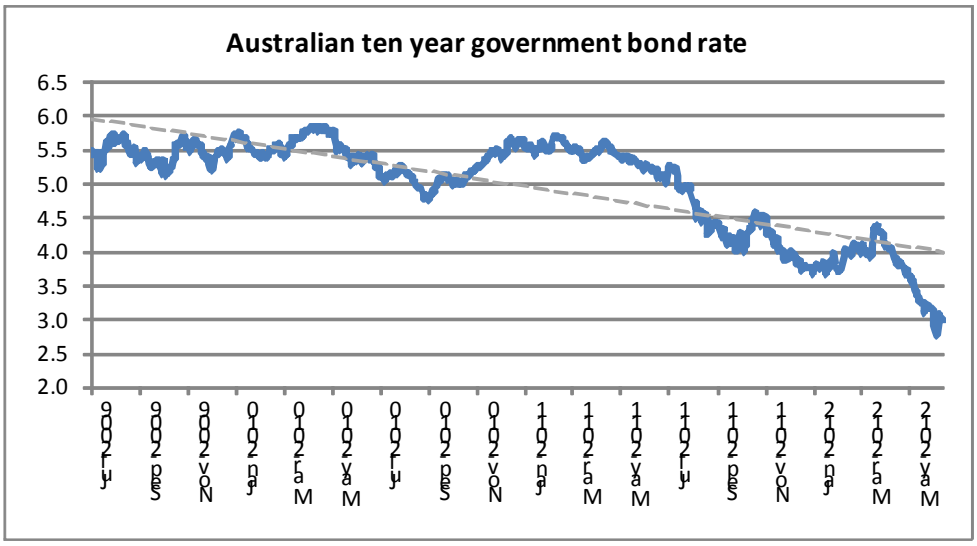
discussion paper on financeability tests and Hunter Water's August 2011 response to the discussion paper on the incorporation of company tax in price determinations.

[7] NSW Treasury Corporation, April 2012, **Response to Sydney Water and Sydney Catchment Draft Determinations**, Sydney, page 1

[8] Deloitte Touche Tohmatsu, Advice letter to Hunter Water, *Review of weighted average cost of capital*, 19 July 2012.

[9] NSW Treasury Corporation, April 2012, **Submission for Sydney Water Final Determination**, Sydney (Stephen Knight)

Figure I.3 Australian ten year government bond rate trend



Source: RBA rates

Hunter Water has adopted a long-term average of 2.5 per cent per year in line with long-term RBA forecasts. This is also in line with TCorp recommendations.[10]

Debt Margin

The debt margin is the cost of debt an entity has to pay above the nominal risk-free rate. It is related to current market bond interest rates, the debt maturity, the capital structure and the credit rating.

In April 2011, IPART released a further research paper indicating is final decision on debt margin.[11] The table below outlines the changes since the last price submission.

	Previous price submission 2009-10	**IPART's revised approach**
Data selection	Bloomberg BBB 7 year fair value curve Australian bonds with credit ratings of BBB/BBB+	Bloomberg BBB 5-year fair value curve. Australian and US bonds that are issued by Australian firms and are rated BBB/BBB+ by S&P
Term to maturity	10 years	5 years
Debt raising costs	An allowance of 0.125% pa on the debt margin	An allowance of 0.20%pa on the debt margin

[10] NSW Treasury Corporation, April 2012, **Response to Sydney Water and Sydney Catchment Draft Determinations**, Sydney, page 3

[11] Independent Pricing and Regulatory Tribunal of NSW (IPART), April 2011, **Developing the approach to estimating the debt margin**, Sydney

Hunter Water agrees with the index used, however as mentioned previously, the 7-year index previously used, and a 10-year term to maturity is more relevant. The debt margin applied to Hunter Water's WACC calculation is 3.5 per cent to 4.8 per cent.

In determining the WACC point estimate of 5.6 per cent, the upper limit of the debt margin of 4.8 per cent was used. Contributing to an overall cost of debt of 7.9 per cent, this is considered appropriate due to the following factors;

- 96.9 per cent of outstanding loan obligations of Hunter Water as at 30 June 2012 are long-term fixed rate loans from NSW Treasury Corporation with an average interest rate of 5.81 per cent.
- The average Hunter Water government guarantee fee rate per June 2012 Treasury estimates until the end of 2017 is 2.02 per cent.
- A 0.20 per cent allowance for debt raising costs, as stipulated in the IPART debt margin paper[12]

Market Risk Premium

IPART has maintained its current market risk premium range of 5.5 per cent to 6.5 per cent. The Australian Energy Regulator (AER) increased the value of the market risk premium to 6.5 per cent following its May 2009 report on the review of WACC parameters. [13] The increase is based on the notion that the GFC has raised risk levels for investors.

Given that the decision by AER is not outside the upper bound of IPART's current range of 5.5 per cent - 6.5 per cent, Hunter Water agrees with IPART's current approach.

Gamma

Under IPART's new building block model, tax liability is included as a price building block and as such the return on capital needs to be based on a real post-tax WACC. Under the new WACC calculation, gamma (dividend imputation factor) is no longer relevant to the WACC calculation. It is now incorporated in the tax building block, and is discussed in detail in section 7.6 of the main submission - Building block components and aggregate pricing.

The gamma chosen is 0.25. This is in line with IPART's research paper 'Review of imputation credits (gamma)'.[14]

Equity Beta

The equity beta represents the systematic or market wide risk of an asset. It measures variations in revenue and profit due to variations in general economic parameters of the relevant market. IPART position is to determine an industry specific equity beta.

In IPART's research paper on the weighted average cost of capital, Sydney Water and NSW Treasury raised concerns about the validity of comparing the Australian water agencies with Australian energy transmission and distribution businesses and UK water businesses. The Australian water agencies face additional risks with respect to volume certainty. In the UK water industry, variable charges account for less of the overall revenue than in NSW water

[12] Independent Pricing and Regulatory Tribunal of NSW (IPART), April 2011, **Developing the approach to estimating the debt margin**, Sydney

[13] AER, May 2009 Final decision, electricity transmission and distribution service providers, **Review of the weighted average cost of capital (WACC) parameters**

[14] Independent Pricing and Regulatory Tribunal of NSW (IPART), March 2012, **Review of Imputation credits (gamma)**, Sydney

businesses. IPART have agreed to take considerable care in assessing the implications of UK equity betas. [15]

IPART adopted an equity beta range of 0.8 to 1.0 in Hunter Water's current determination.

Hunter Water believes that the value range adopted by IPART in Hunter Water's previous price determination is reflective of the volumetric risks faced by Hunter Water. Water supply in the lower Hunter is highly vulnerable to drought. Water levels can drop faster than in most other major Australian urban centres during drought because lower Hunter storages are small or shallow and have high evaporation rates.

The Lower Hunter Water Plan is currently being prepared by Metropolitan Water Directorate in consultation with Hunter Water and the community to identify potential solutions to ensure the lower Hunter makes it through a drought. The plan will also be sufficiently long term to meet the water supply needs of a growing community.

The outcomes of the plan on long-term water security will not be operational in the 2013-14 to 2016-17 price period. As such Hunter Water believes high volumetric risk still exists, and an equity beta range of 0.8 to 1.0 is still appropriate. In its review undertaken on Hunter Water WACC parameters Deloitte considers the *'beta range proposed by Hunter Water to be supported by market evidence observed for comparable listed companies and past regulatory practice.*'[16]

In Sydney Water's 2012-13 final price determination, IPART used an equity beta range of 0.6 to 0.8. Hunter Water believes this is appropriate for Sydney Water given the lower volumetric risk they face over the next four years, particularly given that the desalination plant will be operating in water security mode.

Debt Gearing Ratio

The debt gearing ratio represents the proportion of the assets funded by debt. IPART's current approach is to estimate an industry specific gearing level, as opposed to utilising the agency's actual debt gearing ratio. The rationale for this is to ensure that customers will not bear the cost associated with an inefficient financing structure.

Historically IPART use a notional debt gearing ratio of 60 per cent, which is supposed to represent an optimal capital structure.

Hunter Water agrees with this approach, provided 60 per cent remains as the maximum gearing ratio. At present Hunter Water's capital structure is 37 per cent funded by debt, and is expected to increase over the next price path. Hunter Water manages its capital structure to ensure it maintains an investment grade credit rating, and the financial viability of the agency.

[15] Independent Pricing and Regulatory Tribunal of NSW (IPART), April 2010, **IPART's weighted average cost of capital**, Sydney, page 5, 10-11

[16] Deloitte Touche Tohmatsu, Advice letter to Hunter Water, *Review of weighted average cost of capital*, 19 July 2012.

APPENDIX K DUNGOG SHIRE CAPITAL EXPENDITURE

This appendix provides the information requested in questions 38 to 43 of the information requirements in Appendix B of IPART's June 2012 Issues Paper.

Dungog Water Service Charge Revenue and Infrastructure Projects

Hunter Water's 2009 price submission proposed a transitional pricing arrangement for Dungog Shire customers to enable Hunter Water to fund additional capital investments in order to offer a standard of service consistent with that provided its other customers and consistent with the requirements of the operating licence.[1] The proposed transitional pricing arrangement involved only a higher water service charge to apply to Dungog Shire customers.

The proposed water service charge was $127.53 ($2008-09) for each year of the determination period. This price was derived from a funding model for the additional capital investment assessed as required in 2007 as part of the due diligence review for the transfer of the water and sewer business from Dungog Council to Hunter Water. This charge was to remain constant for the current determination period, then be phased out over the following determination period.

IPART reduced Hunter Water's proposed Dungog water service charge in its final determination in line with the reductions to the water service charges for other customers and immediately began a phased reduction of the charge from 2009-10. The final determination set water service charges in 2008-09 terms of $108.59 for 2009-10 reducing to $85.42 for 2012-13. These two decisions removed the nexus between the Dungog water service charge and the funding required for the additional infrastructure. The prices quoted here were further reduced in early 2011 to remove Tillegra Dam costs from service charges.

The additional revenue from the higher water service charge from the date of transfer of the water and sewer business to Hunter Water to 30 June 2013 is shown in Table K.1.

Table K.1 Additional revenue from Dungog water service charges ($nominal)

	2008-09	2009-10	2010-11	2011-12	2012-13
Dungog water service charge (a)	127.53	92.56	84.86	76.87	69.55
Water service charge - other areas (a)	41.46	18.75	18.80	18.84	18.92
Difference	86.07	73.81	66.06	58.03	50.63
Additional revenue	204,400	175,450	157,600	138,580	120,900

Source: Hunter Water
(a) Charges shown are those with Tillegra Dam costs removed.

Hunter Water provided a report to IPART of the state of the assets in Dungog Shire on 31 March 2009, in response to an earlier request from IPART.[2] This report also outlined the remedial actions underway and proposed.

Table K.2 shows nominal expenditure on the transitional system upgrades between 1 July 2008 and 30 June 2013. All transitional upgrades to ensure system reliability and licence standards have been completed and it is not proposed to add further

[1] Hunter Water Corporation, 2009(a), section 9.7
[2] Hunter Water Corporation, 2009(b) requested by IPART in letter dated 31 March 2008 (ref 06/224)

projects to this list. All future capital spending in Dungog Shire will be part of the normal capital program.

Table K.2 Transitional upgrade expenditure - 2008-09 to 2012-13 ($nominal)

Expenditure item	Expenditure	Completion 30 June
General business & operations		
Customer communications	44,144	2009
Plans, surveys & GIS update	139,991	2009
Customer information system update	86,625	2009
Property & easement purchases	261,697	2013
Telemetry/SCADA compatibility & upgrade	325,561	2011
Depot establishment	87,346	2009
Systems operations tools (eg hydraulic models etc)	52,220	2009
Water system upgrades		
Electrical/mechanical upgrades (pump stations & Gresford water treatment plant)	256,781	2009
Clarence Town reservoir upgrade	100,178	2013
Paterson reservoir upgrade, trunk main & reticulation upgrades	410,607	2013
Gresford raw water pumping stations – upgrades & replacement (Paterson River station)	882,588	2012
Gresford water treatment plant upgrade (materials)	11,966	2010
Wastewater system upgrades		
Electrical/mechanical upgrades (pump stations & Dungog wastewater treatment works)	306,441	2011
Dungog wastewater treatment works – HV power supply upgrade	82,047	2010
Dungog wastewater treatment works – inlet & other civil works	37,975	2010
Dungog township – reticulation upgrades & pipe relining	106,688	2010

Source: Hunter Water

Clarence Town Sewerage Scheme

Expenditure and CSO payments

Table K.3 details the actual expenditure on the Clarence Town sewerage scheme and the eligible assistance payments to Hunter Water under the NSW Government's Country Towns Water Supply and Sewerage Program (CTWSSP).

Table K.3 Capital Expenditure and CTWSSP Assistance ($ nominal)

	Reticulation component	Treatment component
Total expenditure to date	7,295,160	5,039,345
Remaining expenditure (a)	Nil	193,300
Eligible CTWSSP assistance	2,528,861	2,580,206
CTWSSP payments received	2,528,861	2,465,167
CTWSSP payments outstanding	Nil	115,039

Source: Hunter Water
(a) Estimated outstanding payments for land purchase and irrigation system establishment and monitoring.

Table K.4 shows estimated revenue from the Environmental Improvement Charge (EIC) as a contribution to the Clarence Town sewerage project. The Clarence Town component of the EIC is fixed at 13.07 per cent of the nominal EIC.[3] Table K.5 shows the contribution from the Clarence Town levy paid by residents of Clarence Town only.

Table K.4 EIC contribution to Clarence Town funding ($ nominal)

	2009-10	2010-11	2011-12	2012-13
EIC	33.23	33.86	34.86	35.89
Clarence Town proportion (%)	13.1	13.1	13.1	13.1
EIC contribution to Clarence Town scheme	4.34	4.43	4.56	4.69
EIC customers (No)	163,8210	166,021	168,888	169,848
Revenue	711,497	734,726	769,488	796,727

Source: Hunter Water

Table K.5 Revenue from Clarence Town levy ($ nominal)

	2008-09	2009-10	2010-11	2011-12	2012-13
Levy amount	200.00	207.80	109.47	112.69	116.02
Revenue	71,400	74,185	39,081	40,230	41,419

Source: Hunter Water

Outstanding Clarence Town Cost Recovery

Chapter 9 provides details about Hunter Water's proposals for the continuation of the EIC contribution to the Clarence Town sewerage project and continuation of the Clarence Town levy. The discussion in the chapter outlines the proposal to reduce the Clarence Town levy from its present level of $116.02 to $73.20 ($2012-13) for the remainder of its currency to June 2019.

The outstanding balance for the cost of the project at June 2013 is expected to be $4,255,025 ($2012-13). This will be recovered over the original recovery period to 30 June 2019 as follows:

[3] Hunter Water Corporation, 2009(a), section 10.7

CTWSSP	$115,040
EIC	$4,013,450
Clarence Town levy at $73.20 ($2012-13)	$126,535
Total	4,255,025

APPENDIX L BILL IMPACTS

Hunter Water Corporation

2012 Price Review

Impact of proposed charges

($12/13 terms)

Corporate Strategy and Regulation

Thursday, 6 September 2012

2012 Price Review
Impact of proposed charges

Contents

2012 Price Review
Impact of proposed charges

Key charges summary

Price terms: $12/13

		FY 2013 [Current]	FY 2014	FY 2015	FY 2016	FY 2017
Water						
Usage						
Filtered water 50,000 kL or less	$12/13	2.08	2.12	2.17	2.21	2.26
Service						
Residential						
House	$12/13	18.92	16.69	16.69	16.69	16.69
House - Dungog	$12/13	69.55	16.69	16.69	16.69	16.69
Units	$12/13	18.92	16.69	16.69	16.69	16.69
Non-Residential						
20mm stand alone	$12/13	18.92	16.69	16.69	16.69	16.69
Other	$/ME	18.92	18.39	18.41	18.45	18.32
Sewer						
Usage						
Non-residential	$12/13/kL	0.67	0.65	0.64	0.62	0.61
Service						
Residential						
Houses	$/occupancy	555.23	573.82	584.74	595.85	607.11
Units	$/occupancy	363.20	387.33	409.32	431.99	455.33
20 mm stand alone charge	$/connection	1,110.46	573.82	584.74	595.85	607.11
Other	$/ME	1,110.46	1,137.04	1,175.11	1,222.94	1,263.75
Env'tal improvement charge						
Residential, non-residential and vacant	$12/13	35.89	35.89	35.89	35.89	35.89
Stormwater drainage						
Residential properties						
Houses	$12/13	86.42	83.58	74.95	67.22	60.32
Units	$12/13	86.42	30.92	27.73	24.87	22.08
Non-residential properties						
Small (<1,000m2) / low impact	$12/13	86.42	83.58	74.95	67.22	60.32
Medium (1,001 - 10,000m2)	$12/13	156.20	151.06	135.48	121.50	109.03
Large (10,001 - 45,000m2)	$12/13	993.59	960.89	861.74	772.83	693.53
Very Large (>45,000m2)	$12/13	3,156.84	3,052.97	2,737.94	2,455.46	2,203.49

2012 Price Review
Impact of proposed charges

Summary of bills and key indicators

Price terms: $12/13

		FY 2013	FY 2017	$ change over 4 years	$ change/year	% change over 4 yrs	% change per year
	Typical residential bills						
1	House - including drainage	1,081	1,138	57	14	5.3%	1.3%
2	House - excluding drainage	995	1,078	83	21	8.3%	2.0%
3	House - Dungog	1,045	1,078	32	8	3.1%	0.8%
4	Pensioner household	694	721	27	7	3.9%	1.0%
5	Strata unit - excluding drainage	665	790	125	31	18.8%	4.4%
6	Strata unit - including drainage	752	812	61	15	8.1%	2.0%
	Sample non-residential bills						
7	Service station	1,799	1,447	(352)	(88)	(19.5%)	(5.3%)
8	Small shop - Newcastle	1,363	1,043	(320)	(80)	(23.4%)	(6.5%)
9	Small shop - Cessnock	1,774	1,956	183	46	10.3%	2.5%
10	Large licenced club	68,472	72,530	4,058	1,014	5.9%	1.4%
11	Medium licenced hotel	7,814	8,328	515	129	6.6%	1.6%
12	Regional shopping centre	100,970	105,264	4,294	1,074	4.3%	1.0%
13	Large office - Newcastle	18,679	20,063	1,383	346	7.4%	1.8%
14	Regional office - Maitland	6,488	7,098	611	153	9.4%	2.3%
15	Small industrial firm	1,298	922	(376)	(94)	(29.0%)	(8.2%)
16	Medium industrial firm	197,581	210,653	13,072	3,268	6.6%	1.6%
17	Large industrial firm no sewer	343,550	371,761	28,211	7,053	8.2%	2.0%
18	Large industrial firm with sewer	473,775	499,132	25,357	6,339	5.4%	1.3%
19	Nursery low DF stand alone	1,607	2,030	423	106	26.4%	6.0%
20	Nursery low DF	13,770	14,845	1,075	269	7.8%	1.9%

2012 Price Review
Impact of proposed charges ($12/13 terms)

Customer type: House - including drainage

Charges: water, sewer, house drainage, EIC

Configuration: 185 kL p.a. / 20mm meter

Composition of the projected annual bill ($12/13 terms)

	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
Water service	19	17	17	17	17
Water usage	385	392	401	409	418
Sewer service	555	574	585	596	607
	-	-	-	-	-
Drainage	86	84	75	67	60
Environment improvement	36	36	36	36	36
	-	-	-	-	-
	-	-	-	-	-
Projected total bill	**1,081**	**1,102**	**1,114**	**1,125**	**1,138**
% change on the previous year		1.9%	1.0%	1.0%	1.2%
Water usage % of water charges	95%	96%	96%	96%	96%
Water usage % of total bill	36%	36%	36%	36%	37%

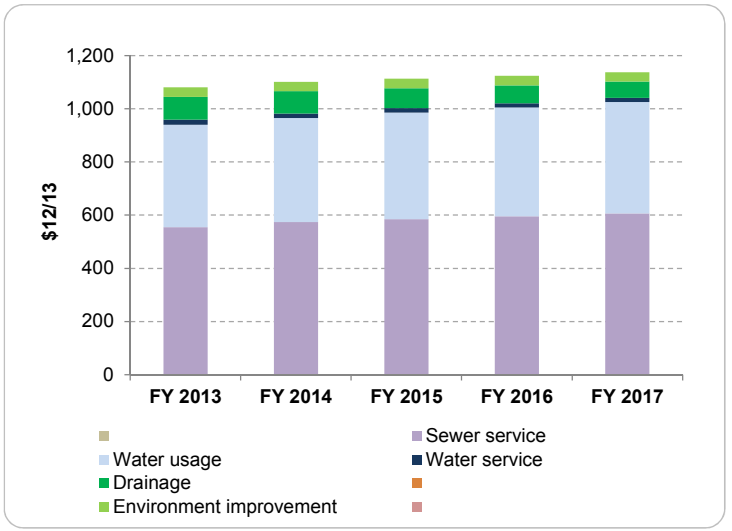
Changes over the 12/13 to 16/17 period ($12/13 terms)

	FY 2013 Bill	FY 2017 Bill	Difference	Av Ann Δ	Av Wkly Δ
Water service	19	17	(2)	(1)	(0.01)
Water usage	385	418	33	8	0.16
Sewer service	555	607	52	13	0.25
	-	-	-	-	-
Drainage	86	60	(26)	(7)	(0.13)
Environment improvement	36	36	-	-	-
	-	-	-	-	-
	-	-	-	-	-
Projected total bill	**1,081**	**1,138**	**57**	**14**	**0.27**

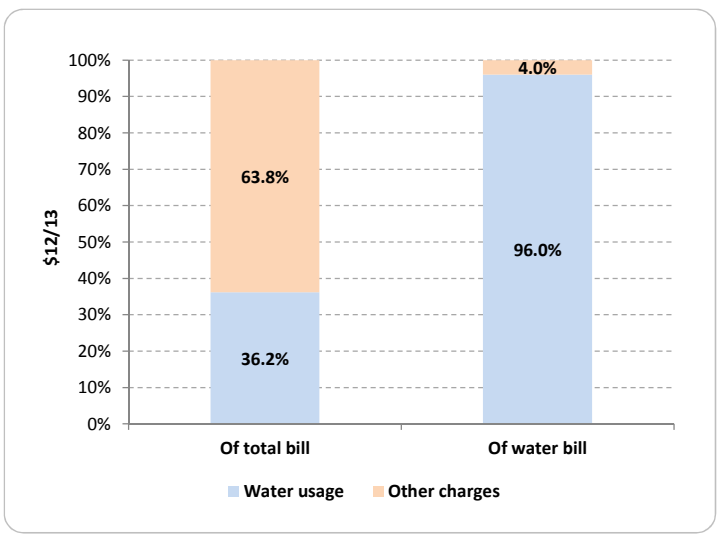
Notes

All prices shown are in $12/13 terms.
The typical bill for this customer category in 12/13 is $1,081.
By 16/17 this bill is projected to be $1,138 in $12/13 terms.
The percentage change in the bills over 4 years (i.e. by 2016/17) is 5.3%.
The annual average change in percentage terms is 1.3% per annum.
These households benefit from a reduction in the water service and drainage charges.
The largest change is due to an increase in the sewer service charge however the annual impact is modest.
The water usage charge increases 8.7% over the four year period.
The water conservation signal and variable proportion of the total bill are thus maintained.

Projected annual bill ($12/13 terms)



Average water usage component over 13/14 to 16/17



2012 Price Review
Impact of proposed charges ($12/13 terms)

Customer type: House - excluding drainage

Charges: water, sewer, EIC

Configuration: 185 kL p.a. / 20mm meter

Composition of the projected annual bill ($12/13 terms)

	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
Water service	19	17	17	17	17
Water usage	385	392	401	409	418
Sewer service	555	574	585	596	607
	-	-	-	-	-
Drainage	-	-	-	-	-
Environment improvement	36	36	36	36	36
	-	-	-	-	-
	-	-	-	-	-
Projected total bill	**995**	**1,019**	**1,039**	**1,057**	**1,078**
% change on the previous year		2.4%	2.0%	1.8%	1.9%
Water usage % of water charges	95%	96%	96%	96%	96%
Water usage % of total bill	39%	39%	39%	39%	39%

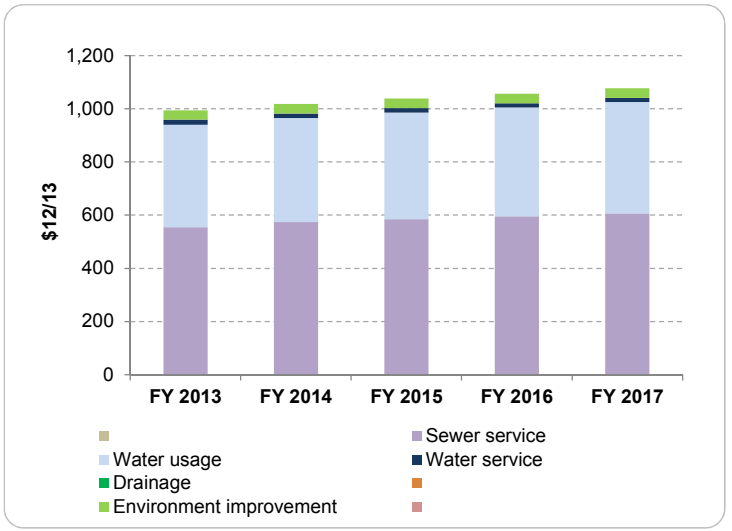
Changes over the 12/13 to 16/17 period ($12/13 terms)

	FY 2013 Bill	FY 2017 Bill	Difference	Av Ann Δ	Av Wkly Δ
Water service	19	17	(2)	(1)	(0.01)
Water usage	385	418	33	8	0.16
Sewer service	555	607	52	13	0.25
	-	-	-	-	-
Drainage	-	-	-	-	-
Environment improvement	36	36	-	-	-
	-	-	-	-	-
	-	-	-	-	-
Projected total bill	**995**	**1,078**	**83**	**21**	**0.40**

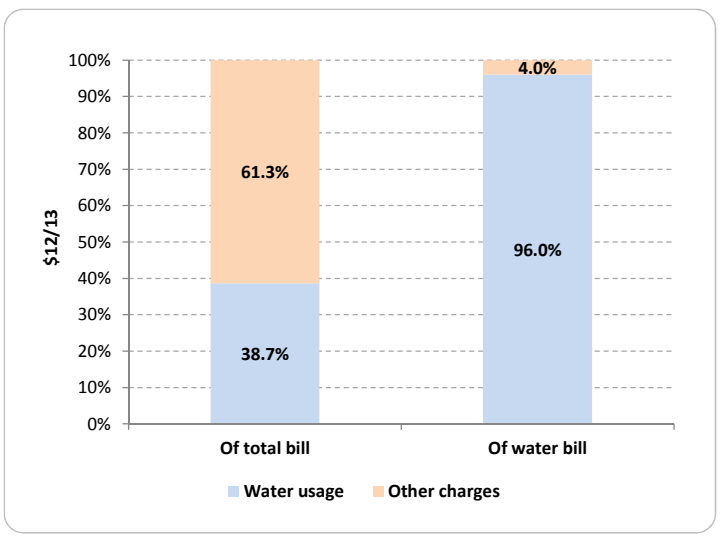
Notes

All prices shown are in $12/13 terms.
The typical bill for this customer category in 12/13 is $995.
By 16/17 this bill is projected to be $1,078 in $12/13 terms.
The percentage change in the bills over 4 years (i.e. by 2016/17) is 8.3%.
The annual average change in percentage terms is 2.1% per annum.
The overall bill for these households is less than households with drainage charges.
The relative increase therefore, is slightly greater because they do not benefit from the drainage reduction.

Projected annual bill ($12/13 terms)



Average water usage component over 13/14 to 16/17



2012 Price Review
Impact of proposed charges ($12/13 terms)

Customer type: House - Dungog

Charges: water, sewer, EIC

Configuration: 185 kL p.a. / 20mm meter

Composition of the projected annual bill ($12/13 terms)

	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
Water service	70	17	17	17	17
Water usage	385	392	401	409	418
Sewer service	555	574	585	596	607
	-	-	-	-	-
Drainage	-	-	-	-	-
Environment improvement	36	36	36	36	36
	-	-	-	-	-
	-	-	-	-	-
Projected total bill	**1,045**	**1,019**	**1,039**	**1,057**	**1,078**
% change on the previous year		(2.6%)	2.0%	1.8%	1.9%
Water usage % of water charges	85%	96%	96%	96%	96%
Water usage % of total bill	37%	39%	39%	39%	39%

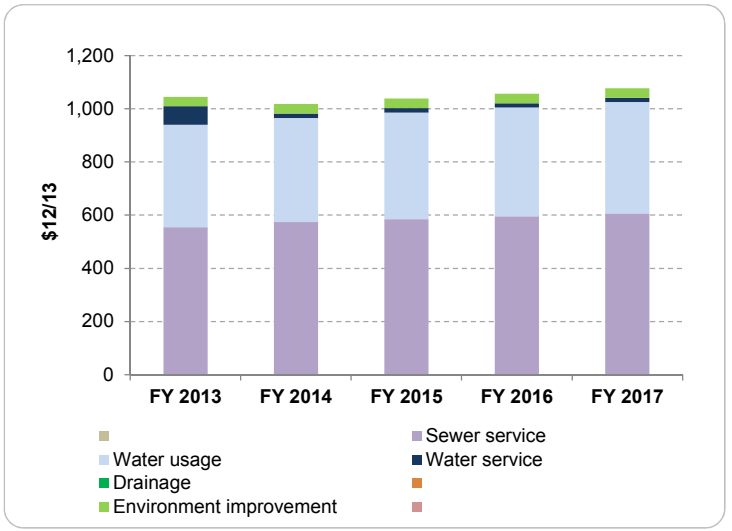
Changes over the 12/13 to 16/17 period ($12/13 terms)

	FY 2013 Bill	FY 2017 Bill	Difference	Av Ann Δ	Av Wkly Δ
Water service	70	17	(53)	(13)	(0.25)
Water usage	385	418	33	8	0.16
Sewer service	555	607	52	13	0.25
	-	-	-	-	-
Drainage	-	-	-	-	-
Environment improvement	36	36	-	-	-
	-	-	-	-	-
	-	-	-	-	-
Projected total bill	**1,045**	**1,078**	**32**	**8**	**0.16**

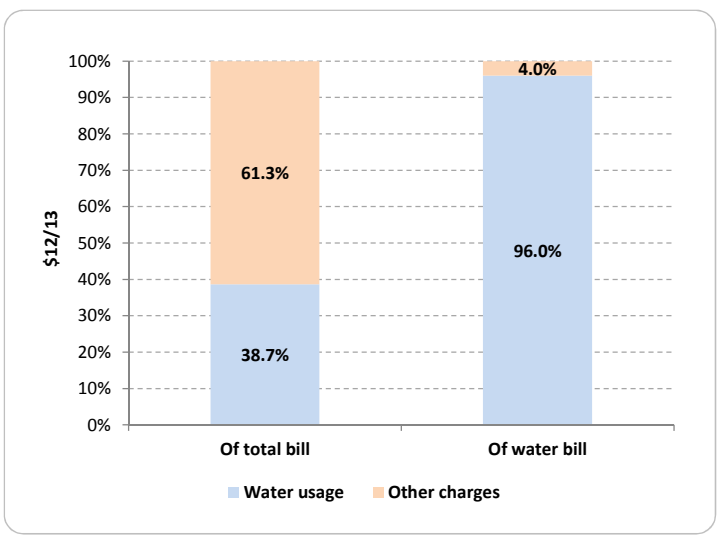
Notes

All prices shown are in $12/13 terms.
The typical bill for this customer category in 12/13 is $1,045.
By 16/17 this bill is projected to be $1,078 in $12/13 terms.
The percentage change in the bills over 4 years (i.e. by 2016/17) is 3.1%.
The annual average change in percentage terms is 0.8% per annum.
The alignment of the water service charge in 13/14 to the common water service charge benefits these customers.

Projected annual bill ($12/13 terms)



Average water usage component over 13/14 to 16/17



2012 Price Review
Impact of proposed charges ($12/13 terms)

Customer type: Pensioner household

Charges: water, sewer,

Configuration: 140 kL p.a. / 20mm meter

Composition of the projected annual bill ($12/13 terms)

	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
Water service	19	17	17	17	17
Water usage	291	297	304	309	316
Sewer service	555	574	585	596	607
	-	-	-	-	-
Drainage	-	-	-	-	-
	-	-	-	-	-
Rebate	(258)	(264)	(269)	(274)	(280)
	-	-	-	-	-
Projected total bill	**607**	**623**	**636**	**648**	**660**
% change on the previous year		2.6%	2.1%	1.8%	1.9%
Water usage % of water charges	94%	95%	95%	95%	95%
Water usage % of total bill	48%	48%	48%	48%	48%

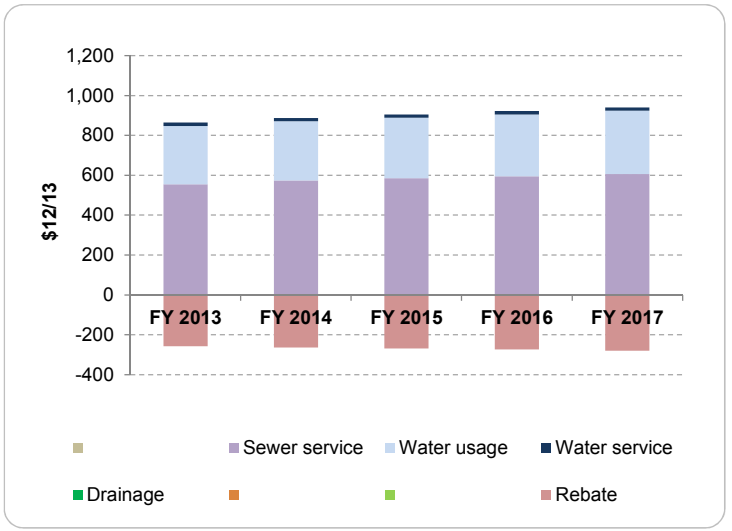
Changes over the 12/13 to 16/17 period ($12/13 terms)

	FY 2013 Bill	FY 2017 Bill	Difference	Av Ann Δ	Av Wkly Δ
Water service	19	17	(2)	(1)	(0.01)
Water usage	291	316	25	6	0.12
Sewer service	555	607	52	13	0.25
	-	-	-	-	-
Drainage	-	-	-	-	-
	-	-	-	-	-
Rebate	(258)	(280)	(22)	(6)	(0.11)
	-	-	-	-	-
Projected total bill	**607**	**660**	**53**	**13**	**0.25**

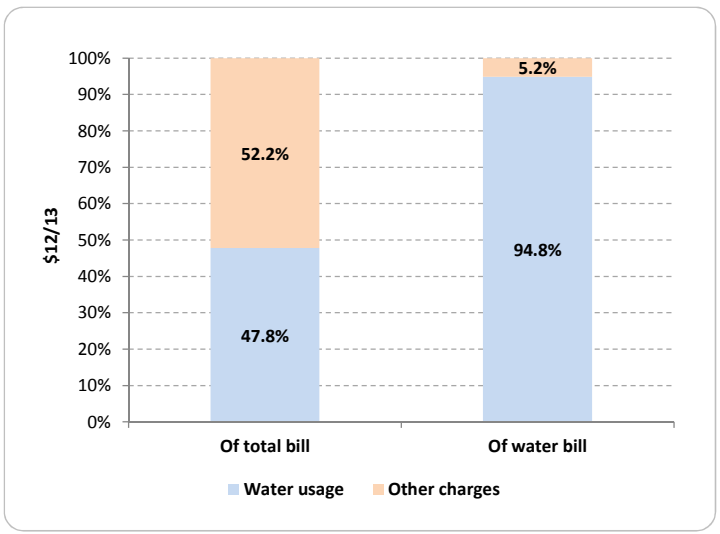
Notes

All prices shown are in $12/13 terms.
The typical bill for this customer category in 12/13 is $607.
By 16/17 this bill is projected to be $660 in $12/13 terms.
The percentage change in the bills over 4 years (i.e. by 2016/17) is 8.7%.
The annual average change in percentage terms is 2.2% per annum.
Proportional increase similar to the households.
The rebate increases in proportion to the bill.
Pensioners that pay drainage charges will see a smaller percentage increase over same period.

Projected annual bill ($12/13 terms)



Average water usage component over 13/14 to 16/17



2012 Price Review
Impact of proposed charges ($12/13 terms)

Customer type: Strata unit - excluding drainage

Charges: water, sewer, EIC

Configuration: 125 kL p.a. / 40mm meter shared by 12 units

Composition of the projected annual bill ($12/13 terms)

	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
Water service	6	17	17	17	17
Water usage	260	265	271	276	283
Sewer service	363	387	409	432	455
	-	-	-	-	-
Drainage	-	-	-	-	-
Environment improvement	36	36	36	36	36
	-	-	-	-	-
	-	-	-	-	-
Projected total bill	**665**	**705**	**733**	**761**	**790**
% change on the previous year		5.9%	4.0%	3.8%	3.9%
Water usage % of water charges	98%	94%	94%	94%	94%
Water usage % of total bill	39%	38%	37%	36%	36%

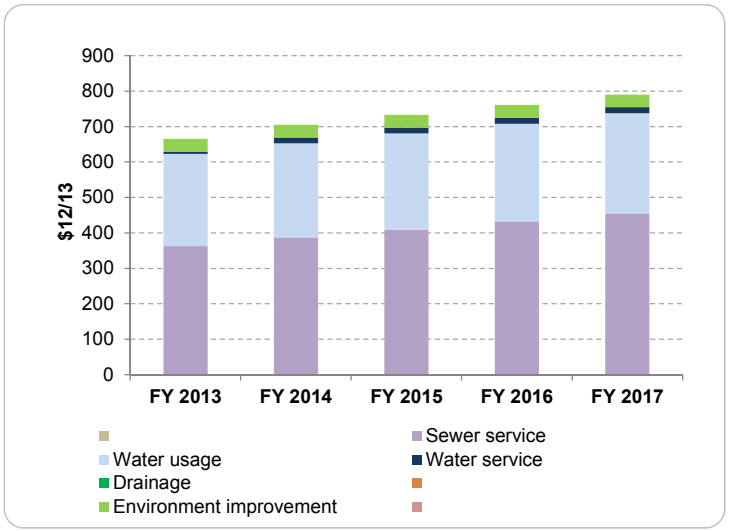
Changes over the 12/13 to 16/17 period ($12/13 terms)

	FY 2013 Bill	FY 2017 Bill	Difference	Av Ann Δ	Av Wkly Δ
Water service	6	17	10	3	0.05
Water usage	260	283	23	6	0.11
Sewer service	363	455	92	23	0.44
	-	-	-	-	-
Drainage	-	-	-	-	-
Environment improvement	36	36	-	-	-
	-	-	-	-	-
	-	-	-	-	-
Projected total bill	**665**	**790**	**125**	**31**	**0.60**

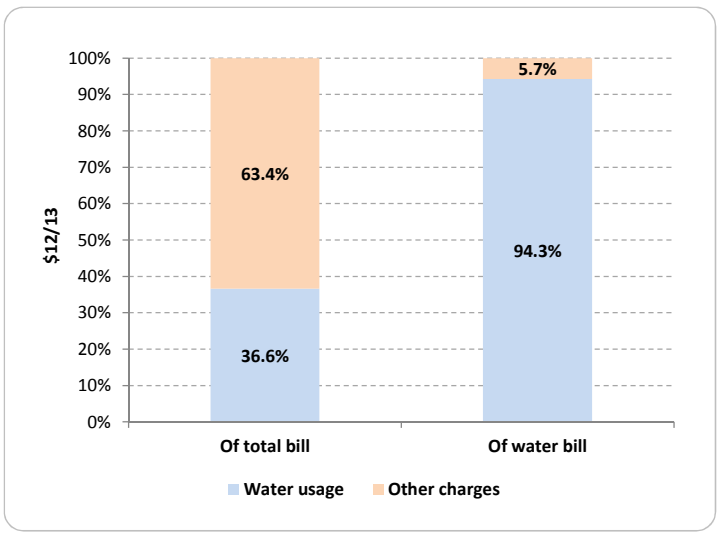
Notes

All prices shown are in $12/13 terms.
The typical bill for this customer category in 12/13 is $665.
By 16/17 this bill is projected to be $790 in $12/13 terms.
The percentage change in the bills over 4 years (i.e. by 2016/17) is 18.8%.
The annual average change in percentage terms is 4.7% per annum.
The increase is predominantly a function of IPART's required changes to the structure of service charges particularly sewer service.
HWC is proposing a phasing in of this change over the four years which keeps annual price increases in real terms under 5% per annum.

Projected annual bill ($12/13 terms)



Average water usage component over 13/14 to 16/17



2012 Price Review
Impact of proposed charges ($12/13 terms)

Customer type: Strata unit - including drainage

Charges: water, sewer, unit drainage, EIC

Configuration: 125 kL p.a. / 40mm meter shared by 12 units

Composition of the projected annual bill ($12/13 terms)

	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
Water service	6	17	17	17	17
Water usage	260	265	271	276	283
Sewer service	363	387	409	432	455
	-	-	-	-	-
Drainage	86	31	28	25	22
Environment improvement	36	36	36	36	36
	-	-	-	-	-
	-	-	-	-	-
Projected total bill	**752**	**736**	**761**	**786**	**812**
% change on the previous year		(2.1%)	3.4%	3.3%	3.4%
Water usage % of water charges	98%	94%	94%	94%	94%
Water usage % of total bill	35%	36%	36%	35%	35%

Changes over the 12/13 to 16/17 period ($12/13 terms)

	FY 2013 Bill	FY 2017 Bill	Difference	Av Ann Δ	Av Wkly Δ
Water service	6	17	10	3	0.05
Water usage	260	283	23	6	0.11
Sewer service	363	455	92	23	0.44
	-	-	-	-	-
Drainage	86	22	(64)	(16)	(0.31)
Environment improvement	36	36	-	-	-
	-	-	-	-	-
	-	-	-	-	-
Projected total bill	**752**	**812**	**61**	**15**	**0.29**

Notes

All prices shown are in $12/13 terms.

The typical bill for this customer category in 12/13 is $752.

By 16/17 this bill is projected to be $812 in $12/13 terms.

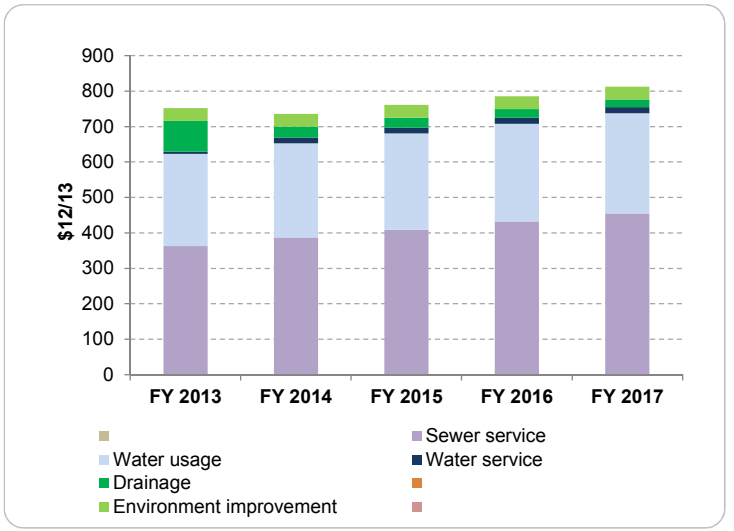
The percentage change in the bills over 4 years (i.e. by 2016/17) is 8.1%.

The annual average change in percentage terms is 2.0% per annum.

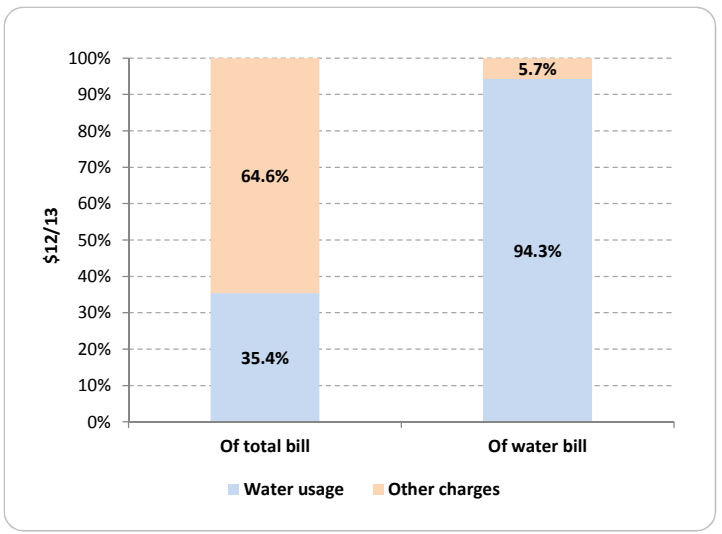
These customers will have an significant reduction in drainage charges in the first year which will offset the increase in sewer service charge.

Strata units with drainage charges are not as adversely impacted by the IPART changes as other strata units.

Projected annual bill ($12/13 terms)



Average water usage component over 13/14 to 16/17



2012 Price Review
Impact of proposed charges ($12/13 terms)

Customer type: Service station

Charges: water, sewer, small non-res. drainage, minor trade waste

Configuration: 237 kL p.a. / 20mm meter / discharge factor 76% -100%

Composition of the projected annual bill ($12/13 terms)

	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
Water service	19	17	17	17	17
Water usage	493	502	514	524	536
Sewer service	944	574	585	596	607
Sewer usage	135	131	129	125	123
Drainage	86	84	75	67	60
	-	-	-	-	-
	-	-	-	-	-
Trade waste	121	104	104	104	104
Projected total bill	**1,799**	**1,412**	**1,424**	**1,433**	**1,447**
% change on the previous year		(21.5%)	0.9%	0.6%	1.0%
Water usage % of water charges	96%	97%	97%	97%	97%
Water usage % of total bill	27%	36%	36%	37%	37%

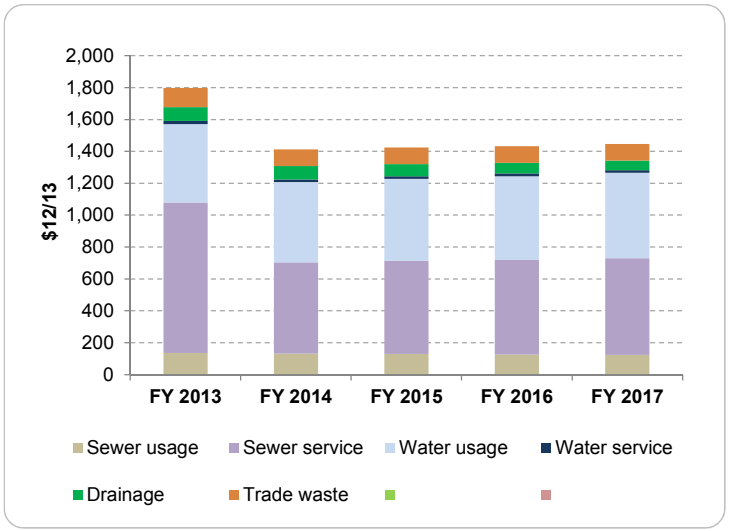
Changes over the 12/13 to 16/17 period ($12/13 terms)

	FY 2013 Bill	FY 2017 Bill	Difference	Av Ann Δ	Av Wkly Δ
Water service	19	17	(2)	(1)	(0.01)
Water usage	493	536	43	11	0.21
Sewer service	944	607	(337)	(84)	(1.62)
Sewer usage	135	123	(12)	(3)	(0.06)
Drainage	86	60	(26)	(7)	(0.13)
	-	-	-	-	-
	-	-	-	-	-
Trade waste	121	104	(17)	(4)	(0.08)
Projected total bill	**1,799**	**1,447**	**(352)**	**(88)**	**(1.69)**

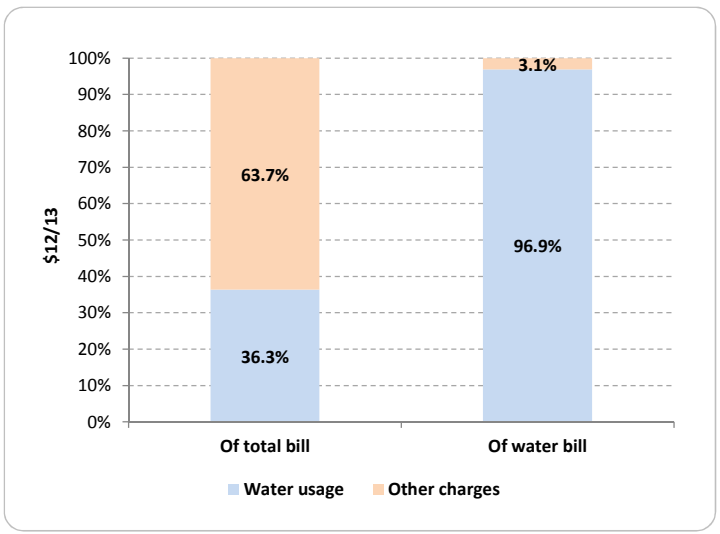
Notes

All prices shown are in $12/13 terms.
The typical bill for this customer category in 12/13 is $1,799.
By 16/17 this bill is projected to be $1,447 in $12/13 terms.
The percentage change in the bills over 4 years (i.e. by 2016/17) is -19.5%.
The annual average change in percentage terms is -4.9% per annum.
IPART's required pricing structures requires small non-res customers (20 mm stand alone) to pay the same service charge as houses.
This customer is a small non-res customer and benefits from the IPART's revised tariff structure for small non-residential customers.
Sewer usage charge = water consumption x non-residential sewer usage charge x discharge factor.
From 13/14 sewer service charge = 20 mm stand alone (residential service charge).

Projected annual bill ($12/13 terms)



Average water usage component over 13/14 to 16/17



2012 Price Review
Impact of proposed charges ($12/13 terms)

Customer type: Small shop - Newcastle

Charges: water, sewer

Configuration: 151 kL p.a. / 20mm meter / discharge factor 76% -100%

Composition of the projected annual bill ($12/13 terms)

	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
Water service	19	17	17	17	17
Water usage	314	320	328	334	341
Sewer service	944	574	585	596	607
Sewer usage	86	83	82	80	78
Drainage	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-
Trade waste	-	-	-	-	-
Projected total bill	**1,363**	**994**	**1,011**	**1,026**	**1,043**
% change on the previous year		(27.1%)	1.7%	1.4%	1.7%
Water usage % of water charges	94%	95%	95%	95%	95%
Water usage % of total bill	23%	32%	32%	33%	33%

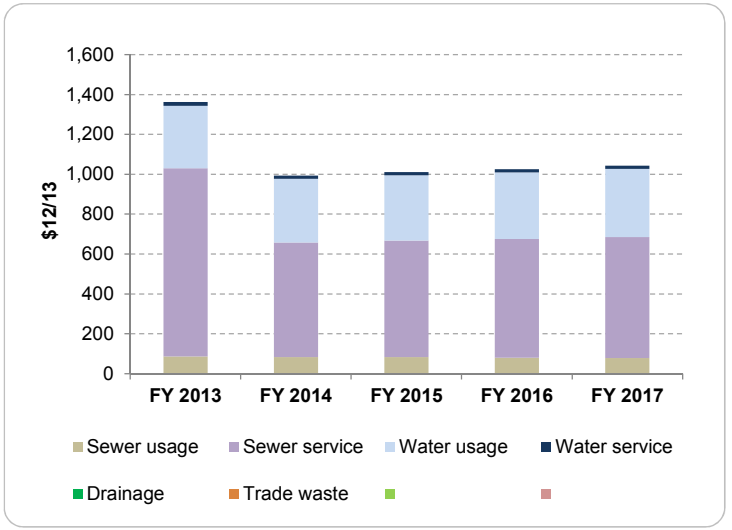
Changes over the 12/13 to 16/17 period ($12/13 terms)

	FY 2013 Bill	FY 2017 Bill	Difference	Av Ann Δ	Av Wkly Δ
Water service	19	17	(2)	(1)	(0.01)
Water usage	314	341	27	7	0.13
Sewer service	944	607	(337)	(84)	(1.62)
Sewer usage	86	78	(8)	(2)	(0.04)
Drainage	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-
Trade waste	-	-	-	-	-
Projected total bill	**1,363**	**1,043**	**(320)**	**(80)**	**(1.54)**

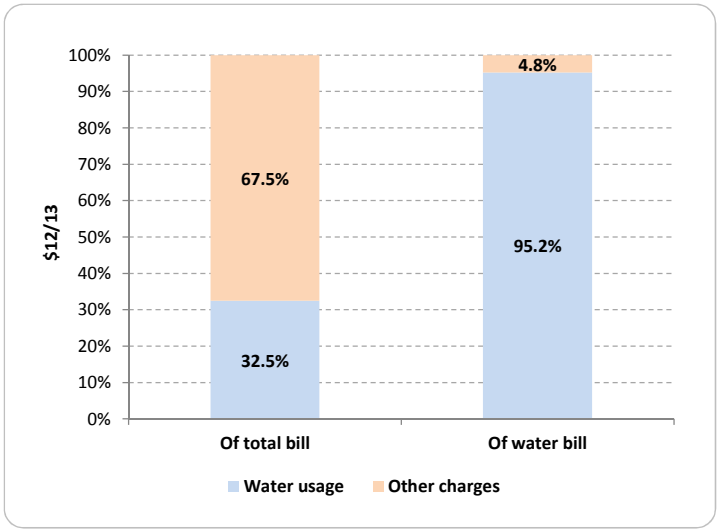
Notes

All prices shown are in $12/13 terms.
The typical bill for this customer category in 12/13 is $1,363.
By 16/17 this bill is projected to be $1,043 in $12/13 terms.
The percentage change in the bills over 4 years (i.e. by 2016/17) is -23.4%.
The annual average change in percentage terms is -5.9% per annum.
IPART's required pricing structures requires small non-res customers (20 mm stand alone) to pay the same service charge as houses.
This customer is a small non-res customer and benefits from the IPART's revised tariff structure for small non-residential customers.
Sewer usage charge = water consumption x non-residential sewer usage charge x discharge factor.
From 13/14 sewer service charge = 20 mm stand alone (residential service charge).

Projected annual bill ($12/13 terms)



Average water usage component over 13/14 to 16/17



2012 Price Review
Impact of proposed charges ($12/13 terms)

Customer type: Small shop - Cessnock

Charges: water, sewer, small non-res. drainage

Configuration: 69 kL p.a. / 25mm meter / discharge factor 76% -100%

Composition of the projected annual bill ($12/13 terms)

	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
Water service	30	29	29	29	29
Water usage	144	146	150	152	156
Sewer service	1,475	1,508	1,558	1,622	1,676
Sewer usage	39	38	38	36	36
Drainage	86	84	75	67	60
	-	-	-	-	-
	-	-	-	-	-
Trade waste	-	-	-	-	-
Projected total bill	**1,774**	**1,804**	**1,849**	**1,906**	**1,956**
% change on the previous year		1.7%	2.5%	3.1%	2.6%
Water usage % of water charges	83%	84%	84%	84%	85%
Water usage % of total bill	8%	8%	8%	8%	8%

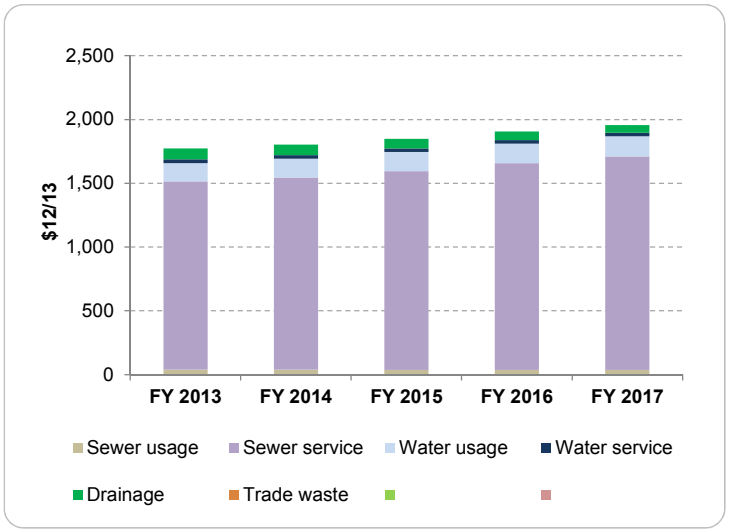
Changes over the 12/13 to 16/17 period ($12/13 terms)

	FY 2013 Bill	FY 2017 Bill	Difference	Av Ann Δ	Av Wkly Δ
Water service	30	29	(1)	(0)	(0.00)
Water usage	144	156	12	3	0.06
Sewer service	1,475	1,676	201	50	0.97
Sewer usage	39	36	(4)	(1)	(0.02)
Drainage	86	60	(26)	(7)	(0.13)
	-	-	-	-	-
	-	-	-	-	-
Trade waste	-	-	-	-	-
Projected total bill	**1,774**	**1,956**	**183**	**46**	**0.88**

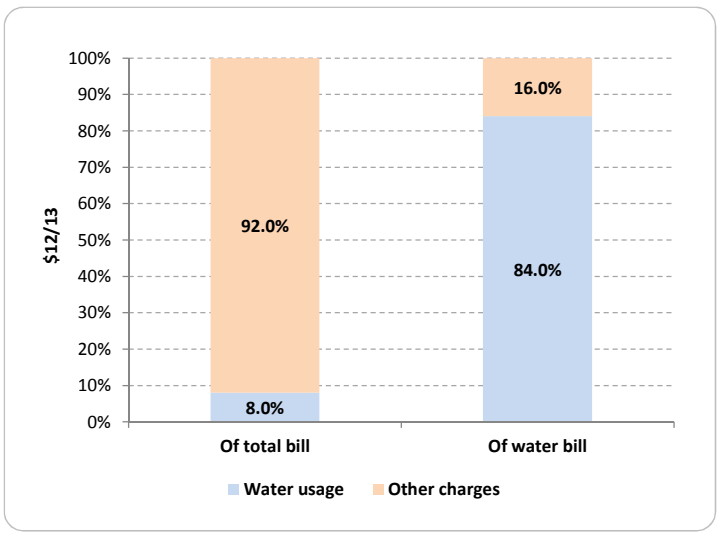
Notes

All prices shown are in $12/13 terms.
The typical bill for this customer category in 12/13 is $1,774.
By 16/17 this bill is projected to be $1,956 in $12/13 terms.
The percentage change in the bills over 4 years (i.e. by 2016/17) is 10.3%.
The annual average change in percentage terms is 2.6% per annum.
With a 25mm meter this customer is not classified as a "small non-residential" customer.
They therefore do not benefit from IPART's revised tariff structure and are not eligible for a minimum sewer service charge.
Sewer usage charge = water consumption x non-residential sewer usage charge x discharge factor.
Sewer service charge = number of meter equivalents x ME unit charge x discharge factor.

Projected annual bill ($12/13 terms)



Average water usage component over 13/14 to 16/17



2012 Price Review
Impact of proposed charges ($12/13 terms)

Customer type: Large licenced club

Charges: water, sewer, medium non-res. drainage, major trade waste

Configuration: 16,988 kL p.a. / 80mm meter / discharge factor 80%

Composition of the projected annual bill ($12/13 terms)

	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
Water service	303	294	295	295	293
Water usage	35,335	36,015	36,864	37,543	38,393
Sewer service	14,214	14,554	15,041	15,654	16,176
Sewer usage	9,106	8,834	8,698	8,426	8,290
Drainage	156	151	135	122	109
	-	-	-	-	-
	-	-	-	-	-
Trade waste	9,359	9,268	9,268	9,268	9,268
Projected total bill	**68,472**	**69,116**	**70,302**	**71,308**	**72,530**
% change on the previous year		0.9%	1.7%	1.4%	1.7%
Water usage % of water charges	99%	99%	99%	99%	99%
Water usage % of total bill	52%	52%	52%	53%	53%

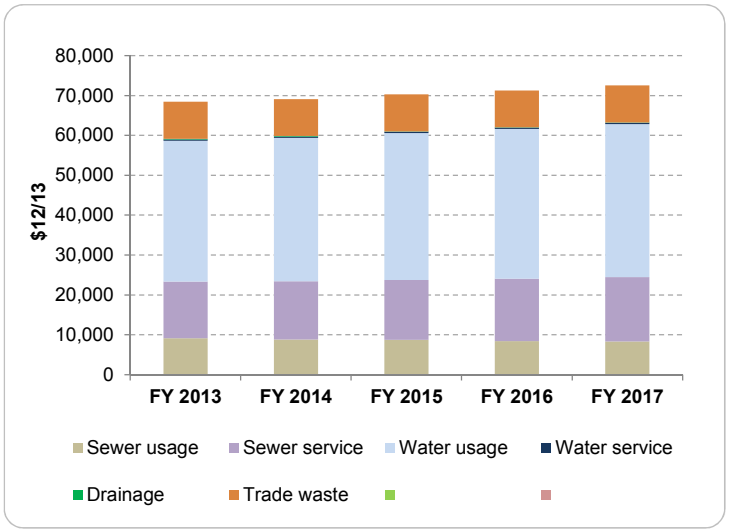
Changes over the 12/13 to 16/17 period ($12/13 terms)

	FY 2013 Bill	FY 2017 Bill	Difference	Av Ann Δ	Av Wkly Δ
Water service	303	293	(10)	(2)	(0.05)
Water usage	35,335	38,393	3,058	764	14.70
Sewer service	14,214	16,176	1,962	491	9.43
Sewer usage	9,106	8,290	(815)	(204)	(3.92)
Drainage	156	109	(47)	(12)	(0.23)
	-	-	-	-	-
	-	-	-	-	-
Trade waste	9,359	9,268	(90)	(23)	(0.43)
Projected total bill	**68,472**	**72,530**	**4,058**	**1,014**	**19.51**

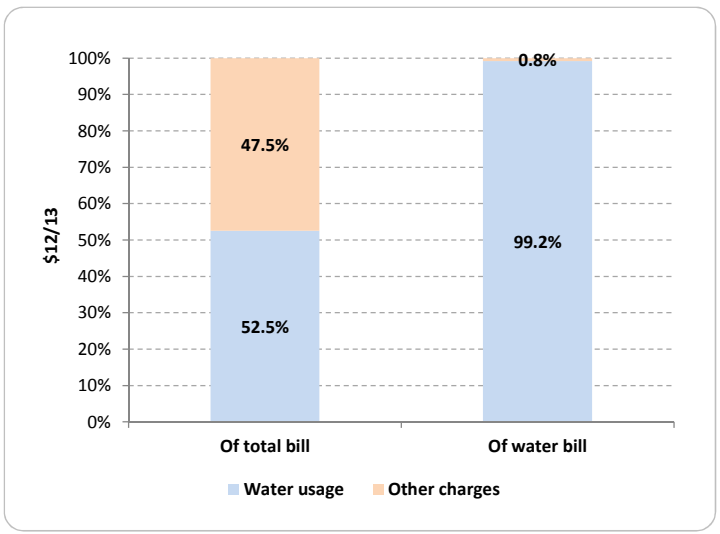
Notes

All prices shown are in $12/13 terms.
The typical bill for this customer category in 12/13 is $68,472.
By 16/17 this bill is projected to be $72,530 in $12/13 terms.
The percentage change in the bills over 4 years (i.e. by 2016/17) is 5.9%.
The annual average change in percentage terms is 1.5% per annum.
Tariff structures are essential the same as the current structures.
Price increases in percentage terms similar to a household and reflect HWC's increasing costs.
Sewer usage charge = water consumption x non-residential sewer usage charge x discharge factor.
Sewer service charge = number of meter equivalents x ME unit charge x discharge factor.

Projected annual bill ($12/13 terms)



Average water usage component over 13/14 to 16/17



2012 Price Review
Impact of proposed charges ($12/13 terms)

Customer type: Medium licenced hotel

Charges: water, sewer, medium non-res. drainage, minor trade waste

Configuration: 1,914 kL p.a. / 32mm meter / discharge factor 76% -100%

Composition of the projected annual bill ($12/13 terms)

	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
Water service	48	47	47	47	47
Water usage	3,981	4,058	4,153	4,230	4,326
Sewer service	2,416	2,474	2,557	2,661	2,750
Sewer usage	1,090	1,057	1,041	1,009	992
Drainage	156	151	135	122	109
	-	-	-	-	-
	-	-	-	-	-
Trade waste	121	104	104	104	104
Projected total bill	**7,814**	**7,892**	**8,039**	**8,173**	**8,328**
% change on the previous year		1.0%	1.9%	1.7%	1.9%
Water usage % of water charges	99%	99%	99%	99%	99%
Water usage % of total bill	51%	51%	52%	52%	52%

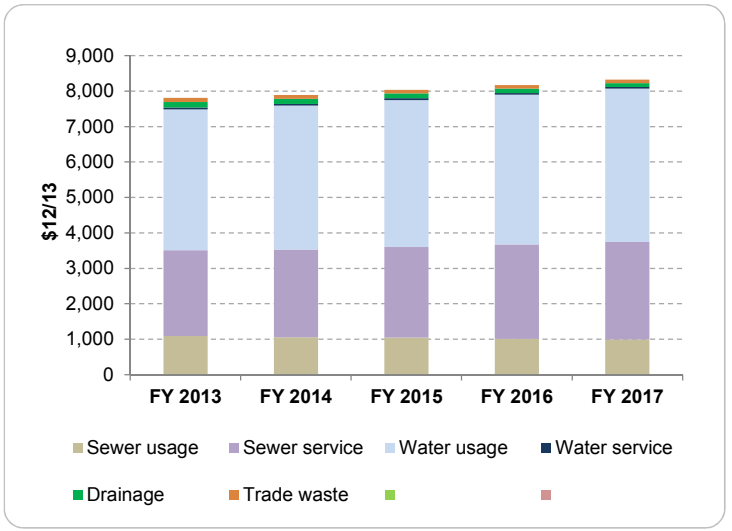
Changes over the 12/13 to 16/17 period ($12/13 terms)

	FY 2013 Bill	FY 2017 Bill	Difference	Av Ann Δ	Av Wkly Δ
Water service	48	47	(2)	(0)	(0.01)
Water usage	3,981	4,326	345	86	1.66
Sewer service	2,416	2,750	334	83	1.60
Sewer usage	1,090	992	(98)	(24)	(0.47)
Drainage	156	109	(47)	(12)	(0.23)
	-	-	-	-	-
	-	-	-	-	-
Trade waste	121	104	(17)	(4)	(0.08)
Projected total bill	**7,814**	**8,328**	**515**	**129**	**2.47**

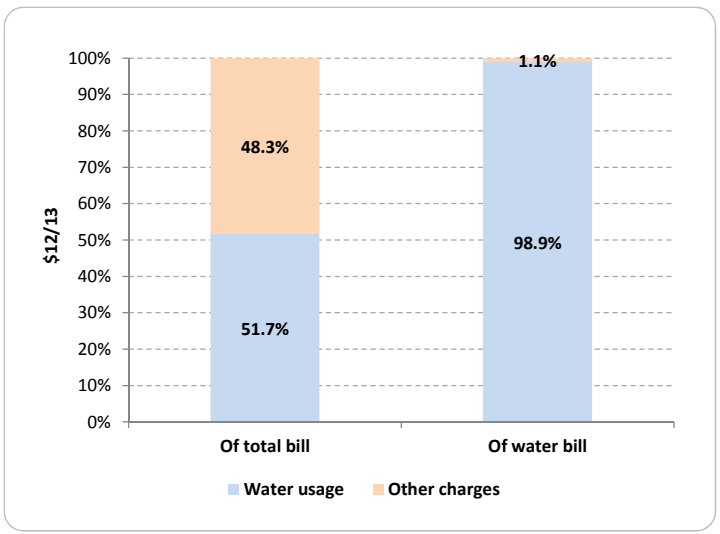
Notes

All prices shown are in $12/13 terms.
The typical bill for this customer category in 12/13 is $7,814.
By 16/17 this bill is projected to be $8,328 in $12/13 terms.
The percentage change in the bills over 4 years (i.e. by 2016/17) is 6.6%.
The annual average change in percentage terms is 1.6% per annum.
Tariff structures are essential the same as the current structures.
Price increases in percentage terms similar to a household and reflect HWC's increasing costs.
Sewer usage charge = water consumption x non-residential sewer usage charge x discharge factor.
Sewer service charge = number of meter equivalents x ME unit charge x discharge factor.

Projected annual bill ($12/13 terms)



Average water usage component over 13/14 to 16/17



2012 Price Review
Impact of proposed charges ($12/13 terms)

Customer type: Regional shopping centre

Charges: water, sewer, very large non-res. drainage, major trade waste

Configuration: 21,686 kL p.a. / Multiple meters / discharge factor 76% -100%

Composition of the projected annual bill ($12/13 terms)

	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
Water service	378	368	368	369	366
Water usage	45,107	45,974	47,059	47,926	49,010
Sewer service	18,878	19,330	19,977	20,790	21,484
Sewer usage	12,350	11,982	11,797	11,429	11,244
Drainage	3,157	3,053	2,738	2,455	2,203
	-	-	-	-	-
	-	-	-	-	-
Trade waste	21,099	20,956	20,956	20,956	20,956
Projected total bill	**100,970**	**101,662**	**102,895**	**103,925**	**105,264**
% change on the previous year		0.7%	1.2%	1.0%	1.3%
Water usage % of water charges	99%	99%	99%	99%	99%
Water usage % of total bill	45%	45%	46%	46%	47%

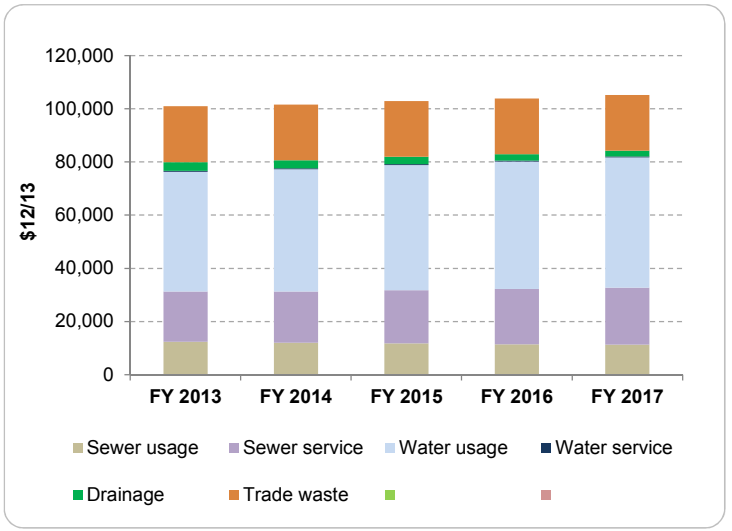
Changes over the 12/13 to 16/17 period ($12/13 terms)

	FY 2013 Bill	FY 2017 Bill	Difference	Av Ann Δ	Av Wkly Δ
Water service	378	366	(12)	(3)	(0.06)
Water usage	45,107	49,010	3,903	976	18.77
Sewer service	18,878	21,484	2,606	651	12.53
Sewer usage	12,350	11,244	(1,106)	(276)	(5.32)
Drainage	3,157	2,203	(953)	(238)	(4.58)
	-	-	-	-	-
	-	-	-	-	-
Trade waste	21,099	20,956	(144)	(36)	(0.69)
Projected total bill	**100,970**	**105,264**	**4,294**	**1,074**	**20.65**

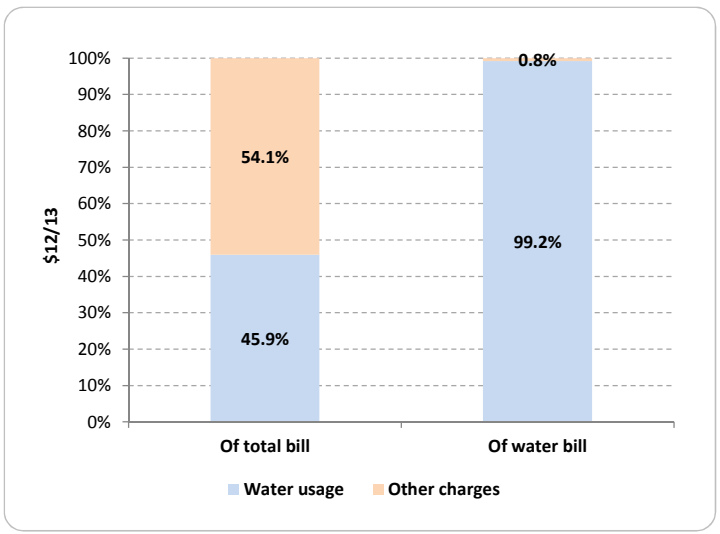
Notes

All prices shown are in $12/13 terms.
The typical bill for this customer category in 12/13 is $100,970.
By 16/17 this bill is projected to be $105,264 in $12/13 terms.
The percentage change in the bills over 4 years (i.e. by 2016/17) is 4.3%.
The annual average change in percentage terms is 1.1% per annum.
Tariff structures are essential the same as the current structures.
This customer occupies a large area and benefits slightly from reductions in drainage charges, i.e. the overall bill does not increase at the same rate as other non-res customers.
Sewer usage charge = water consumption x non-residential sewer usage charge x discharge factor.
Sewer service charge = number of meter equivalents x ME unit charge x discharge factor.

Projected annual bill ($12/13 terms)



Average water usage component over 13/14 to 16/17



2012 Price Review
Impact of proposed charges ($12/13 terms)

Customer type: Large office - Newcastle

Charges: water, sewer, minor trade waste

Configuration: 4,824 kL p.a. / Multiple meters / discharge factor 76% -100%

Composition of the projected annual bill ($12/13 terms)

	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
Water service	114	110	110	111	110
Water usage	10,034	10,227	10,468	10,661	10,902
Sewer service	5,663	5,799	5,993	6,237	6,445
Sewer usage	2,747	2,665	2,624	2,542	2,501
Drainage	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-
Trade waste	121	104	104	104	104
Projected total bill	**18,679**	**18,906**	**19,300**	**19,655**	**20,063**
% change on the previous year		1.2%	2.1%	1.8%	2.1%
Water usage % of water charges	99%	99%	99%	99%	99%
Water usage % of total bill	54%	54%	54%	54%	54%

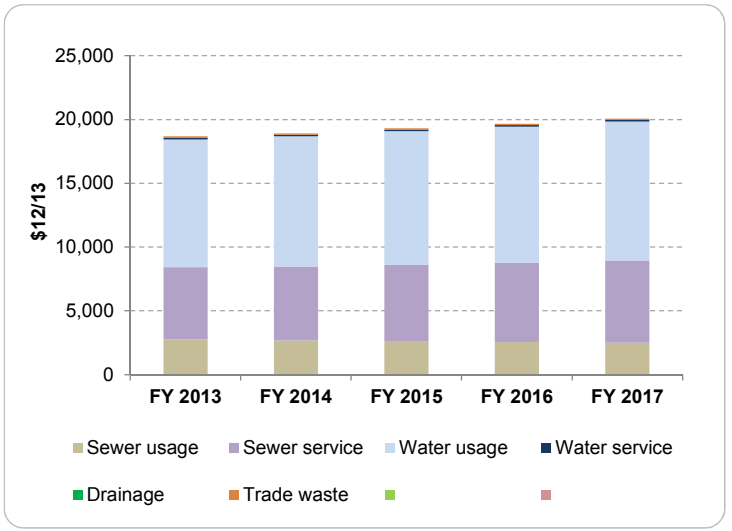
Changes over the 12/13 to 16/17 period ($12/13 terms)

	FY 2013 Bill	FY 2017 Bill	Difference	Av Ann Δ	Av Wkly Δ
Water service	114	110	(4)	(1)	(0.02)
Water usage	10,034	10,902	868	217	4.17
Sewer service	5,663	6,445	782	195	3.76
Sewer usage	2,747	2,501	(246)	(62)	(1.18)
Drainage	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-
Trade waste	121	104	(17)	(4)	(0.08)
Projected total bill	**18,679**	**20,063**	**1,383**	**346**	**6.65**

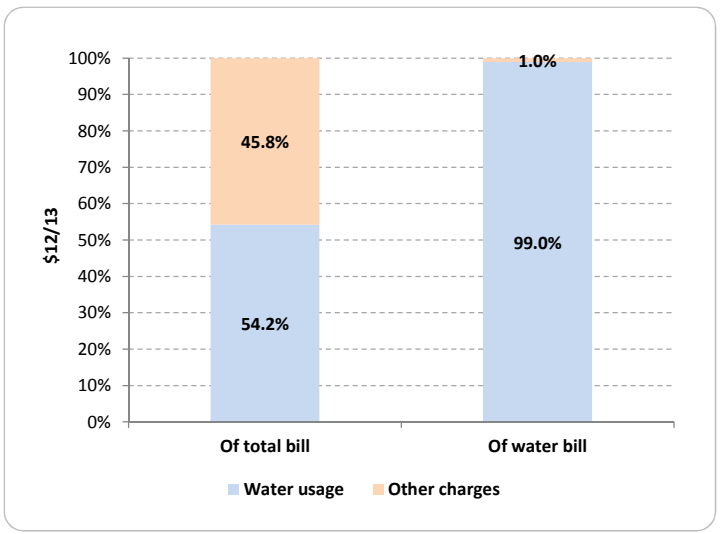
Notes

All prices shown are in $12/13 terms.
The typical bill for this customer category in 12/13 is $18,679.
By 16/17 this bill is projected to be $20,063 in $12/13 terms.
The percentage change in the bills over 4 years (i.e. by 2016/17) is 7.4%.
The annual average change in percentage terms is 1.9% per annum.
Tariff structures are essential the same as the current structures.
Price increases in percentage terms similar to a household and reflect HWC's increasing costs.
Sewer usage charge = water consumption x non-residential sewer usage charge x discharge factor.
Sewer service charge = number of meter equivalents x ME unit charge x discharge factor.

Projected annual bill ($12/13 terms)



Average water usage component over 13/14 to 16/17



2012 Price Review
Impact of proposed charges ($12/13 terms)

Customer type: Regional office - Maitland

Charges: water, sewer

Configuration: 1,155 kL p.a. / Multiple meters / discharge factor 76% -100%

Composition of the projected annual bill ($12/13 terms)

	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
Water service	67	65	66	66	65
Water usage	2,402	2,449	2,506	2,553	2,610
Sewer service	3,360	3,441	3,556	3,701	3,824
Sewer usage	658	638	628	609	599
Drainage	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-
Trade waste	-	-	-	-	-
Projected total bill	**6,488**	**6,593**	**6,756**	**6,928**	**7,098**
% change on the previous year		1.6%	2.5%	2.5%	2.5%
Water usage % of water charges	97%	97%	97%	97%	98%
Water usage % of total bill	37%	37%	37%	37%	37%

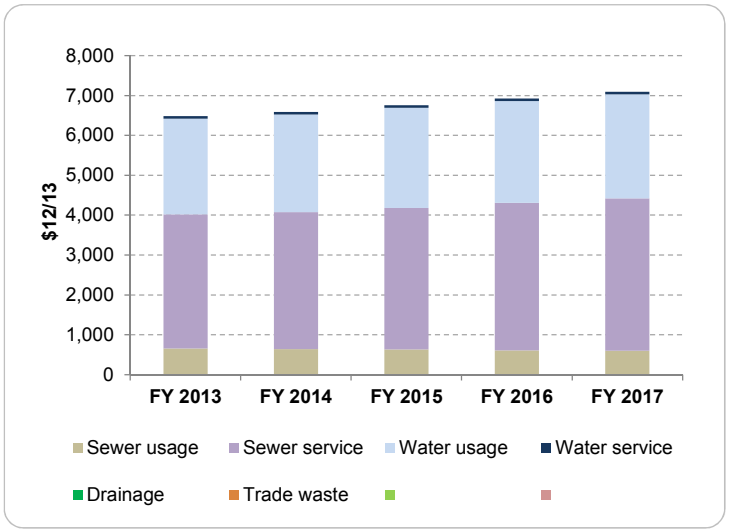
Changes over the 12/13 to 16/17 period ($12/13 terms)

	FY 2013 Bill	FY 2017 Bill	Difference	Av Ann Δ	Av Wkly Δ
Water service	67	65	(2)	(1)	(0.01)
Water usage	2,402	2,610	208	52	1.00
Sewer service	3,360	3,824	464	116	2.23
Sewer usage	658	599	(59)	(15)	(0.28)
Drainage	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-
Trade waste	-	-	-	-	-
Projected total bill	**6,488**	**7,098**	**611**	**153**	**2.94**

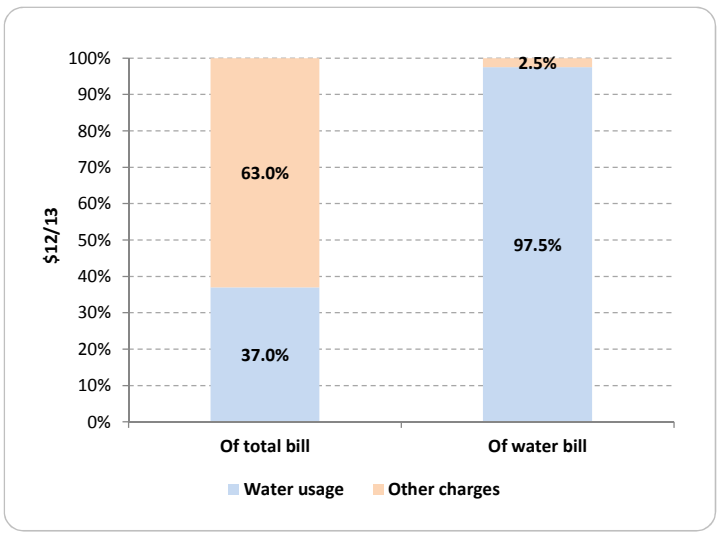
Notes

All prices shown are in $12/13 terms.
The typical bill for this customer category in 12/13 is $6,488.
By 16/17 this bill is projected to be $7,098 in $12/13 terms.
The percentage change in the bills over 4 years (i.e. by 2016/17) is 9.4%.
The annual average change in percentage terms is 2.4% per annum.
Tariff structures are essential the same as the current structures.
However this customer is not a drainage customer and does not benefit from the reductions in drainage charges.
This results in the overall bill increasing more than other non-residential customers.
Sewer usage charge = water consumption x non-residential sewer usage charge x discharge factor.
Sewer service charge = number of meter equivalents x ME unit charge x discharge factor.

Projected annual bill ($12/13 terms)



Average water usage component over 13/14 to 16/17



2012 Price Review
Impact of proposed charges ($12/13 terms)

Customer type: Small industrial firm

Charges: water, sewer, small non-res. drainage, minor trade waste

Configuration: 48 kL p.a. / 20mm meter / discharge factor 76% -100%

Composition of the projected annual bill ($12/13 terms)

	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
Water service	19	17	17	17	17
Water usage	100	102	104	106	108
Sewer service	944	574	585	596	607
Sewer usage	27	27	26	25	25
Drainage	86	84	75	67	60
	-	-	-	-	-
	-	-	-	-	-
Trade waste	121	104	104	104	104
Projected total bill	**1,298**	**907**	**911**	**915**	**922**
% change on the previous year		(30.1%)	0.5%	0.5%	0.7%
Water usage % of water charges	84%	86%	86%	86%	87%
Water usage % of total bill	8%	11%	11%	12%	12%

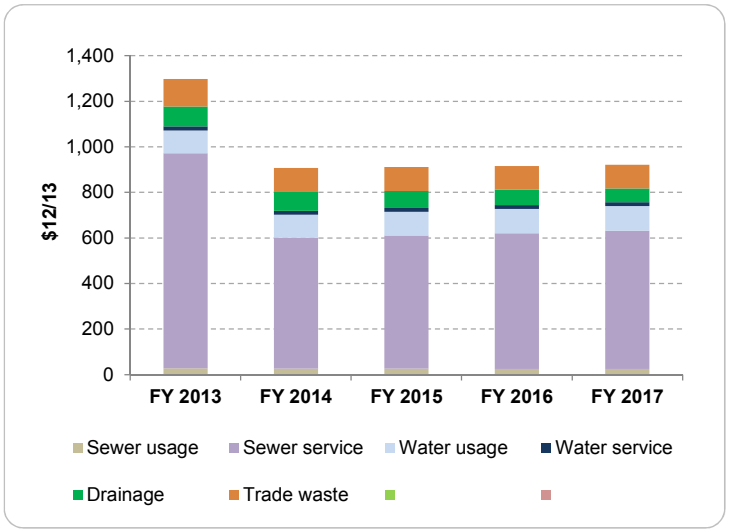
Changes over the 12/13 to 16/17 period ($12/13 terms)

	FY 2013 Bill	FY 2017 Bill	Difference	Av Ann Δ	Av Wkly Δ
Water service	19	17	(2)	(1)	(0.01)
Water usage	100	108	9	2	0.04
Sewer service	944	607	(337)	(84)	(1.62)
Sewer usage	27	25	(2)	(1)	(0.01)
Drainage	86	60	(26)	(7)	(0.13)
	-	-	-	-	-
	-	-	-	-	-
Trade waste	121	104	(17)	(4)	(0.08)
Projected total bill	**1,298**	**922**	**(376)**	**(94)**	**(1.81)**

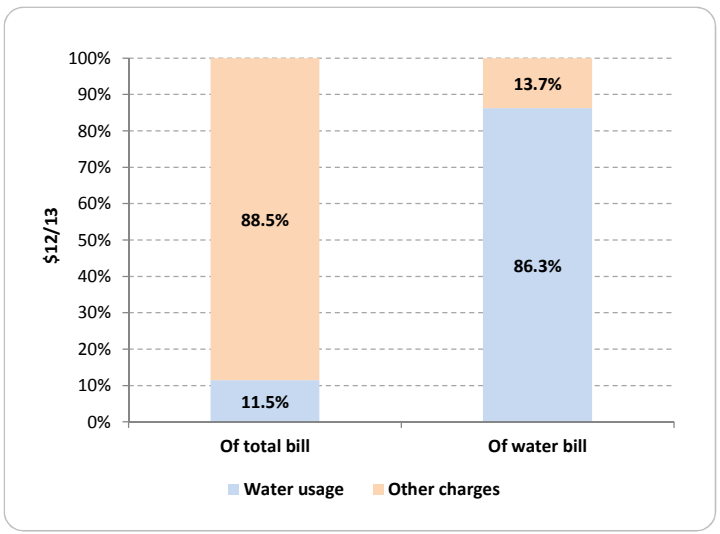
Notes

All prices shown are in $12/13 terms.
The typical bill for this customer category in 12/13 is $1,298.
By 16/17 this bill is projected to be $922 in $12/13 terms.
The percentage change in the bills over 4 years (i.e. by 2016/17) is -29.0%.
The annual average change in percentage terms is -7.2% per annum.
IPART's required pricing structures requires small non-res customers (20 mm stand alone) to pay the same service charge as houses.
This customer is a small non-res customer and benefits from the IPART's revised tariff structure for small non-residential customers.
Sewer usage charge = water consumption x non-residential sewer usage charge x discharge factor.
From 13/14 sewer service charge = 20 mm stand alone (residential service charge).

Projected annual bill ($12/13 terms)



Average water usage component over 13/14 to 16/17



2012 Price Review
Impact of proposed charges ($12/13 terms)

Customer type: Medium industrial firm

Charges: water, sewer, major trade waste

Configuration: 75,105 kL p.a. / Multiple meters / discharge factor 60%

Composition of the projected annual bill ($12/13 terms)

	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
Water service	521	507	507	508	505
Water usage	145,704	149,075	152,722	155,258	159,106
Sewer service	18,364	18,802	19,432	20,223	20,897
Sewer usage	30,192	29,291	28,840	27,939	27,488
Drainage	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-
Trade waste	2,799	2,656	2,656	2,656	2,656
Projected total bill	**197,581**	**200,331**	**204,157**	**206,584**	**210,653**
% change on the previous year		1.4%	1.9%	1.2%	2.0%
Water usage % of water charges	100%	100%	100%	100%	100%
Water usage % of total bill	74%	74%	75%	75%	76%

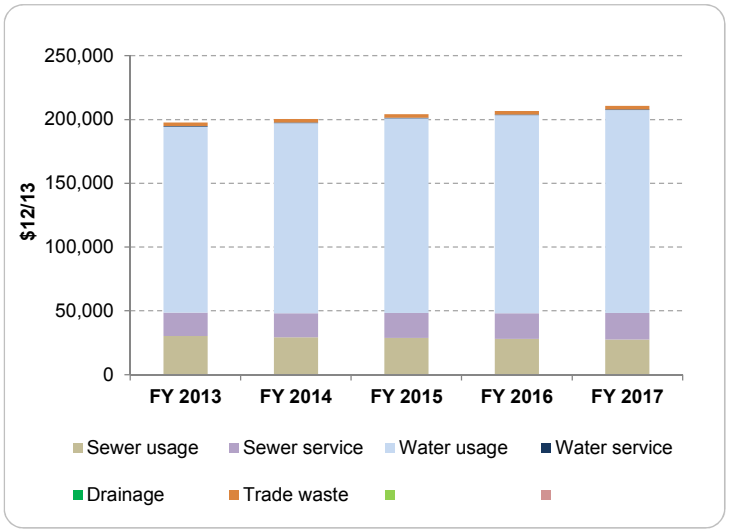
Changes over the 12/13 to 16/17 period ($12/13 terms)

	FY 2013 Bill	FY 2017 Bill	Difference	Av Ann Δ	Av Wkly Δ
Water service	521	505	(17)	(4)	(0.08)
Water usage	145,704	159,106	13,403	3,351	64.44
Sewer service	18,364	20,897	2,533	633	12.18
Sewer usage	30,192	27,488	(2,704)	(676)	(13.00)
Drainage	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-
Trade waste	2,799	2,656	(144)	(36)	(0.69)
Projected total bill	**197,581**	**210,653**	**13,072**	**3,268**	**62.85**

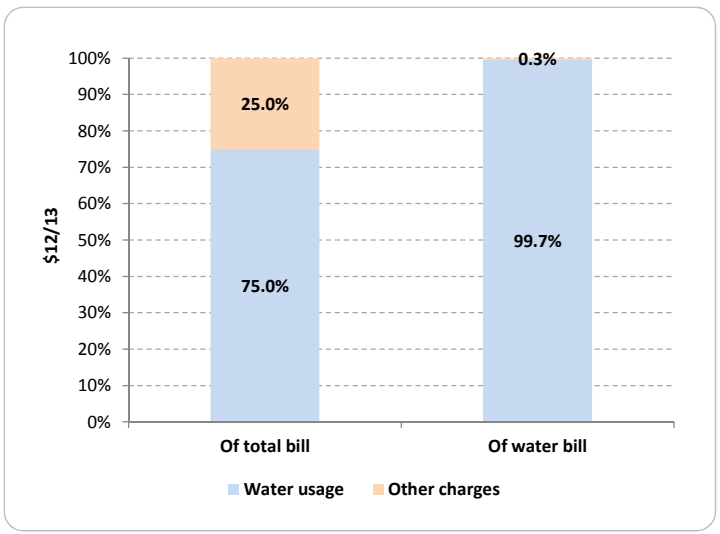
Notes

All prices shown are in $12/13 terms.
The typical bill for this customer category in 12/13 is $197,581.
By 16/17 this bill is projected to be $210,653 in $12/13 terms.
The percentage change in the bills over 4 years (i.e. by 2016/17) is 6.6%.
The annual average change in percentage terms is 1.7% per annum.
Tariff structures are essential the same as the current structures.
Price increases in percentage terms similar to a household and reflect HWC's increasing costs.
Sewer usage charge = water consumption x non-residential sewer usage charge x discharge factor.
Sewer service charge = number of meter equivalents x ME unit charge x discharge factor.

Projected annual bill ($12/13 terms)



Average water usage component over 13/14 to 16/17



2012 Price Review
Impact of proposed charges ($12/13 terms)

Customer type: Large industrial firm no sewer

Charges: water, large non-res. drainage, major trade waste

Configuration: 160,712 kL p.a. / Multiple meters

Composition of the projected annual bill ($12/13 terms)

	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
Water service	776	754	755	756	751
Water usage	311,781	318,996	326,799	332,225	340,461
Sewer service	-	-	-	-	-
Sewer usage	-	-	-	-	-
Drainage	994	961	862	773	694
	-	-	-	-	-
	-	-	-	-	-
Trade waste	29,999	29,856	29,856	29,856	29,856
Projected total bill	**343,550**	**350,567**	**358,271**	**363,611**	**371,761**
% change on the previous year		2.0%	2.2%	1.5%	2.2%
Water usage % of water charges	100%	100%	100%	100%	100%
Water usage % of total bill	91%	91%	91%	91%	92%

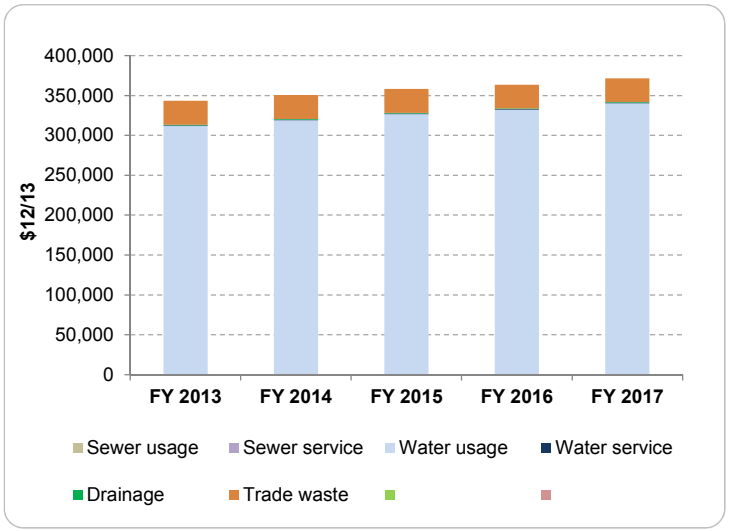
Changes over the 12/13 to 16/17 period ($12/13 terms)

	FY 2013 Bill	FY 2017 Bill	Difference	Av Ann Δ	Av Wkly Δ
Water service	776	751	(25)	(6)	(0.12)
Water usage	311,781	340,461	28,680	7,170	137.88
Sewer service	-	-	-	-	-
Sewer usage	-	-	-	-	-
Drainage	994	694	(300)	(75)	(1.44)
	-	-	-	-	-
	-	-	-	-	-
Trade waste	29,999	29,856	(144)	(36)	(0.69)
Projected total bill	**343,550**	**371,761**	**28,211**	**7,053**	**135.63**

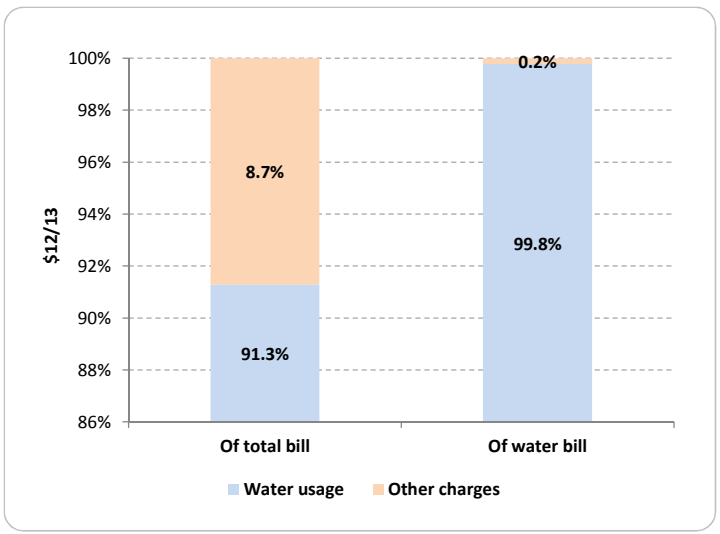
Notes

All prices shown are in $12/13 terms.
The typical bill for this customer category in 12/13 is $343,550.
By 16/17 this bill is projected to be $371,761 in $12/13 terms.
The percentage change in the bills over 4 years (i.e. by 2016/17) is 8.2%.
The annual average change in percentage terms is 2.1% per annum.
As a large water the bill is dominated by the increase in the water usage charge.
Sewer usage charge = water consumption x non-residential sewer usage charge x discharge factor.
Sewer service charge = number of meter equivalents x ME unit charge x discharge factor.

Projected annual bill ($12/13 terms)



Average water usage component over 13/14 to 16/17



2012 Price Review
Impact of proposed charges ($12/13 terms)

Customer type: Large industrial firm with sewer

Charges: water, sewer, large non-res. drainage, major trade waste

Configuration: 160,712 kL p.a. / Multiple meters / discharge factor 76% -100%

Composition of the projected annual bill ($12/13 terms)

	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
Water service	776	754	755	756	751
Water usage	311,781	318,996	326,799	332,225	340,461
Sewer service	38,700	39,626	40,953	42,619	44,042
Sewer usage	91,525	88,793	87,427	84,695	83,329
Drainage	994	961	862	773	694
	-	-	-	-	-
	-	-	-	-	-
Trade waste	29,999	29,856	29,856	29,856	29,856
Projected total bill	**473,775**	**478,986**	**486,651**	**490,925**	**499,132**
% change on the previous year		1.1%	1.6%	0.9%	1.7%
Water usage % of water charges	100%	100%	100%	100%	100%
Water usage % of total bill	66%	67%	67%	68%	68%

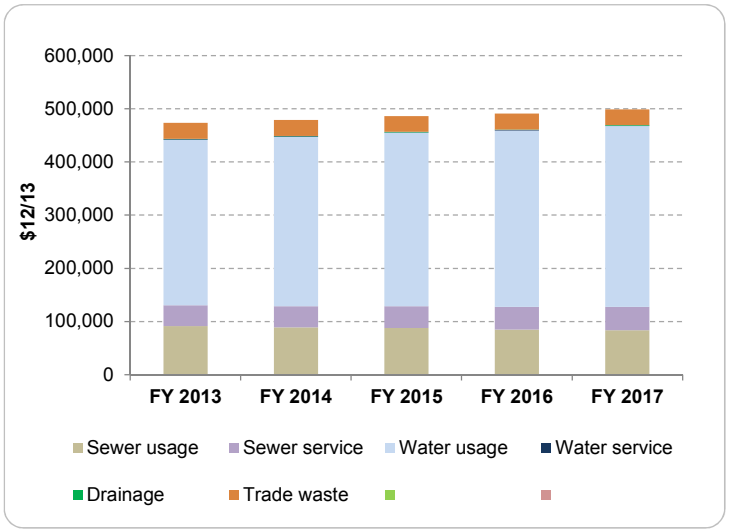
Changes over the 12/13 to 16/17 period ($12/13 terms)

	FY 2013 Bill	FY 2017 Bill	Difference	Av Ann Δ	Av Wkly Δ
Water service	776	751	(25)	(6)	(0.12)
Water usage	311,781	340,461	28,680	7,170	137.88
Sewer service	38,700	44,042	5,342	1,336	25.68
Sewer usage	91,525	83,329	(8,196)	(2,049)	(39.41)
Drainage	994	694	(300)	(75)	(1.44)
	-	-	-	-	-
	-	-	-	-	-
Trade waste	29,999	29,856	(144)	(36)	(0.69)
Projected total bill	**473,775**	**499,132**	**25,357**	**6,339**	**121.91**

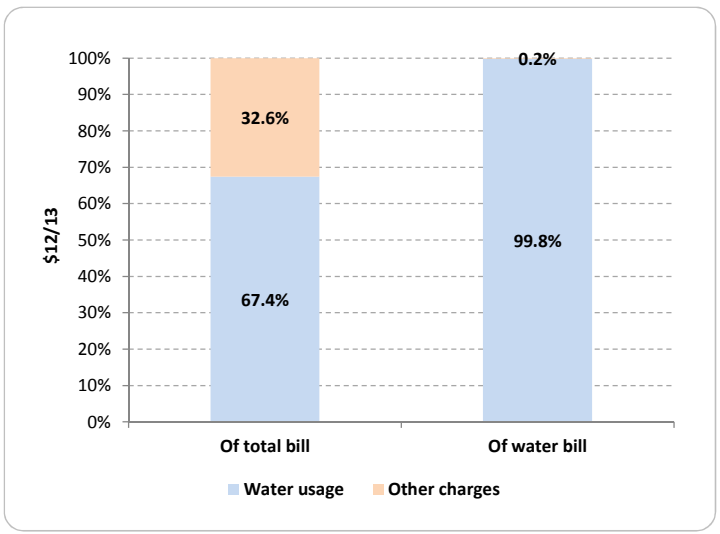
Notes

All prices shown are in $12/13 terms.
The typical bill for this customer category in 12/13 is $473,775.
By 16/17 this bill is projected to be $499,132 in $12/13 terms.
The percentage change in the bills over 4 years (i.e. by 2016/17) is 5.4%.
The annual average change in percentage terms is 1.3% per annum.
Tariff structures are essential the same as the current structures.
Price increases in percentage terms similar to a household and reflect HWC's increasing costs.
This customer realises some benefits from real reduction in sewer usage and drainage charges.
Sewer usage charge = water consumption x non-residential sewer usage charge x discharge factor.
Sewer service charge = number of meter equivalents x ME unit charge x discharge factor.

Projected annual bill ($12/13 terms)



Average water usage component over 13/14 to 16/17



2012 Price Review
Impact of proposed charges ($12/13 terms)

Customer type: Nursery low DF stand alone

Charges: water, sewer

Configuration: 583 kL p.a. / 20mm meter / discharge factor 25%

Composition of the projected annual bill ($12/13 terms)

	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
Water service	19	17	17	17	17
Water usage	1,213	1,236	1,265	1,288	1,318
Sewer service	278	574	585	596	607
Sewer usage	98	95	93	90	89
Drainage	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-
Trade waste	-	-	-	-	-
Projected total bill	**1,607**	**1,921**	**1,960**	**1,991**	**2,030**
% change on the previous year		19.6%	2.0%	1.6%	2.0%
Water usage % of water charges	98%	99%	99%	99%	99%
Water usage % of total bill	75%	64%	65%	65%	65%

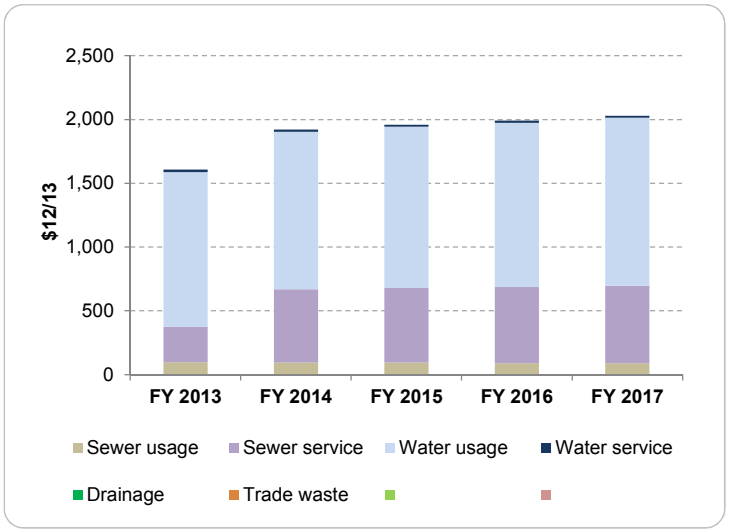
Changes over the 12/13 to 16/17 period ($12/13 terms)

	FY 2013 Bill	FY 2017 Bill	Difference	Av Ann Δ	Av Wkly Δ
Water service	19	17	(2)	(1)	(0.01)
Water usage	1,213	1,318	105	26	0.50
Sewer service	278	607	329	82	1.58
Sewer usage	98	89	(9)	(2)	(0.04)
Drainage	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-
Trade waste	-	-	-	-	-
Projected total bill	**1,607**	**2,030**	**423**	**106**	**2.04**

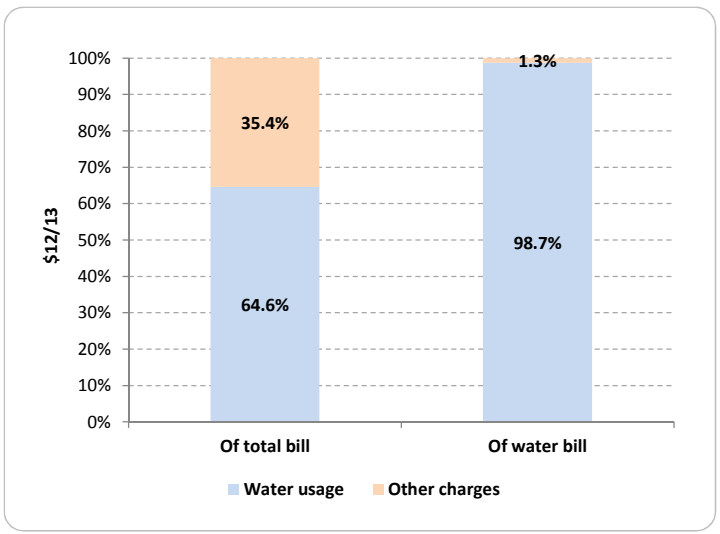
Notes

All prices shown are in $12/13 terms.
The typical bill for this customer category in 12/13 is $1,607.
By 16/17 this bill is projected to be $2,030 in $12/13 terms.
The percentage change in the bills over 4 years (i.e. by 2016/17) is 26.4%.
The annual average change in percentage terms is 6.6% per annum.
IPART's required pricing structures requires small non-res customers (20 mm stand alone) to pay the same service charge as houses.
This customer is adversely affected by this change because the new sewer service charge effectively is a minimum charge.
In this case the previous sewer service charge was reduced because the customer only discharged a small proportion of water use to the sewer.
This reduction no longer applies to the minimum charge under the new IPART regime.
Sewer usage charge = water consumption x non-residential sewer usage charge x discharge factor.
From 13/14 sewer service charge = 20 mm stand alone (residential service charge).

Projected annual bill ($12/13 terms)



Average water usage component over 13/14 to 16/17



2012 Price Review
Impact of proposed charges ($12/13 terms)

Customer type: Nursery low DF

Charges: water, sewer

Configuration: 5,599 kL p.a. / 40mm meter / discharge factor 25%

Composition of the projected annual bill ($12/13 terms)

	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
Water service	76	74	74	74	73
Water usage	11,646	11,870	12,150	12,374	12,654
Sewer service	1,110	1,137	1,175	1,223	1,264
Sewer usage	938	910	896	868	854
Drainage	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-
Trade waste	-	-	-	-	-
Projected total bill	**13,770**	**13,990**	**14,294**	**14,538**	**14,845**
% change on the previous year		1.6%	2.2%	1.7%	2.1%
Water usage % of water charges	99%	99%	99%	99%	99%
Water usage % of total bill	85%	85%	85%	85%	85%

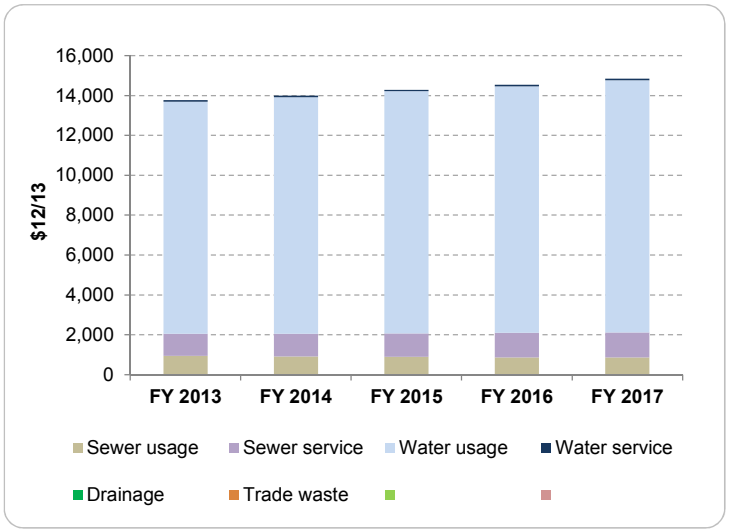
Changes over the 12/13 to 16/17 period ($12/13 terms)

	FY 2013 Bill	FY 2017 Bill	Difference	Av Ann Δ	Av Wkly Δ
Water service	76	73	(2)	(1)	(0.01)
Water usage	11,646	12,654	1,008	252	4.85
Sewer service	1,110	1,264	153	38	0.74
Sewer usage	938	854	(84)	(21)	(0.40)
Drainage	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-
Trade waste	-	-	-	-	-
Projected total bill	**13,770**	**14,845**	**1,075**	**269**	**5.17**

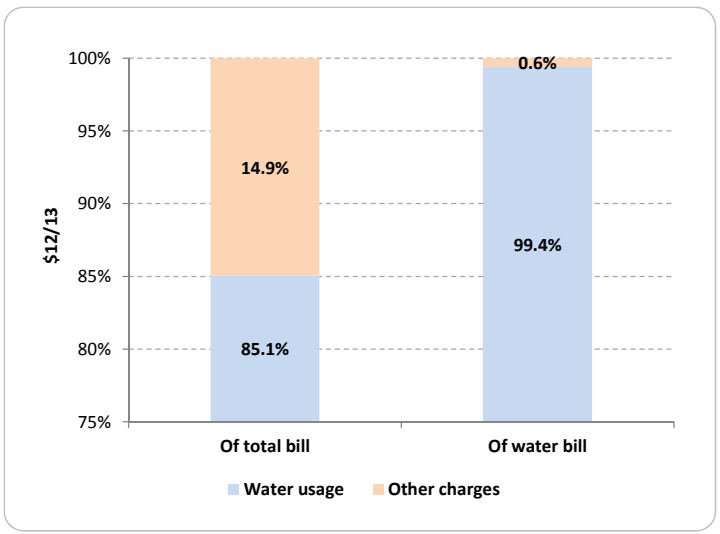
Notes

All prices shown are in $12/13 terms.
The typical bill for this customer category in 12/13 is $13,770.
By 16/17 this bill is projected to be $14,845 in $12/13 terms.
The percentage change in the bills over 4 years (i.e. by 2016/17) is 7.8%.
The annual average change in percentage terms is 2.0% per annum.
This customer is not a "small non-res customer" under IPART's definition and therefore the tariff structures are essentially unchanged.
Sewer usage charge = water consumption x non-residential sewer usage charge x discharge factor.
Sewer service charge = number of meter equivalents x ME unit charge x discharge factor.

Projected annual bill ($12/13 terms)



Average water usage component over 13/14 to 16/17



APPENDIX M 2012 PRICING CONSULTATION MATERIALS

Customer Engagement 2012

Welcome

Thank you in advance for having your say about Hunter Water prices for the next four years.

National water indicators have continually ranked Hunter Water Corporation as one of the lowest cost water utilities within Australia and we are determined to keep our services affordable for our customers. Our prices are set by the Independent Pricing and Regulatory Tribunal (IPART) every four years and we seek your involvement in this process so that your views can be taken into account when IPART undertake a detailed review of our costs over the coming months. Our next pricing determination takes effect in July 2013 and will remain in place until 2017.

Here at Hunter Water we face the challenge of providing our customers with reliable water and sewerage services at the lowest possible cost. Your views are important to us and I encourage you to provide us with honest and considered feedback in relation to a number of issues presented in the survey.

Hunter Water has engaged Insync Surveys, an independent research company to conduct this research. Insync Surveys undertakes to keep your feedback strictly confidential. Results that may identify you individually will not be provided to Hunter Water or any other third party.

The survey should take no longer than five minutes to complete and will close at 9am on Monday 9 July 2012.

If you have any questions about this research, please contact Hunter Water on 1300 657 657 or email price.review@hunterwater.com.au. If you experience any technical difficulties, please contact Insync Surveys on 1800 770 395 during business hours or email technical_enquiries@insyncsurveys.com.au

Again I would like to thank you for participating in this survey. We look forward to receiving your feedback.

Regards

Kim Wood
Managing Director

Section 1: Demographics

This section asks for some general information about you.

1. What is your postcode?

2. Are you responding as a business or as a residential customer?

   - Business
   - Residential – I live in a house I own
   - Residential – I live in a house I rent
   - Residential – I live in a flat/unit I own
   - Residential – I live in a flat/unit I rent

3. **If Residential:** How many people live in your home including you?

   - 1-2
   - 3-4
   - >4

4. **If Residential:** Do you have a concession card?

   - Yes
   - No

5. **If Residential:** Do you have a septic tank?

   - Yes
   - No

6. Which of the following categories best describes you?

   - Gen Y – (usually applies to people born after 1980)
   - Gen X – (usually applies to people born 1966-1980)
   - Baby boomer – (usually applies to people born 1946-1965)
   - Veteran – (usually applies to people born before 1946)

Section 2: What you think about Hunter Water

The second section asks a few questions about your perceptions of water pricing and Hunter Water as an organisation.

1. Who owns Hunter Water Corporation? (select one)

- They own themselves
- They are owned by the local councils
- They are owned by the State Government
- They are owned by the Federal Government
- They are owned by a private company
- I don't know

For the next set of questions, please respond with a "Yes", "No" or "I don't know".

	Yes	No	I don't know
2. Do you think Hunter Water spends money wisely?			
3. If you had to guess, does Hunter Water charge more than the water authorities in Sydney, Wyong, Gosford and the Mid North Coast?			
4. Is the price you pay reasonable in comparison to your other home utility bills? (e.g. Council rates, electricity, gas, telephone, internet)			
5. Is Hunter Water a good corporate citizen? *Definition: Does HW deliver good social, environmental and ethical performance for the lower Hunter community?*			
6. Does Hunter Water provide a reliable water/sewerage service? *Definition: Reliable means if you rarely experience events such as low water pressure, unplanned water interruptions or sewerage spills*			

The next set of questions require you to select from multiple options. You can select more than one option for some of the questions.

7. How many staff does Hunter Water have?

- 200
- 500
- 1,000
- 2,000
- 5,000

8. Water bills have been rising over the last few years. Why do you think this might be the case? (select all that apply)

- Hunter Water has been putting on more staff
- The prices of inputs like electricity and chemicals have been going up
- They have been building for the future growth of the population
- They have been replacing their assets as they get old

9. If you halved your water usage what do you think your combined water and sewerage bill should drop by? (select one)

- 0%
- 10%, a tenth
- 25%, a quarter
- 33%, a third
- 50%, a half

10. Do you think there is anything unfair about Hunter Water's pricing? (select all that apply)

- I believe that the sewerage charges are too high
- I believe that the water charges are too high
- I believe that the water charges are too low
- I believe that big businesses don't pay their fair share
- I believe that pensioners should receive more discount
- I believe that other concession card holders such as unemployed people should receive more discount
- I believe that I don't have enough control over my bill
- Other:

Section 3: Prices for the next four years

The third section of the survey focuses on five key areas where your opinion will shape Hunter Water's price proposal to the regulator that sets its prices.

The first question relates to the sewerage charge paid by houses compared to that paid by units and flats:

At present, houses pay a fixed charge of $555 per year for access to the sewerage system, regardless of how much waste water they put down the drains. Flats and units only pay about two thirds of this charge.

1. Should Hunter Water charge all houses, flats and units the same fixed sewerage charge?

- Yes
- No

The next question is about environmental standards:

Our drinking water is healthy and meets all quality standards because Hunter Water filters and treats it before it is piped to your house or business. Hunter Water could provide extra protection for the quality of the water flowing into our dams by investing $4 million in additional catchment protection projects. These would include preventing leaks from septic tanks, educating farmers in how to improve the quality of water flowing off their farms and protecting streams and rivers from erosion. It would cost around $2 on the average bill.

2. Are you in favour of this expenditure?

- Yes
- No

The last questions are about ways Hunter Water could save money:

Currently Hunter Water performs better than their mandated standards for the number of properties affected by water supply interruptions, sewer overflows and water pressure.

Hunter Water would like to know whether you want them to spend less money instead of continuing to perform at a level better than the standards. This would mean these problems are likely to occur more often and may affect more properties. It would also mean that these savings would be passed back to you.

3. Would you like Hunter Water to make these savings in the knowledge that the chance of you being affected by a leak or interruption will increase slightly?

- Yes
- No

At the moment, Hunter Water provides a Payment Assistance Scheme where $100,000 of vouchers are shared among families experiencing financial hardship. These are issued through local charities that ensure the recipients are in genuine need. This service costs all our customers 14 cents per bill.

4. Should this program be:

- Stopped
- Maintained
- Doubled
- Tripled

5. Do you think Hunter Water should spend less on:

	Yes	No	I don't know
Odour reduction from sewerage pipes and pumping stations			
Odour reduction from sewerage treatment works			
Removing graffiti from Hunter Water property			

Section 4: Your feedback

Is there anything you would like to add?

How to have your say

Hunter Water is committed to involving the community in the price setting process. We will be telephoning a random sample of our customers over the coming weeks. However, if you would like to make your views known you can do so on our web survey or by visiting our booths at libraries in the local government areas served by Hunter Water.

Log on via Hunter Water's website:
http://www.hunterwater.com.au

Log on to the web survey at:
http://www.insyncsurveys.com.au/hunterwater

Library session dates

Tuesday 3rd July

Cessnock 9am – 11:30am
65-67 Vincent Street,
Cessnock

Maitland 1:30pm – 4pm
480 High Street, Maitland

Wednesday 4th July

Dungog 10am – 11:30am
Mackay Street, Dungog

Raymond Terrace
1:30pm – 4pm
74 Port Stephens Street,
Raymond Terrace

Newcastle 5:30pm – 7pm
Laman Street, Newcastle

Thursday 5th July

Toronto 9am – 12noon
Corner Brighton Avenue &
Pemell Street, Toronto

Friday 6th July

Swansea 9am–11:30am
228 Pacific Highway
Swansea

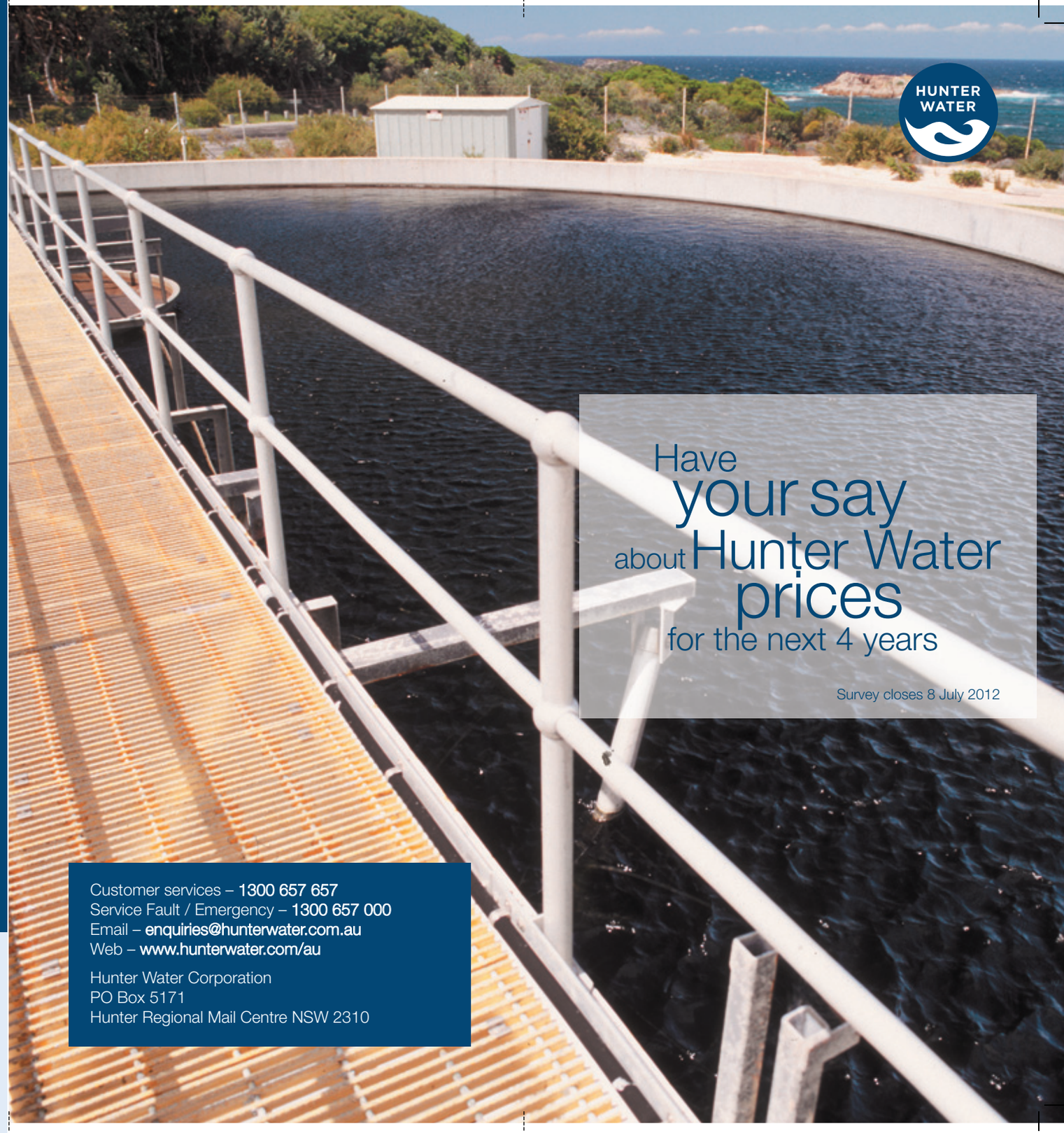
Belmont 1:30pm – 4pm
19 Ernest Street, Belmont

Saturday 7th July

Charlestown 10am – 1pm
13 Smith Street,
Charlestown

Do the web survey on your tablet or smartphone using this QR code

(you might need a special QR code reading app)



HUNTER WATER

Have your say about Hunter Water prices for the next 4 years

Survey closes 8 July 2012

Customer services – **1300 657 657**
Service Fault / Emergency – **1300 657 000**
Email – **enquiries@hunterwater.com.au**
Web – **www.hunterwater.com/au**

Hunter Water Corporation
PO Box 5171
Hunter Regional Mail Centre NSW 2310

Involving the community in our future prices

Hunter Water provides water and sewerage services to over half a million people in the lower Hunter region.

Hunter Water is owned by the State Government. We are faced with the challenge of providing our customers with the best and most reliable water and sewerage services at the lowest possible cost.

Our average bills are lower than those in Sydney, Gosford, Wyong or the mid North Coast.

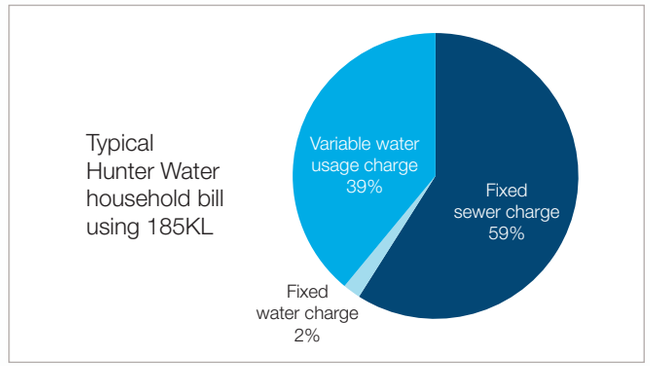
Our prices are set by the Independent Pricing and Regulatory Tribunal (IPART) after a review of our costs and our pricing submission.

The next pricing period begins in July 2013 and is proposed to run for four years.

Leading up to our price submission we want to hear your views on a number of issues. Further information on the price review process is available on Hunter Water and IPART's websites.

This brochure describes those issues and tells you how to get involved.

Pricing for the next four years is different to our long term water strategy. The NSW Metropolitan Water Directorate is leading development of the Lower Hunter Water Plan in close consultation with Hunter Water, other government agencies and the lower Hunter community.



What makes up my Hunter water bill?

Most water bills have three components: access to the water supply; the water that you used; and a charge for access to the sewerage system. The two access charges are fixed, and the usage charge is variable.

Where does the money go?

Hunter Water's costs fall into three categories.

1. Operating costs include maintaining our assets, materials, energy, vehicles, staff costs and payments to contractors who maintain our assets.
2. Depreciation is the decrease in the value of our assets over the year. Our assets are worth more than $3.5 billion. You don't pay for assets in the year that they are built. Instead, customers pay over the life of the asset. For example, some watermains last for up to 100 years, but sewerage pumps last for just a few decades.
3. We borrow the money to build our assets rather than charge our customers up front. Part of your bill is the interest on those borrowings. We pay income tax and a proportion of our after tax profit is reinvested in our business. A proportion of after tax profit is also returned to the State Government for investment in important services such as health and education.

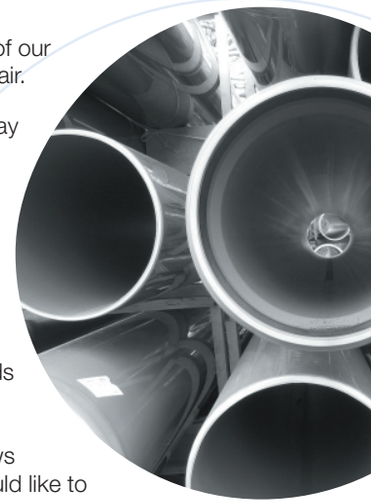
What does Hunter Water want to know from me?

We expect that the price of electricity, chemicals and some of our other operating costs will rise more quickly than inflation. This means that despite our significant energy conservation measures, these costs will ultimately flow through to your bill.

There are a number of issues where your input will help shape our price submission to IPART.

These issues include:

- How we could improve the value you're getting for what you pay.
- Whether you think any part of our current pricing system is unfair.
- Whether you would like to pay a little more on your bill to improve the quality of our waterways beyond the standards set by the Environment Protection Agency (EPA).
- Currently we perform better than our mandated standards for the number of properties affected by water supply interruptions, sewer overflows and water pressure. We would like to know whether you want us to spend less money instead of continuing to perform at a level better than the standards. This would mean these problems are likely to occur more often and may affect more properties.
- Whether you think the proportion of fixed and variable charges on your bill is appropriate.
- Whether flats and units should continue to attract lower fixed sewerage charges than houses.



APPENDIX N ACTIVITY AND REVENUE SUMMARY - CUSTOMER SERVICE MISCELLANEOUS CHARGES

Table N.1 Miscellaneous charges

Service No.	Function	Description	Existing charge	Proposed charge ($2012/13)	Predicted quantity	Predicted income
Water supply miscellaneous charges						
7	Water reconnection after restriction	a) <u>During business hours</u> Restoration of water supply during business hours to a property restricted for non-payment of accounts when payment has been received, during normal business hours (8am to 3pm). b) <u>Outside business hours</u> Restoration of water supply outside business hours to a property restricted for non-payment of accounts during the hours of 3.00pm to 8.00am the following business day.	a) $66.80 b) $180	a) $106.00 b) $128.00	479 36	$50,774 $4,608
9a)	Application for water disconnection (all sizes)	Charge applied to process applications to disconnect an existing water service (all sizes).	$107	$66.35	172	$11,412
9b)	Application for recycled water disconnection	Charge applied to process applications to disconnect an existing recycled water service. A plumbing inspection is required to ensure the service has been correctly capped off and complies with Plumbing Standards.	$138	$133	1	$133
10	Application for water service connection – (all sizes)	Charge applied to process applications to connect a new water service.	$113	$72.2	1572	$113,498

Service No.	Function	Description	Existing charge	Proposed charge ($2012/13)	Predicted quantity	Predicted income
66	Application for recycled water connection - domestic	This charge recoups the costs associated processing of applications and mandatory inspections for recycled water service connections.	a) $322 (pre-laid connections) b) $411 (redevelopment)	a) $46.95 (pre-laid connections) b) $138.75 (redevelopment)	129 -	$6,057 $0
22	Application to connect/ disconnect water and Sewer services (combined application)	Charge applied to process combined application to connect a new water and sewer service, or to disconnect an existing water and sewer service.	$113	$72.20	1652	$19,274
24	Request for separate metering of units	Charge for the initial assessment of a request for separate sub-metering of individual units within a registered Strata Plan or Community Title. The charge is applied per plan, regardless of the number of units.	$44.25 per plan	$29.95 per plan	69	$2,067
25	Unauthorised connections	Charge applied to a customer account to recover costs and appropriate application fees where a connected service is located, but no application to connect has been lodged with Hunter Water.	$166	$108	5	$540
29	Meter affixtures/handling fee	Installation of a water meter to the water connection framework. Customers have two options, depending on the size of the water meter that is to be affixed: a) For meters up to 50mm light duty. b) For meters 50mm or larger.	a) $25.75 (up to 50mm light duty) b) $19.65	a) $83.25 (up to 50mm light duty) b) $83.25	1,847 5	$153,763 $416

Service No.	Function	Description	Existing charge	Proposed charge ($2012/13)	Predicted quantity	Predicted income
30	Inspection of non-compliant meters	Reinspect a multi-occupancy development or stand alone property where a second inspection is required for separate metering, or meter installation, as meter assemblies were either non-compliant or not accessible at initial inspection.	$54.50	$56.10	132	$7,405
32	Connect to or building over / adjacent to a stormwater channel for a single residence	Process applications from customers connecting a single residence to a stormwater channel or erecting a single residence over / adjacent to a stormwater channel held by Hunter Water.	$79.85	$90.20	2	$180
60	Inaccessible meter – reading agreement	Preparation of an agreement with a customer, whereby the customer provides Hunter Water with water meter readings. This arrangement is necessary where the meter is not accessible to Hunter Water as part of our normal meter reading processes.	$51.30	$41.65	1	$41.65
61	Inaccessible meter – imputed charge for breach of meter reading agreement	Charge applied for water and sewer usage when a customer breaches their meter reading agreement with Hunter Water by failing to provide a meter reading within the specified time requested. This charge is in addition to water and sewer usage charges to be raised when an actual meter reading is obtained.	$18.85 + imputed usage as per calculation	$17.60+ imputed usage as per calculation	158	$2,776

Service No.	Function	Description	Existing charge	Proposed charge ($2012/13)	Predicted quantity	Predicted income
62	Damaged meter replacement	Charge for the replacement of meters that have been wilfully or accidentally damaged by a third party as noted in 10.2 of the Customer Contract. In this situation the customer is responsible for the replacement cost of the asset. This does not include normal wear and tear.	20mm $78.95 25mm $123 32mm $167 40mm $194 50mm L $319 50mm H $375 65mm $476 80mm $487 100mm $509 150mm $908 250mm $3149 300mm $3999	20mm $60.40 25mm $100.00 32mm $139.00 40mm $166.00 50mm L $355.00 50mm H $405.00 65mm $495.00 80mm $621.00 100mm $646.00 150mm $1,106.00 250mm $4,065.00 300mm $5,063.00	93	$5,617
63	Affix a separate meter to a unit	Affix a meter to a unit where the meter frame is compliant with requirements. This fee will be applied for each meter that is affixed.	$33.70	$56.10	70	$3,927
64	Recycled water meter affix fee	Costs associated with affixing a meter to a recycled water service at a customer's property.	$53.85	$36.15	129	$4,663
Wastewater services miscellaneous charges						
21	Application to connect/disconnect sewer service (or for special internal inspection permit)	Charge applied to process applications to connect a new sewer service or to disconnect an existing sewer service.	$140	$72.20	193	$13,934
27	Determining requirements for build over/ adjacent to sewer or easement	Attaching conditional requirements to Council approved building plans to safeguard Hunter Water assets.	$93.90	$150	811	$121,650

Service No.	Function	Description	Existing charge	Proposed charge ($2012/13)	Predicted quantity	Predicted income
Plans and statements						
1	Conveyancing certificate	a) Over the counter Over the counter statement of outstanding rates and charges at a specific date which is issued to solicitors, conveyancing companies and individuals as a requirement for buying and selling property. b) Electronic Electronic statement of outstanding rates and charges at a specific date. Issued to solicitors, conveyancing companies and individuals as a requirement for buying and selling property.	a) $30.85 b) $9.45	a) $30.50 b) $9.40	2424 8823	$73,932 $82,932
2	Property sewerage diagram (up to A4)	Where available, issue a copy of a diagram showing the location of the house-service line, building and sewer for a property.	$18.20	$18.75	360	$6,750
3	Service location diagram	a) Over the counter Over the counter plan of Hunter Water's services and connection points in relation to a property's boundaries or a statement that no sewer main is available. b) Electronic Broker or agent lodges an application via the Land Title Office interface and extracts property details, produces an electronic plan of Hunter Water's services and connection points in relation to a property's boundaries, or a statement that no sewer main is available.	a) $25.40 b) $14.80	a) $24.65 b) $14.75	3209 7512	$79,102 $110,802

Service No.	Function	Description	Existing charge	Proposed charge ($2012/13)	Predicted quantity	Predicted income
4	Meter reading - special reads and by appointment	To provide a statement of account where customers request a special meter reading. Meter reader obtains a special reading outside of the existing read schedule: a) During business hours, or b) Outside of business hours, by appointment	a) $26.20 b) $48.15	a) $24.10 b) $98.70	38 0	$916 $0
5a)	Billing record search statement (up to 5 years)	Customer requested search of Hunter Water's archived financial reports providing account details for up to 5 years. Account details for the current and previous financial year are free of charge. This charge is applied for each property requiring a billing record search.	$69.25	$59.85	12	$718
5b)	Billing record search for multiple properties.	An hourly charge to prepare and provide billing and consumption data to owners of multiple properties.	$86.95	$86.55	2	$173 (estimate 2 hours each search)
6	Building over or adjacent to sewer advice	Providing conditional requirements, statement of approval status for existing building over or adjacent to sewer applications.	$86.65	$70.15	58	$4,069
26	Building plan stamping	Approval of basic building/development plans certifying that the proposed construction does not adversely impact on Hunter Water's assets.	$13.00	$11.75	6833	$80,288

Service No.	Function	Description	Existing charge	Proposed charge ($2012/13)	Predicted quantity	Predicted income
31	Services requirement audit *(previously standard plumbing inspections)*	Due to the recent changes in plumbing legislation, Hunter Water will no longer be the regulator for the plumbing industry in our area of operations. This policy details Hunter Water's requirements for the connection to water and sewer services within it area of operations.	a) General Plumbing $106.00 b) Inspection $109.00 c) Hr rate for Inspection $77.25	$91.75	1,847	$169,462
Ancillary services						
8a)	Workshop flow rate test of a mechanical water meter	Removal, transportation and flow rate test of a mechanical water meter by an accredited organisation at the customer's request to determine the accuracy of the water meter.	20mm-25mm $175	20mm-25mm $158	11	$1,738
			32mm $239	32mm $222	0	$0
			40mm $250	40mm $ 226	2	$452
			50mm light $287	50mm light $266	0	$0
			50mm heavy $515	50mm heavy $331	0	$0
			65mm $517	65mm $333	0	$0
			80mm $526	80mm $389	4	$1,556
			100mm $639	100mm $464	0	$0
			150mm $792	150mm $526	1	$526

Service No.	Function	Description	Existing charge	Proposed charge ($2012/13)	Predicted quantity	Predicted income
8b)	Workshop flow rate and strip test of a mechanical water meter	Removal, transportation, flow rate and strip test of a mechanical meter at the customer's request to determine the accuracy of the water meter. The strip test component is only charged if the customer requests this test.	20mm-25mm $242 32mm $306 40mm $318 50mm light $355 50mm heavy $582 65mm $585 80mm $594 100mm $706 150mm $860	20mm-25mm $218 32mm $282 40mm $282 50mm light $326 50mm heavy $391 65mm $393 80mm $449 100mm $524 150mm $576	0	$0 (approx)
14	Standpipe hire security bond	Moneys paid by standpipe hirers and held in a public moneys account, refundable upon return of the standpipe in an undamaged state and upon payment of all outstanding hire and usage charges. The bond is the actual purchase price of the standpipe.	20mm $314.00 32mm H $842.00 32mm L $382.00 50mm $842.00	20mm $305 32mm H $817 32mm L $371 50mm $817	9 11 0 16	$2,745 $8,987 $0 $13,072
15	Standpipe hire – quarterly & monthly fees	Hire fees payable for the use of a portable metered standpipe owned by Hunter Water that is used to extract water from a water main.	<u>Tri-annual</u> 20mm $42.95 32mm H $51.85 32mm L $44.10 50mm $51.85 <u>Monthly</u> 20mm $9.50 32mm H $18.35 32mm L $10.60 50mm $18.35	<u>Tri-annual</u> 20mm $31.85 32mm H $ 41.25 32mm L $33.05 50mm $41.25 <u>Monthly</u> 20mm $5.60 32mm H $15.00 32mm L $6.80 50mm $15.00	49	$2,500 (approx)

Service No.	Function	Description	Existing charge	Proposed charge ($2012/13)	Predicted quantity	Predicted income
16	Standpipe water usage fee	Charge per kilolitre of measured consumption on a standpipe	As per water usage tariff per kilolitre	As per water usage tariff per kilolitre	0	-
17	Backflow prevention device application and registration fee	Charge for the initial registration of a backflow prevention device.	$26.10	$32.50	438	$14,235
18a)	Backflow prevention device annual administration fee	Charge for the maintenance of backflow prevention device records including logging of inspection reports.	$17.10	$20.80	2022	$42,058
18b)	Backflow device test	Arrange to test a customer's backflow device as a result of them failing to arrange their own test as per the Customer Contract.	$272	$312	200	$62,400
20	Statement of available pressure and flow	Charge for water pressure report detailing relative pressures in Hunter Water's mains. The charge covers assessment of available pressure at three specific flow rates from a single connection point to Hunter Water's main.	$323	$311	199	$61,889
23	Irregular and dishonoured payments	a) Banking authority – cheque declined Fees relating to cheques returned by banking authorities as irregular or dishonoured. b) Banking authority – direct debit declined Fees relating to Direct Debit payment declines. c) Australia Post – cheque declined Fees relating to cheques dishonoured when paid at Australia Post agencies.	a) $24.65 b) $27.45 c) $41.45	a) $33.50 b) $26.00 c) $38.50	51 14 702	$1,701 $364 $27,027
28a)	Application to hire a metered standpipe	Charge for processing applications for the hire of a portable metered standpipe	$184	$169	10	$1,690

Service No.	Function	Description	Existing charge	Proposed charge ($2012/13)	Predicted quantity	Predicted income
28b)	Breach of standpipe hire conditions	Charges applied to a customer's account each time they fail to provide a standpipe meter reading as per the conditions of the Hire Agreement. The Agreement advises if three breaches occur the Agreement will be terminated. Due to processing times, each breach attracts its own charge.	Breach 1 $22.35 Breach 2 $28.10 Breach 3: Step 1 $32.45 Breach 3 Step 2 $35.35	Breach 1 $18.20 Breach 2 $24.05 Breach 3: Step 1 $29.95 Breach 3 Step 2 $29.95	100	$3,000 (approx)
34	Hydraulic design assessment *(previously Hydraulic Assessment Application – less than 80mm)*	This is the stand alone fee for assessment of water and sewer services for a development proposing to connect to Hunter Water's existing infrastructure network. The base fee includes assessment of the point of connection to a standard water main frontage and sewer connection point for the lot. Drawings must be formatted to comply with our Services Connection Policy.	a) Up to 10 drawings $290 b) 11 to 50 drawings $290 + $25.80/ drawing c) >50 drawings $1,322 + $22.45/drawing	1) Residential 25-40mm $226 2) Residential >40mm $270 3) Non-Resident 25-40mm $323 4) Non-Resident >40mm $354	43 43 197 66	$9,763 $11,664 $63,566 $23,364
45a)	Connection to existing water system - major works (valve shutdown)	Charge covers shutdown of water supply by Hunter Water using valves to allow connections to existing mains and recharging of the main.	$674	$657	47	$30,879
45b)	Connection to existing water system - major works (non-valve shutdown)	Charge applies to shutdown of water supply by the developer (or their contractor) using a non-valve method to allow connections to existing mains and recharging of the main.	$279	$280	10	$2,800

Service No.	Function	Description	Existing charge	Proposed charge ($2012/13)	Predicted quantity	Predicted income
46a)	Insertion or removal of tee & valve (valve shutdown and charge up)	Charge applied when the developer elects for Hunter Water to insert the connection to existing mains and where the shutdown is performed using valves.	$1,023	$1,034	26	$26,884
46b)	Insertion or removal of tee & valve (non-valve shutdown and charge up)	Charge applied when the developer elects for Hunter Water to insert the connection to existing mains and where the shutdown is performed by the developer (or their contractor) using a non-valve method.	$627	$646	5	$3,230
48	Tee & valve connection	Water services greater than 80mm diameter require special connection arrangements to Hunter Water's mains and are covered by an agreement and technical specification prepared on application.	$205	$255	75	$19,125
51	Application to assess encroachment on Hunter Water land, easement rights or assets	Charge for a first pass review of an application to allow Hunter Water to advise requirements to be met and a quote for additional, more detailed assessment.	$387	$385	1	$385
52	Technical Services hourly rate	Charge provides an hourly rate for the time taken for additional technical work to be undertaken.	$111/ hour	$100/ hour	Quote	Quote
59a)	Inspection of a water cart tanker	Initial inspection (or annual inspection) of a new Water Cart Tanker to ensure the air gap and backflow prevention is sufficient to protect HWC potable water supply. The inspection location is negotiated with the customer (ie at either a field location nominated by the Customer or at a Hunter Water depot.	$128	$128	21	$2,688

Service No.	Function	Description	Existing charge	Proposed charge ($2012/13)	Predicted quantity	Predicted income
59b)	Reinspection of water tanker due to non-compliance	Reinspect a water cart tanker if non- compliant at initial inspection. The purpose of the inspection is to ensure the air gap and backflow prevention is sufficient to protect HWC potable water supply. This fee is charged each time the tanker requires a follow up inspection due to non-compliance.	$111	$116	3	$348
TOTAL INCOME						**1,573,434**

Source: Hunter Water

APPENDIX O COST BASE FOR INDIVIDUAL MISCELLENEOUS SERVICE CHARGES

1. Conveyancing Certificate
2. Property Sewerage Diagram
3. Service Location Diagram
4. Meter Reading - Special Reads and by Appointment

5a). Billing Record Search Statement

5b). Billing Record Search Statement for Multiple Properties

6. Building Over or Adjacent to Sewer Advice
7. Water Reconnection – after restriction

8a). Workshop Flow Rate Test of a Mechanical Water Meter

8b). Workshop Flow Rate and Strip Test of a Mechanical Water Meter

9a). Application for Water Disconnection

9b). Application for Recycled Water Disconnection

10. Application for Water Service Connection (all sizes)
11. Application for Water Service Connection (32 to 65mm)
12. Application for Water Service Connection (80mm or greater)
13. Application to Assess Water Main Adjustment
14. Standpipe Hire Security Bond
15. Standpipe Hire – tri-annual and monthly fees
16. Standpipe Water Usage Fee
17. Backflow Prevention Device Application and Registration Fee

18a). Backflow Prevention Device Annual Administration Fee

18b). Backflow Device Test

19. Major Works Inspection Fee
20. Statement of Available Pressure and Flow
21. Application to Connect / Disconnect Sewer Services (for for a Special Internal Inspection Permit)
22. Application to Connect / Disconnect Water and Sewer Services (combined application)
23. Irregular and Dishonoured Payments
24. Request for Separate Metering of Units

25. Unauthorised Connections
26. Building Plan Stamping
27. Determining Requirements for Building Over / Adjacent to Hunter Water Sewer or Easement
28a). Application to Hire a Metered Standpipe
28b). Breach of Standpipe Hire Conditions
29. Meter Affixtures / Handling Fee
30. Inspection of Non-compliant Meters
31. Services Requirement Audit
32. Connecting to or Building Over / Adjacent to a Stormwater Channel for a Single Residence
33. Stormwater Channel Connection
34. Hydraulic Design Assessment
35. Pump Station Design Assessment
36. Application to Assess Sewer Main Adjustment
37. Indicative Developer Charge Application
38. Revision of Development Assessment Requirements
39. Bond Application
40. Bond Variation
41. Development Assessment Application
42. Application for Water / Sewer Main Extensions
43. Assessment of Minor Works
44a). Major Works Design Review and Contract Preparation
44b). Major Works Design Re-Assessment
45a). Connect to Existing Water System - Major Works (valve shutdown)
45b). Connect to Existing Water System - Major Works (non-valve shutdown)
46a). Insertion or Removal of Tee and Valve (valve shutdown and charge up)
46b). Insertion or Removal of Tee and Valve (non-valve shutdown and charge up)
47. Application for Additional Sewer Connection Point
48. Tee and Valve Connection
49. Minor Works Inspection Fee
50. Major Works Inspection and WAE Fee

51. Application to Assess Encroachment on Hunter Water Land, Easement Right or Assets
52. Technical Services Hourly Rate
53. Remote Application Fee
54. Preliminary Servicing Advice
55. Servicing Strategy Review
56. Environmental Assessment Report Review
57. Recycled Water Inspection and WAE Fee
58. Reservoir Construction Inspection and WAE Fee
59a). Inspection of a Water Cart Tanker
59b). Reinspection of a Water Cart Tanker due to Non-Compliance
60. Inaccessible Meter – reading Agreement
61. Inaccessible Meter – Imputed Charge for Breach of Meter Reading Agreement
62. Damaged Meter Replacement
63. Affix a Separate Meter to a Unit
64. Recycled Water Meter Affix Fee
65. Plumbing Non-Compliance Follow Up Inspection Fee
66. Application for Recycled Water Service Connection - Domestic

1a). Conveyancing Certificate – over the counter

CURRENT CHARGE = $30.85

Function Overview:

Over the counter statement of outstanding rates and charges at a specific date which is issued to solicitors, conveyancing companies and individuals as a requirement for buying and selling property.

Process	Time
Open mail and stamp cheques includes records processing, remittances etc	3 min
Identify property	2 min
Computer entry (applicant details, queue procedure)	2 min
Banking procedures	7 min
Post printing procedures (collection, checking)	6 min
Mailing procedures (address envelopes, insert certificate)	3 min
Follow up telephone call to check balance on date of settlement	2 min
Average time for function	**25 minutes**

Calculations and proposed charge =	
Hunter Water costs	$29.35
Australia Post costs - A4 envelope	$1.16
PROPOSED CHARGE =	**$30.50**

1b). Conveyancing Certificate – electronic

CURRENT CHARGE = $9.45

Function Overview:

Electronic statement of outstanding rates and charges at a specific date. Issued to solicitors, conveyancing companies and individuals as a requirement for buying and selling property. This fee covers the Land & Information Property (LPI) Brokers fee plus the transaction charge.

Process

Property and vendor details supplied electronically by solicitors, conveyancing companies or individuals to a Broker nominated by Hunter Water

Details electronically forwarded to Hunter Water

The appropriate Hunter Water customer account is automatically identified and the statement of rates and charges is electronically compiled and sent to the broker

Investigation of exceptions where electronic advice cannot be provided are handled manually

Free electronic update of charges on the date of settlement

PROPOSED CHARGE = $ 9.40

2. Property Sewerage Diagram (up to A4)

CURRENT CHARGE = $18.20

Function Overview:
Where available, issue a copy of a diagram showing the location of the house-service line, building and sewer for a property.

Process	Time
Identify property on HWC mapping system	2 min
Print plan	2 min
Raise relevant fee against customer account and receipt payment	3 min
Fax/mail copy of plan when required	3 min
Banking Procedures	5 min
Average time for function	**15 minutes**

Calculations and proposed charge =	
Hunter Water costs	$17.60
Australia Post costs- A4 document	$1.16
PROPOSED CHARGE =	**$18.75**

3a). Service Location Diagram – over the counter

CURRENT CHARGE = $25.40

Function Overview:
Over the counter plan of Hunter Water's services and connection points in relation to a property's boundaries or a statement that no sewer main is available.

Process	Time
Identify property on mapping system	2 min
Print out plan	2 min
Raise adjustment and manage payment in CIS	10 min
Provide receipt to customer	3 min
Mailing procedures (address envelopes, insert certificate)	3 min
Average time for function	**20 minutes**

Calculations and proposed charge =	
Hunter Water costs	$23.48
Australia Post costs - A4 size envelope	$1.16
PROPOSED CHARGE =	**$24.65**

3b). Service Location Diagram - electronic

CURRENT CHARGE = $14.80

Function Overview:
Broker or agent lodges an application via the Land Title Office interface and extracts property details, produces an electronic plan of Hunter Water's services and connection points in relation to a property's boundaries, or a statement that no sewer main is available. This fee covers the Land and Property Information (LPI) Brokers fee plus the transaction charge.

Process

Land parcel details are supplied electronically by solicitors, conveyancing companies or individuals to a broker nominated by Hunter Water.

The details are electronically forwarded to Hunter Water.

The appropriate land parcel for the details provided is automatically identified, compiled and sent electronically to the broker.

Investigation of exceptions where electronic advice cannot be provided are handled manually.

Provide large diagrams – locate, print, package and post.

Calculations and proposed charge =

Hunter Water costs	$9.25
LPI Broker's Charge	$5.50
PROPOSED CHARGE =	**$14.75**

4. Meter Reading - special reads and by appointment

CURRENT CHARGE = During Business Hours - $26.20
= Outside Business Hours - $48.15

Function Overview:
Meter Reader required to attend customers property for the purpose of obtaining a special reading outside of the existing meter read schedule (inside business hours) or alternatively by appointment with the customer after business hours. This requirement could be for the purpose of dispute investigation, finalisation of account under property sale, inaccessible meter etc. If the meter is inaccessible, the customer's obligations and Hunter Water's rights regarding access to the water meter are outlined in Section 10.4 of the Customer Contract.
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Process	Time
Arrange appointment with Customer / occupant	5 min
Log Field Activity requesting Contractor site visit	2 min
Action Field Activity and enter meter reading	3 min
Average time for function	**10 minutes**

Calculation and proposed charge

During business hours:	
Hunter Water costs	$11.75
Contractor Costs to read meter during contract business hours	$12.35
PROPOSED CHARGE	**$24.10**
Outside business hours:	
Hunter Water costs	$11.75
Contractor Costs to read meter outside contract business hours	$86.97
PROPOSED CHARGE	**$98.70**

5a). Billing Record Search Statement – up to and including 5 years

CURRENT CHARGE = $69.25

Function Overview:
This charge is applied when customers request a search of Hunter Water's archived financial reports which provide account details for up to 5 years. Account details for the current and previous financial year are free of charge. This charge is applied for each property that the historical information has been requested.

Process	Time
Receipt application	3 min
Identify property	2 min
Search/source data & copy records	30 min
Type summarised reply	10 min
Mailing procedures	5 min
Average time for function	**50 minutes**

Calculations and proposed charge =	
Hunter Water costs	$58.70
Australia Post costs - A4 size document	$1.16
PROPOSED CHARGE =	**$59.85**

5b). Billing Record Search Statement for Multiple Properties

CURRENT CHARGE = $86.95

Function Overview:

This fee is similar to the Billing Record Search Statement (Charge 5a) but is applied for requests relating to owners of multiple properties (such as Council, Dept Education etc). At times owners of multiple properties undertake reviews relating to water consumption to determine areas of potential water efficiency gains. Often property owners do not keep their own billing records and request Hunter Water to prepare extensive information regarding the consumption and expenditure at each property. This charge is designed to recoup the staff costs in servicing this type of customer request. The fee is an hourly charge and the customer is informed of the charge prior to us proceeding with their request. This is a fairer and more reasonable approach to charging for these requests rather than imposing the Billing Record Search Statement (Charge 5a) for each property.

PROPOSED CHARGE = $86.55

6. Building Over or Adjacent to Sewer Advice

CURRENT CHARGE = $86.65

Function Overview:

Providing conditional requirements, Statement of Approval Status for Existing Building Over or Adjacent to Sewer applications.

Process	Time
Receive application, identify property on customer services database & provide receipt for payment to customer/or agent	10 mins
Search for relevant information on TRIM	15 mins
Prepare letter including a copy of existing conditions, or advising there was no previous application.	30 mins
Mailing procedures	5 mins
Average time for function	**60 minutes**

Calculations and proposed charge	
Hunter Water costs	$69.00
Australia Post costs - A4 size postage	$1.16
PROPOSED CHARGE =	**$70.15**

7. Water Reconnection After Restriction

CURRENT CHARGE = $66.80

Function Overview: a) During business hours

Restoration of water supply during business hours to a property restricted for non-payment of accounts when payment has been received, during normal business hours (8am to 3pm).

Process	Time
Customer advises customer service staff of payment or pay plan is emailed to credit management team.	10 min
Details of payment noted, field activity issued & phoned to contractor	15 min
Field Activity reviewed and finalised	5 min
Average time for function	**30 minutes**

Calculations and proposed charge	
Hunter Water costs	$34.20
Contractor costs to restore water service (includes travel to/from site, removing the inhibiting device and notifying Hunter Water)	$71.50
PROPOSED CHARGE	**$106.00**

CURRENT CHARGE = $180.00

Function Overview: b) Outside Business Hours

Restoration of water supply outside business hours to a property restricted for non-payment of accounts during the hours of 3.00pm to 8.00am the following business day.

Process	Time
Customer advises contact centre staff of payment of account and agrees to pay after hours fee	10 min
Field activity issued and phoned to contractor	15 min
Field activity reviewed and finalised	5 min
Average time for function	**30 minutes**

Calculations and proposed charge =	
Hunter Water costs	$34.20
Contractor costs to restore water service (includes travel to/from site, removing inhibiting device and notifying Hunter Water)	$93.50 (GST inclusive)
PROPOSED CHARGE =	**$128.00**

8a). Workshop Flow Rate Test of a Mechanical Water Meter

CURRENT CHARGE =

20-25mm	$175	32mm	$239
40mm	$250	50mm light	$287
50mm heavy	$515	65mm	$517
80mm	$526	100mm	$639
150mm	$792		

Function Overview:

Removal, transportation and flow rate test of a mechanical water meter by an accredited organisation at the customer's request to determine the accuracy of the water meter.

Process	Time
Identify property and receipt fees	3 mins
Log a case	2 mins
Create a TRIM file and scan application	5 mins
Log a field activity for removal and replacement of meter	2 mins
Prepare fax to meter testing facility	2 mins
Prepare meter for transportation	8 mins
Assessment of results and preparation of reply to customer	5 mins
Scan results sheet and letter into TRIM	3 mins
Average time for function	**30 minutes**

Calculations and proposed charges:

Meter size	Hunter Water costs	Freight (weight based)	Contractor (remove and replace meter)	Test Facility flow rate test costs	proposed charge
20 & 25mm	$35.20	$11.00	$17.34	$94.60	**$158.00**
32mm	$35.20	$11.00	$23.64	$151.80	**$222.00**
40mm	$35.20	$15.00	$23.64	$151.80	**$226.00**
50mm light	$35.20	$18.00	$31.51	$181.50	**$266.00**
50mm heavy	$35.20	$20.00	$94.53	$181.50	**$331.00**
65mm	$35.20	$22.00	$94.53	$181.50	**$333.00**
80mm	$35.20	$30.00	$141.80	$181.50	**$389.00**
100mm	$35.20	$50.00	$141.80	$236.50	**$464.00**
150mm	$35.20	$65.00	$189.07	$236.50	**$526.00**

8b). Workshop Flow Rate and Strip Test of a Mechanical Water Meter

CURRENT CHARGE =

20-25mm	$242	32mm	$306
40mm	$318	50mm light	$355
50mm heavy	$582	65mm	$585
80mm	$594	100mm	$706
150mm	$860		

Function Overview:

Removal, transportation, flow rate and strip test of a mechanical water meter by an accredited organisation at the customer's request to determine the accuracy of the water meter. This charge includes an additional component to the Flow Rate Test (Charge 8a). The strip test component is only charged to the customer if the test is requested by them. If Hunter Water requests a meter strip test to investigate meter issues the cost will be paid by Hunter Water.

Process	Time
Identify property and receipt fees	3 mins
Log a Case	2 mins
Create a TRIM file and scan application	5 mins
Log a Field Activity for removal and replacement of meter	2 mins
Prepare fax to Meter Testing facility	2 mins
Prepare meter for transportation	8 mins
Assessment of results and preparation of reply to customer	5 mins
Scan results sheet and letter into TRIM	3 mins
Average time for function	**30 minutes**

Calculations and proposed charges:

Meter size	Hunter Water admin	Freight (weight based)	Contractor (remove and replace meter)	Test facility flow rate test costs	Test facility strip test report cost	Proposed charge
20 & 25mm	$35.20	$11.00	$17.34	$94.60	$60.00	**$218.00**
32mm	$35.20	$11.00	$23.64	$151.80	$60.00	**$282.00**
40mm	$35.20	$15.00	$23.64	$151.80	$60.00	**$282.00**
50mm light	$35.20	$18.00	$31.51	$181.50	$60.00	**$326.00**
50mm heavy	$35.20	$20.00	$94.53	$181.50	$60.00	**$391.00**
65mm	$35.20	$22.00	$94.53	$181.50	$60.00	**$393.00**
80mm	$35.20	$30.00	$141.80	$181.50	$60.00	**$449.00**
100mm	$35.20	$50.00	$141.80	$236.50	$60.00	**$524.00**
150mm	$35.20	$65.00	$189.07	$236.50	$60.00	**$576.00**

9a). Application for Water Disconnection

CURRENT CHARGE = $107

Function Overview:

Charge applied to process applications to disconnect an existing water service (all sizes).

Process	Time
Identify property on HWC customer services database	2 mins
Raise disconnection CASE on customer services database (including administration fees & inspection scheduling)	15 min
Receipt payment	3 min
Update property information on customer service database	15 min
Average time for function	**35 minutes**

Calculations and proposed charge =	
Hunter Water costs	$41.10
Plumbing inspection costs	$25.24
PROPOSED CHARGE =	**$66.35**

9b). Application for Recycled Water Disconnection

CURRENT CHARGE = $138

Function Overview:

Charge applied to process applications to disconnect an existing recycled water service. a plumbing inspection is required to ensure the service has been correctly capped off and complies with plumbing standards.

Process	Time
Identify property on HWC customer services database	2 min
Raise disconnection CASE on customer services database (including administration fees & inspection scheduling)	15 min
Receipt payment	3 min
Update property information on customer service database	15 min
Average time for function	**35 minutes**

Calculation and proposed charge	
Hunter Water costs	$41.10
Services requirement audit	$91.77
PROPOSED CHARGE	**$133.00**

10. Application for Water Service Connection (all sizes)

CURRENT CHARGE = $113

Function Overview:

Charge applied to process applications to connect a new water service (all sizes). This covers the administration and contractor/inspection fees.

Process	Time
Identify property on Hunter Water's customer services database	2 min
Identify property on plan to determine the size and type of main	5 min
Raise connection CASE on customer services database including administration fees & inspection scheduling	15 min
Receipt payment	3 min
Update property information on customer service database	15 min
Average time for function	**40 minutes**

Calculations and proposed charge =	
Hunter Water costs	$46.95
Plumbing inspection costs	$25.24
PROPOSED CHARGE	**$72.20**

11. Application for Water Service Connection (32 to 65mm)

CHARGE NO LONGER REQUIRED (NOW INCORPORATED IN CHARGES 10 & 34)

This charge is no longer required and will be discontinued, as:

- Charge 10 (Application for water service connection) covers the administration and contractor/inspection fees for water service connection applications of all sized services.
- Charge 34 (Hydraulic design assessment) is also applied where relevant to water service connection applications.

12. Application for Water Service Connection (80mm or greater)

CHARGE NO LONGER REQUIRED (NOW INCORPORATED IN CHARGES 10 & 34)

This charge is no longer required and will be discontinued, as:

- Charge 10 (Application for water service connection) covers the administration and contractor/inspection fees for water service connection applications of all sized services.
- Charge 34 (Hydraulic design assessment) is also applied where relevant to water service connection applications.

13. Application to Assess Water Main Adjustment

CURRENT CHARGE = $297

Function Overview:

This charge covers preliminary advice as to the feasibility of a project and covers either:

1. A rejection of the project - in which case the fee covers the associated investigation costs, or
2. Conditional approval - in which case the fee covers the administration costs associated with the investigation and record amendment.

Process	
Register application	
Determine requirement for additional capacity	
Complete technical report	
Prepare advice	
Review advice	
Approve advice	
Issue advice	
Average time for function	**226 minutes**

PROPOSED CHARGE = $340.00

14. Standpipe Hire Security Bond

CURRENT CHARGES: **20 mm = $314**
32mm low flow = $382
32mm high flow and 50mm = $842

Function Overview:

Moneys paid by standpipe hirers and held in a public moneys account, refundable upon return of the standpipe in an undamaged state and upon payment of all outstanding hire and usage charges. The Bond is the actual purchase price of the standpipe.

PROPOSED CHARGES

20mm Standpipe	**$305.20**
32mm High Flow	**$817.45**
32mm Low Flow	**$370.55**
50mm	**$817.45**

15. Standpipe Hire – tri-annual & monthly fees

CURRENT CHARGES:

Tri-annual Fee (4 monthly)	**- 20mm**	**$42.95**
	- 32mm low flow	**$44.10**
	- 32mm high flow & 50mm	**$51.85**
Monthly Fee (or part thereof)	**- 20mm**	**$9.50**
	- 32mm low flow	**$10.60**
	- 32mm high flow & 50mm	**$18.35**

Function Overview:
Hire fees payable for the use of a portable metered standpipe owned by Hunter Water which is used to extract water from a water main.

Process: monthly reading fees	**Time**
Update monthly reading on CIS	3 mins
Update documentation in TRIM	2 mins
Average time for function	**5 minutes**

Process: tri-annual reading fees	
Update reading on CIS	6 mins
Book inspection of standpipe with contractor	2 mins
Update TRIM with details of inspection	2 mins
Average time for function	**10 minutes**

Calculation and proposed charges: monthly

20mm Standpipe	
Hunter Water costs	$5.85
Asset cost recovery*	$5.60
PROPOSED CHARGE	**$11.45**
32mm High flow standpipe	
Hunter Water costs	$5.85
Asset cost recovery*	$15.00
PROPOSED CHARGE	**$20.85**
32mm Low flow standpipe	
Hunter Water costs	$5.85
Asset cost recovery*	$6.80
PROPOSED CHARGE	**$12.65**

50mm Standpipe	
Hunter Water costs	$5.85
Asset cost recovery*	$15.00
PROPOSED CHARGE	**$20.85**

Calculation and Proposed Charges: Tri-annual

20mm Standpipe	
Hunter Water costs	$11.75
Contractor Cost for Inspection	$14.50
Asset Cost Recovery*	$5.60
PROPOSED CHARGE	**$31.85**
32mm High flow standpipe	
Hunter Water costs	$11.75
Contractor Cost for Inspection	$14.50
Asset Cost Recovery*	$15.00
PROPOSED CHARGE	**$41.25**
32mm Low flow standpipe	
Hunter Water costs	$11.75
Contractor Cost for Inspection	$14.50
Asset Cost Recovery*	$6.80
PROPOSED CHARGE	**$33.05**
50mm Standpipe	
Hunter Water costs	$11.75
Contractor Cost for Inspection	$14.50
Asset Cost Recovery*	$15.00
PROPOSED CHARGE	**$41.25**

*** Monthly asset cost recovery based on current costs and asset life of 5 years (using an annuity factor of 0.02 at 6.5%):**

20mm @ $280 for 60 months	= $ 5.60
32mm High Flow @ $750 for 60 months	= $15.00
32mm Low Flow @ $340 for 60 months	= $ 6.80
50mm @ $750 for 60 months	= $15.00

16. Standpipe Water Usage Fee

CURRENT CHARGE = As per water usage tariff per kilolitre ($2.08/kL)

Function Overview:

Charge per kilolitre of measured consumption on a standpipe.

PROPOSED CHARGE = As per approved water usage price per kilolitre ($1.90kL)

17. Backflow Prevention Device Application and Registration Fee

CURRENT CHARGE = $26.10

Function Overview:

Charge for the initial registration of a backflow prevention device.

Process
Initial purchase and order of Backflow Prevention books
Review of test report by retail operations
Consultation with hydraulic design inspector
Consultation with tester/plumber
Identify customer on CIS
Create new field in Backflow Database
Backflow Data Entry (failed notice - assume 5% failure rate)
Issue of letters for initial reports not received (assume 10% discovered by HWC proactively)
Follow up on initial letters not received
Enter initial reports received

Calculation and proposed charge	
Hunter Water costs	$31.92
Australia Post - standard envelope	$0.58
PROPOSED CHARGE =	**$32.50**

18a). Backflow Prevention Device Annual Administration Fee

CURRENT CHARGE: $17.10

Function Overview:

Charge for administration costs associated with the maintenance of backflow prevention device records (including the logging of inspection reports).

Process
Ongoing purchase and order of backflow prevention books
Review of test report received at retail operations
Consultation with plumbing inspectors
Consultation with tester/plumber
Identify customer on CIS
Backflow data entry (failed notice - assume 5% failure rate)
Enter passed reports received
Send backflow reminder letters - assume 20%
Follow up on reminder letters not received
Enter passed reports received

Calculation and Proposed Charge	
Hunter Water costs	$20.20
Australia Post - standard envelope	$0.58
PROPOSED CHARGE	**$20.80**

18b). Backflow Device Test

CURRENT CHARGE = $272

Function Overview:

In some cases, Hunter Water has to arrange a test of a customer's backflow device (as per the Customer Contract) due to the inherent risk faced by the Corporation. Hunter Water has two potential courses of action: (1) to disconnect the customer from mains supply; (2) to arrange for a test on behalf of the customer and pass on the costs to the customer. In the past, the costs of administering the arrangement of a backflow test through an external provider and then passing on the costs had not been recovered. This charge incorporates these costs in the external providers charges and provides an incentive for customers to arrange their own backflow tests.

A customer is sent a reminder notice 2 weeks after the due date for an annual test to be conducted has passed. If they fail to send a test result within 6 weeks, a second reminder notice is sent. If within 2 weeks they do not comply with the notice, Hunter Water takes action by either sending a disconnection notice or arranging for a test to be conducted on behalf of the customer. The administration group contacts the customer to seek a preferred path to take at that time. If the customer requests that Hunter Water arrange a backflow test, the reimbursement of costs for the test and this administration fee apply.

Process
Create and send final reminder notice
Update backflow database
Create customer contact in CIS
Contact customer to determine course of action
Notify and engage Civil Services to arrange testing
Civil services engage and manage contractors to perform testing
Identify customer on CIS
Enter details on backflow database

Calculation and proposed charge

Hunter Water Costs	$120.64
Test Fee *	$191.36
PROPOSED CHARGE =	**$312.00**

* Backflow test charge (at Hunter Water rates) = $191.36 per test (average cost of three external providers, performing a test only)

19. Major Works Inspection Fee

CURRENT CHARGE =

Watermains	**=**	**$7.75 per metre**
Gravity sewermains	**=**	**$11.65 per metre**
Sewer risingmains	**=**	**$7.75 per metre**
Pressure sewermains	**=**	**$7.75 per metre**

Function Overview:

Charge for the inspection of water and sewermains constructed by developers that are longer than 25 metres and / or greater than 2 metres in depth. This fee also includes Work-as-Executed (WAE) drawings.

PROPOSED CHARGE =

Watermains	**=**	**$9.61 per metre**
Gravity sewermains	**=**	**$14.48 per metre**
Sewer risingmains	**=**	**$9.61 per metre**
Pressure sewermains	**=**	**$9.61 per metre**

20. Statement of Available Pressure and Flow

CURRENT CHARGE = $323

Function Overview:

Water pressure report detailing relative pressures in Hunter Water's mains. The charge covers assessment of available pressures at three specific flow rates from a single connection point to Hunter Water's main. Additional points of connection and flow values can be assessed at additional cost at the techncial services hourly rate (Charge No.52).

Explanation:

This charge reflects an average assessment for three flows including associated computer modelling. It also includes an estimate of the taken to process and assess these applications, particularly the input for modelling pressure levels within the water network.

Process	Time
Determine flow requirement	20 min
Complete pressure analysis	25 min
Receive Statement Of Available Pressure (SAP) response from Network Planning Group	25 min
Prepare SAP letter	95 min
Approve SAP letter	15 min
Forward SAP to consultant / applicant	15 min
Technical Services Hourly Rate (Charge No.52) if required	$100/hour
Average time for function	**195 Minutes**

PROPOSED CHARGE = **$311.00**

plus Technical Services Hourly Rate (if required)

21. Application to Connect/ Disconnect Sewer Services

(or for a Special Internal Inspection Permit)

CURRENT CHARGE = $140

Function Overview:

Charge applied to process applications to connect a new sewer service or to disconnect an existing sewer service.

Process	Time
Identify property in HWC customer services database (CIS)	5 min
Identify property on mapping system	2 min
Raise connection/disconnection case in CIS (including fees)	15 min
Receipt payment in CIS	3 min
Provide receipt to customer/agent	2 min
Update property information in CIS	10 min
Prepare sewer junction details	3 min
Average time for function	**40 minutes**

Calculations and proposed charge =	
Hunter Water costs	$46.96
Plumbing inspection cost	$25.24
PROPOSED CHARGE	**$72.20**

22. Application to Connect/ Disconnect Water & Sewer Services (combined application)

CURRENT CHARGE = $113

Function Overview:

Charge applied to process combined application to connect a new water and sewer service or to disconnect an existing water and sewer service.

Process	Time
Identify property in HWC customer services (CIS) database	2 min
Identify property on mapping system and determine size and type of main on SWIMS	5 min
Raise connection/disconnection Case against property account in CIS	15 min
Receipt payment in CIS	3 min
Update property information in CIS and prepare sewer junction details	15 min
Average time for function	**40 minutes**

Calculations and proposed charge	
Hunter Water costs	$46.96
Plumbing inspection costs	$25.24
PROPOSED CHARGE =	**$72.20**

23. Irregular & Dishonoured Payments

CURRENT CHARGES:

Banking authority:	
Irregular / dishonoured cheques	**$24.65**
Direct debit decline	**$27.45**
Australia Post:	
Irregular / dishonoured cheques	**$41.45**

Function Overview:

Functions relating to cheques returned by banking authorities as irregular or dishonoured, credit card payment declines and direct debit payment declines.

Process	
Identify property, raise fees against property account and process in CIS to reverse payment Prepare letter to customer Update details on computer	
Average time for function	**20 minutes**

Calculation and proposed charges: banking authority

Irregular / dishonoured cheques	
Fees imposed by bank	$10.00
Hunter Water costs	$23.48
PROPOSED CHARGE =	**$33.50**
Direct debit decline	
Fees imposed by bank	$ 2.50
Hunter Water costs	$23.48
PROPOSED CHARGE =	**$26.00**

Calculation and proposed charges: Australia Post:

Irregular / dishonoured cheques	
Fees imposed on Hunter Water	$15.00
Hunter Water costs	$23.48
PROPOSED CHARGE =	**$38.50**

24. Request for Separate Metering of Units

CURRENT CHARGES = $44.25 per plan

Function Overview:

Initial assessment of a request for separate sub-metering of individual units. This fee is applied per plan, regardless of the number of units.

Process	Time
Receipt fee	2 min
Identify property/ update CIS	2 min
Review application details	6 min
Set up TRIM folder and scan application	6 min
Log field activity with contractor for site inspection, copy and fax plan showing property location and proposed locations of meter frames	4 min
Prepare and scan letter of approval or non-compliance	5 min
Average time for function	**25 minutes**

Calculation and Proposed Charge

Hunter Water costs	$29.35
Australia Post costs	$0.58
PROPOSED CHARGE =	**$29.95/plan**

25. Unauthorised Connections

CURRENT CHARGE = $166

Function Overview:

Charge applied to a customer account to recover costs and appropriate application fees where a connected service is located, but no application to connect has been lodged with Hunter Water.

Note. Where an un-metered water connection is located, a meter is immediately affixed to the service by the contractor.

Process	Time
Preparation of non-compliance letter or phone call to plumber and/or owner	5 min
Receipt fee	3 min
Add customer contact details in HWC customer services (CIS) database	3 min
Confirm sewer connection for billing purposes	3 min
Account management – allocate meter to meter-read route and sequence meter, create service agreements & adjust bill cycle in CIS	6 min
Average time for function	**20 minutes**

Calculation and proposed charge

Hunter Water costs	$23.48
Application fee (refer Charge 10)	$72.20
Contractor cost to affix meter	$12.65
PROPOSED CHARGE =	**$108.00**

26. Building Plan Stamping

CURRENT CHARGE = $13.00

Function Overview:

All new building and development plans require revision and stamping by Hunter Water staff to certify the proposed construction does not adversely impact on Hunter Water's assets.

Process	Time
Identify property on mapping system	2 min
Confirm asset location in relation to proposed building/ development	1 min
Confirm any further development requirement	3 min
Lay HWC stamp upon customers building plan (up to 6 copies)	3 min
Log customer contact against relevant property account on CIS	1 min
Average time for function	**10 minutes**

PROPOSED CHARGE = $11.75

27. Determining Requirements for Building Over / Adjacent to Hunter Water Sewer or Easement

CURRENT CHARGE = $93.90

Function Overview:

Attaching conditional requirements to Council approved building plans to safeguard Hunter Water assets.

Process	Time
Assess requirement for build over sewer assessment	5 mins
Complete application & relevant fees in CIS against property account (including provision of receipt to customer)	5 mins
Register application on TRIM and scan documents	15 mins
Assess implications of encroachment	30 mins
Check precedents	30 mins
Type letter & mail to customer	30 mins
Record details on database	5 mins
Finalise TRIM file	15 mins
Average time for function	**135 minutes**

Calculations and proposed charge =

Hunter Water costs	$148.63
Australia Post costs - A4 envelope	$1.16
PROPOSED CHARGE =	**$150.00**

28a). Application to Hire a Metered Standpipe

CURRENT CHARGE = $184

Function Overview:

Process applications for the hire of a portable metered standpipe.

Process	Time
Process fee for application and issue receipt	2 min
Initial assessment of application and confirm completed checklist	20 min
Register file and attach documentation	10 min
Undertake company checks of applicant	10 min
Log details on standpipe register	2 min
Prepare and send notification of approval	5 min
Create new customer record on CIS	20 min
Create service agreements and charges	4 min
Affix new meter to customer account on CIS	3 min
Finalise paperwork and issue standpipe	20 min
Receipt security bond	2 min
Establish account record and input initial meter reading	2 min
Account management, update documentation in TRIM	10 min
Average time for function	**110 minutes**

Calculation and proposed charge

Hunter Water costs	$129.14
Australia Post costs: A4 size envelope	$1.16
Contractor costs: (Fee charged by contractor to issue standpipes)	$38.50
PROPOSED CHARGE	**$169.00**

28b). Breach of Standpipe Hire Conditions

CURRENT CHARGE = Breach 1 - $22.35 Breach 2 - $28.10 Breach 3 (Step 1) - $32.45
Breach 3 – Step 2 (customer fails to return standpipe) - $35.35

Function Overview:
Fees applied to a customer's account each time a breach of the terms and conditions of their hire agreement is made. Examples of a breach in conditions are failure to provide a standpipe meter reading, failure to pay an account, or using a standpipe at a hydrant that is not approved (due to low pressure). The standpipe agreement advises the customer 3 breaches of the standpipe hire Conditions can result in termination of the Agreement. There is a significant difference in the processing time for each stage of the breach process, therefore each stage attracts its own charge. Note Hunter Water has based the charges on the most common (but the lower cost) breach process which relates to the failure to provide a standpipe meter reading. Other breach types involve both more time and cost to Hunter Water.

Breach 1 Process	**Time**
Review billing error and confirm last reading on CIS	1 min
Enter estimate read on CIS	2 min
Complete pending bill on CIS	2 min
Prepare breach letter and enter document in TRIM	8 min
Add notations to CIS	2 min
Average time for function	**15 minutes**

Breach 2 Process	
Review billing error and confirm last reading on CIS	1 min
Review notations on current breach on CIS/TRIM	2 min
Enter estimate read on CIS	2 min
Complete pending bill on CIS	2 min
Prepare breach letter and enter document in TRIM	8 min
Add notations on CIS and update internal tracking spreadsheet	5 min
Average time for function	**20 minutes**

Breach 3 Process*	
Review billing error and confirm last reading on CIS	1 min
Review notations on current breach on CIS/TRIM	2 min
Enter estimate read on CIS	2 min
Complete pending bill on CIS	2 min
Prepare more comprehensive breach letter and enter document in TRIM	12 min
Add notations on CIS and update internal tracking spreadsheet	5 min
Monitor due date for return of standpipe	1 min
Average time for function	**25 minutes**

* Note: If customers return the standpipe as requested, this process ends at this point. If however they fail to return the standpipe, Step 2 of the process (as detailed below) is required and charged accordingly.

Breach 3 – Step 2 process**	
Customer or HW initiated contact to discuss options for return of standpipe- phone call	5 min
Preparation of declaration letter or customer file for debit recovery agent and enter into TRIM	15 min
Add notations on CIS and update internal tracking spreadsheet	5 min
Average time for function	**25 minutes**

**Note: further charges only applied to customers who do not return standpipe

Calculation and proposed charge:

Breach 1	
Hunter Water Costs	$17.61
Australia Post - standard postage	$0.58
PROPOSED CHARGE	**$18.20**

Breach 2	
Hunter Water costs	$23.48
Australia Post - standard postage	$0.58
PROPOSED CHARGE =	**$24.05**

Breach 3 – Step 1	
Hunter Water costs	$29.35
Australia Post - standard postage	$0.58
PROPOSED CHARGE =	**$29.95**

Breach 3 – Step 2	
Hunter Water costs	$29.35
Australia Post - standard postage	$0.58
PROPOSED CHARGE =	**$29.95**

29. Meter Affixtures/ Handling Fee

CURRENT CHARGE = $25.75 (up to 50mm light duty only)
= $19.65 (50mm or larger – delivery by HWC)

Function Overview:

Installation of a water meter to the water connection framework. Customers have three options, as follows, depending on the size of the water meter that is to be affixed:

1. Hunter Water arranges contractor to attend customer's property and affix meter.
2. For meters 50mm or larger, customers can arrange for a private plumber to collect the meter from Hunter Water's contractor and pay the respective handling fee. The customer then pays their plumber for the installation.
3. For meters 50mm or larger, Hunter Water can arrange delivery of the meter with the customer being required to pay the delivery fee.

Process	Time
Raise a field activity against relevant property account to advise contractors of meter affix, meter delivery or meter pickup required.	5 mins
Account management (enter meter details, bill cycle route, sequencing)	5 mins
	10 minutes

Up to 50mm light duty	
Contractor to affix meter	
Hunter Water costs	$11.74
Contractor costs	$71.50
	Inclusive of GST
PROPOSED CHARGE	**$83.25**
Meters delivered- 50 mm and above- affixed by private plumber	
Hunter Water costs	**$11.74**
Contractor costs = $71.50 (including GST)	**$71.50**
	Inclusive of GST
PROPOSED CHARGE	**$83.25**

30. Inspection of Non-compliant Meters

CURRENT CHARGES = $54.50

Function Overview:
Re-inspect a multi-occupancy development or stand alone property where a second inspection is required for separate metering, or meter installation, as meter assemblies were either non-compliant or were not accessible at the initial inspection. This fee is applied per development.

Process	
Review field activity to determine reason for non-compliance	
Preparation of non-compliance letter or phone call to plumber and/or owner	
Receipt fee when paid by customer to have meter assembly re-inspected.	
Log request to contractor to conduct plumbing inspection	
(1 x Field activity per development)	
Average time for function	**15 minutes**

Calculation and proposed charge	
Hunter Water costs	$17.61
Plumbing inspection contractor costs*	$38.50
	Inclusive of GST
PROPOSED CHARGE	**$56.10**
	Plus contractor hourly rate (if required)

* Contractor costs include contractor travel to site, inspect the meter assembly and complete field activity advising whether installation is compliant (or meter installed). Where more than one unit or inspection is required at a property, the Contractor meter inspection component is only applied once. Note if there are a large number of units and the inspection requires longer than 15 minutes, an hourly rate of $86.97 will be applied in place of the fee. In the case of a multiple-occupancy development, contractor costs for additional meters could be applied to this charge.

31. Services Requirement Audit

(Previously 'Standard Plumbing Inspections')

CURRENT CHARGE = (a) General plumbing inspection - $105.65 (b) Additional recycled water connection inspection - $109.00 (c) Hourly rate for commercial & industrial plumbing inspections - $77.25

Function Overview:

The current Charge 31 relates to inspections of specific plumbing works to confirm compliance with the current plumbing legislation (NSW State Code of Practice: Plumbing & Drainage, and Australian Standard AS/NZS 3500). Due to the recent changes in plumbing legislation, Hunter Water will no longer be the regulator for the plumbing industry in our area of operations.

As a result, Hunter Water has been required to implement a Services Connection Policy. This policy details Hunter Water's requirements for the connection to water and sewer services within its area of operations. Hunter Water will also still be required to conduct inspections of plumbing works not covered by the new legislation.

This fee will cover the costs of inspections for industrial/commercial developments and large multi-unit residential developments, as identified during the hydraulic design assessment procedure e.g. trade waste facilities installation, backflow prevention devices, water metering configuration compliance, pump to sewer, non-standard sewer and water services, etc.

Process	
Answer enquiries/collect data history	
Identify property on CIS	
Create field activity & receipt fees	
Perform Inspection	
Update of field activity	
Follow Up from hydraulic identification - no inspection booked	
Average time for function	**115 minutes**

PROPOSED CHARGE = **$91.75**

32. Connecting to or Building Over / Adjacent to a Stormwater Channel for a Single Residence

Current Charge = $79.85

Function Overview:

Process applications from customers connecting a single residence to a stormwater channel or erecting a single residence over / adjacent to a stormwater channel held by Hunter Water.

Process	Time
Take application at counter	10 mins
Prepare file	15 mins
Prepare letter of reply	30 mins
Record details on database	15 mins
Finalise TRIM file	5 mins
Average time for function	**75 minutes**

PROPOSED CHARGE = $90.20

33. Stormwater Channel Connection

CURRENT CHARGE = $ 281

Function Overview:

This charge applies where new developments are required to drain to Hunter's Water stormwater channels rather than the normal street drainage system. The charge covers the time taken to conduct a technical assessment.

Process	Time
Determine impact on stormwater system	15 min
Assessment/response from strategic operations	60 min
Complete stormwater technical assessment and letter	60 min
Prepare & issue stormwater channel connection approval letter	30 min
Average time for function	**175 minutes**
PROPOSED CHARGE =	**$322.00**

34. Hydraulic Design Assessment

CURRENT CHARGE

Price Tier	Description	Cost
1	**Base fee - up to 10 design drawings**	**$290**
2	**Base fee plus $23/additional drawing up to 50 drawings: -**	
	• **Minimum Fee for 11 drawing set**	**$290**
	• **Maximum Fee for 50 drawing set**	**$1,322**
3	**Over 50 drawings by Quotation**	**Quote**

The current charges are based on the number of drawings submitted in a Hydraulic Design Assessment application. Due to the recent changes in plumbing legislation, Hunter Water has been required to implement a Services Connection Policy. This policy details Hunter Water's requirements for the connection to water and sewer services within its area of operations. It is anticipated that this change will result in a fewer number of drawings submitted to satisfy Hunter Water's Services Connection Policy requirements.

Hunter Water has reviewed the current charge schedule in line with the proposed services connection policy and has determined that it is not the most appropriate form of pricing methodology.
As a result, the current charge has been reconfigured and repackaged into four different categories of "Hydraulic Design Assessment". Each category has a charge based on anticipated relative workload. Rather than relying on the number of drawings submitted as a guide to the complexity of the application, it is proposed to set the price tiers relating to the proposed water service size. This approach provides a fairer representation of the complexity of the application, resulting in a more accurate indication of time required to complete the hydraulic design assessment. For the majority of customers the hydraulic design assessment fee will be reduced.

Hydraulic assessment records from 2010 and 2011 were analysed to categorise hydraulic applications. A total of 205 hydraulic applications were assessed during the timeframe, and the data is shown in the table below.

Development Type	Characteristic: Water Service Size/ Component	Percentage
Non- Residential 75%	25-40mm	75%
	>40mm	25%
	Trade Waste Discharge	45%
Residential 25%	25-40mm	50%
	>40mm	50%

Function Overview:

The new Hunter Water services connection policy requires applicants to prepare and submit a hydraulics design for review and approval where the development requires:

- Water services of 32mm diameter or greater
- More than 2 residential units on 1 lot
- A water meter greater than 25mm
- Large domestic or fire water demands
- Potential trade waste or alterations to existing trade waste installation
- Water supplied for use in manufacturing processes
- Water meter upsize or downsize
- A private pressure sewer pump system (other than common pump effluent)

- "Outside normal connection" criteria
- Multiple water metering systems
- An alternative water supply system (other than rainwater)
- Multiple underground rain water tanks where Hunter Water drinking water supply could be connected – directly or indirectly

This design review is required to confirm compliance with Hunter Water service connection requirements, correct application of the applicable Australian standards, ensuring that Hunter Water's infrastructure is not adversely impacted by the customer upon connection.

Explanation:

This is the stand alone fee for assessment of water and sewer services for a development proposing to connect to Hunter Water's existing infrastructure network. The base fee includes assessment of the point of connection to a standard water main frontage and sewer connection point for the lot. Drawings must be formatted to comply with our services connection policy.

Process - residential 25-40mm service	
Determine hydraulic design assessment category	
Complete residential hydraulic assessment	
Prepare hydraulic design assessment letter	
Approve hydraulic design assessment letter	
Forward hydraulic assessment letter to consultant	
Average time for function	**185 minutes**

Process - residential >40mm service	
Determine hydraulic design assessment category	
Complete residential hydraulic assessment	
Onsite inspection	
Prepare hydraulic design assessment letter	
Approve hydraulic design assessment letter	
Forward hydraulic assessment letter to consultant	
Average time for function	**245 minutes**

Process – Non Residential 25-40mm service	
Determine hydraulic design assessment category	
Complete non-residential hydraulic assessment (allowance of 140 minutes for assessment, larger developments over this allowance may be charged additional Technical Services – hourly rate fee)	
Onsite inspection	
Prepare hydraulic design assessment letter	
Approve hydraulic design assessment letter	
Forward hydraulic assessment letter to consultant	
Additional allowance for trade waste component	
Average time for function	**305 minutes**

Process – Non Residential >40mm service	
Determine hydraulic design assessment category	
Complete residential hydraulic assessment (allowance of 160 minutes for assessment, larger developments over this allowance may be charged additional Technical Services – hourly rate fee)	
Onsite inspection	
Prepare hydraulic design assessment letter	
Approve hydraulic design assessment letter	
Forward hydraulic assessment letter to consultant	
Additional allowance for trade waste component	
Average time for function	**325 minutes**

PROPOSED CHARGES =

Price Tier	Description	Cost
1	**Residential 25-40mm**	**$226.00**
2	**Residential >40mm**	**$270.00**
3	**Non- Residential 25-40mm**	**$323.00**
4	**Non- Residential >40mm**	**$354.00**

35. Pump Station Design Assessment

CURENT CHARGE: **Water Pump Station = $3,793**
Sewer Pump Station = $4,177
Recycled Water Pump Station = $3,793

Function Overview:

Pump station designs prepared by consultants engaged by the development community are reviewed and approved to ensure compliance with Hunter Water design and operating standards. As pump stations are complex and business-critical to Hunter Water, design criteria requires a high degree of scrutiny. The time involved is reflected in the charge.

Hunter Water relies on the design consultants engaged by the development community to provide high quality and error free designs. The assessment fee includes review at two hold points in the design process – 'Concept' and 'Detail' design review of final contract documentation is also undertaken.

The charge for a sewer pump station assessment includes the cost of assessing the associated rising main design. Water and sewer reticulation designs are incorporated in separate service fees. Poor quality designs, requiring further review, attract an additional charge at the technical services hourly rate. Environmental assessment is covered by a separate application fee (Charge 56).

Process/Time (min)	Water	Sewer	Recycled Water
Receipt charges	15	15	15
Complete preliminary assessment	20	20	20
Preliminary technical assessment	30	30	30
Planning review	600	600	600
Compile and review comments	45	60	45
Detailed design review	260	270	260
Planning review	600	600	600
Compile and review comments	90	90	90
Prepare works contract	140	140	140
Prepare rising main design review	0	280	0
Sign off contract release	30	30	30
Technical services hourly rate if required	$100 per hour	$100 per hour	$100 per hour
Average time for function	**31 hours**	**36 hours**	**31 hours**

PROPOSED CHARGE =

Water pump station	**$4,342.00**
Sewer pump station	**$4,782.00**
Recycled water pump station	**$4,342.00**

36. Application to Assess Sewer Main Adjustment

CURRENT CHARGE = $387

Function Overview:

This covers preliminary advice as to the feasibility of the project and will cover either:

1. A rejection of the project in which case the fee covers the associated investigation costs, or
2. Conditional approval in which case the fee covers the administration costs associated with the investigation and record amendment.

Explanation:

From time to time developers seek formal guidance from Hunter Water with respect to adjusting services. This may be triggered by road works or other works proposed to be undertaken by the developer that is not normally covered by a development assessment application.

Process	
Register application	
Determine requirement for additional capacity	
Complete technical report	
Prepare advice	
Review advice	
Approve advice	
Issue advice	
Average time for function	**230 minutes**

PROPOSED CHARGE = $443.00

37. Indicative Developer Charge Application

CURRENT CHARGE = $224

Function Overview:

Applicants lodge preliminary details of developments to enable a developer charge to be calculated. This fee covers determination of developer charges. The developer charge is indicative only and a formal application is required if the developer wishes to proceed to purchase system capacity.

This charge provides a 'short cut' to the full development application process. It provides advice on developer charges only and covers the time required to process a preliminary application.

Process	
Register application	
Calculate developer charges	
Prepare letter	
Review letter	
Approve letter	
Issue developer charge advice	
Average time for function	**225 minutes**

PROPOSED CHARGE = $255.00

38. Revision of Development Assessment Requirements

CURRENT CHARGE = $321

Function Overview:

As a result of lodging an application to determine requirements under Section 50 of the Hunter Water Act, Hunter Water issues a 'Notice of Requirements' letter containing these requirements. Requirements are valid for 12 months from the date of issue of the Notice. Should the notice lapse and the developer then wish to proceed, they are required to make a subsequent application to Hunter Water for review of all aspects of the development proposal.

Due to: the dynamic nature of our systems; capacity limitations; changing design standards and/or operating environment; it is necessary to review requirements after 12 months from the date of initial determination. This fee excludes the administrative cost of the original application.

Process	Time
Assign application	15 min
Calculate developer charges	20 min
Determine requirements of additional capacity	15 min
Determine reimbursement	15 min
Complete technical report	90 min
Prepare and issue revised requirements letter	70 min
Average time for function	**225 minutes**

PROPOSED CHARGE = $368.00

39. Bond Application

CURRENT CHARGE = $1,463

Function Overview:

This fee covers the lodging and release of a bond (and an estimation of the cost of outstanding works), where a developer wishes to provide security in lieu of constructing works to facilitate early release of a Hunter Water Section 50 Compliance Certificate.

On occasions, Hunter Water is requested to accept a bond to cover the costs of outstanding works and, in return, allow early release of the Compliance Certificate for a development application. This charge covers preparation of an estimate of the value of the works for a single asset eg a sewer pump station and rising main. Additional assets that are incomplete attract additional assessment fees, due to the additional estimating involved. Hunter Water's legal fees in preparing special Deeds of Agreement and associated collateral agreements are to be paid by the developer at cost.

Process	
Approve scope of bond requirements	
Determine design / construction phase of bond	
Approve bond amount	
Draft bond letter	
Approve bond letter	
Sign-off bond letter	
Forward bond letter	
Bond lodgement	
Bond release	
Additional assessment/estimating at the technical services hourly rate for each additional asset	$100 per hour
HWC Legal Fees	AT COST
Average time for function	**995 minutes**

PROPOSED CHARGE = **$1,676.00**

Plus Technical Services Hourly Rate for each additional asset

40. Bond Variation

CURRENT CHARGE = $211

Function Overview:

Occassionally Hunter Water is requested to reduce bond securities held, based on partial completion of works. In such cases the value must be estimated, a new bond offered and the old one returned. This charge covers Hunter Water's administration cost for these processes.

Process	
Bond variation	
Average time for function	**120 minutes**

PROPOSED CHARGE = **$242.00**

41. Development Assessment Application

CURRENT CHARGE = $387

Function Overview:

As a result of lodging an application to determine requirements under Section 50 of the Hunter Water Act, Hunter Water issues a 'Notice of Requirements' letter containing these requirements. Requirements are valid for 12 months from the date of issue of the Notice. Applications for both those properties proposed to be developed and un-serviced properties proposing to connect for the first time, are subject to the same assessment procedure. Applications cover a variety of proposals ranging from minor developments, (eg boundary adjustments for which there may be no requirements, up to major developments, such as large subdivisions). Should the Notice lapse and the developer then wish to proceed, it is a requirement that the developer make a subsequent application to Hunter Water to permit review of all aspects of the development proposal and advise the developer accordingly of any changes.

This charge covers the basic processing of each application to determine if there are any requirements (eg developer charges) or the design and construction of works. Once requirements are met, a Certificate under Section 50 of the Hunter Water Act 1991 is issued and properties are permitted to connect to water and / or sewer systems. If there are further works requirements, additional charge(s) (dependent on the specific nature of the requirements) are payable.

Process	Time
Register application	30 min
Calculate developer charges	15 min
Determine requirement for additional capacity	20 min
Obtain capacity response from HWC's Planning Group	630 min
Approve reimbursement	35 min
Complete technical report	180 min
Prepare & issue notice letter	80 min
Follow up request for consent conditions (where required)	
Average time for function	**990 min**
PROPOSED CHARGE =	**$443.00**

42. Application for Water or Sewer Main Extension

CURRENT CHARGE = $387

Function Overview:

A property owner can apply for approval to extend the existing water and / or sewer mains of Hunter Water to an existing development. Hunter Water calculates appropriate developer charges and a possible extension option, based on system capacity and topographical constraints.

Processes are essentially the same as those for processing a Development Assessment Application (S.50) Notice of Requirements (Charge 41), therefore the same charge is applied.

Process	
Register application	
Determine requirement for additional capacity	
Complete technical report	
Prepare & issue advice	
Follow up request for consent conditions	
Average time for function	**120 minutes**
PROPOSED CHARGE =	**$443.00**

43. Assessment of Minor Works

CURRENT CHARGE = $693

Function Overview:

Some developments are in close proximity to the existing water and sewer services of Hunter Water and therefore require only relatively simple design and construction activities to provide a standard point of connection to these services. Where the necessary works are less than 25m in length and less than 2.5m in depth, they are considered to be 'Minor Works'. Works exceeding these requirements are classified as 'Major Works' (Charge 44a). The resources required to assess Minor Works designs are considerably less than those required for Major Works.

Hunter Water relies on the design consultant engaged by the developer to provide high quality and error free designs. A single review of a Minor Works design is completed by Hunter Water. Poor quality designs, requiring further assessment by Hunter Water, attract additional charges at the Technical Services hourly rate.

Process	
Assess minor works design	
Advise minor works design amendments	
Await minor works amendment response	
Approve minor works design / execute contract	
Attach executed minor works contract and plan	
Forward executed contract	
Send minor works information to Hunter Water's contracts group	
Technical services hourly rate	$100 per hour
Average time for function	**235 minutes**

PROPOSED CHARGE = $795.00

44a). Major Works Design Review & Contract Preparation

CURRENT CHARGE = $2,367

Function Overview:

This category consists principally of works required to service larger subdivisions or 'greenfield' sites. As a result of the works being large scale (including not only reticulation systems but also lead-in works), applicants are required to engage accredited design consultants to prepare the designs. The Major Works Assessment fee excludes the work-as-executed survey and connections costs to water mains - these fees are charged separately. Environmental assessment, if required, is also covered by a separate service fee. Hunter Water also inspects the quality of the works ensuring compliance with Hunter Water Standards – these fees are charged separately.

Hunter Water relies on the design consultant engaged by the developer to provide high quality and error free designs. A two phase review of the Major Works design is completed by Hunter Water – 'Preliminary' and 'Final'. Poor quality designs, requiring further assessment by Hunter Water, will attract the fixed "major works design re-assessment fee".

Process	
Receive and review design assessment plans	
Send water design plans to HWC's network operations group for review	
Receive water design response from strategic operations	
Complete major works design assessment	
Approve design assessment and marked-up plans	
Forward amended design assessment to consultant (customer)	
Check final plans	
Create instrument of agreement	
Sign contract and stamp final plans	
Design re-assessment (if required)	$358
Average time for function	**555 minutes**

PROPOSED CHARGE = $2,709.00

44b). Major Works Design Re-Assessment

CURRENT CHARGE = $312

Function Overview:

When the quality of a major works design is poor, re-submission of the design by the developer's consultant is required. This necessitates Hunter Water applying an additional round of design assessment. In such circumstances, the 'major works design re-assessment' charge is applied (in each instance).

The charge includes re-checking the design against design review comments initially offered and checking that the design is sufficiently complete to allow it to go through to the next round of design preparation and documentation.

PROPOSED CHARGE = $358.00

45a). Connect to Existing Water System - Major Works

(Valve Shutdown)

CURRENT CHARGE = $674

Function Overview:

In order to connect major developments to the water supply system a tee and valve must be inserted. This fee applies when the developer elects to insert the tee and valve. Hunter Water determines the most appropriate shut down method to allow connections to existing fittings. This fee covers shutdown using valves and recharging the main.

Process	
Identify the shutdown area	
Advise customers of the service interruption	
Shutdown of the watermain using valves	
Audit of the contractors work	
Restore water supply	
Average time for function	**340minutes**

PROPOSED CHARGE = $657.00

45b). Connect to Existing Water System – Major Works

(Non-Valve Shutdown)

CURRENT CHARGE = $279

Function Overview:

In order to connect major developments to the water supply system a tee and valve must be inserted. This fee applies when the developer elects to insert the tee and valve. Hunter Water determines the most appropriate shut down method to allow connections to existing fittings. This fee covers shutdown using a non-valve method (e.g. AquaStop inflatable in-line plug in the main) and recharging the main. The developer engages an approved contractor to perform the shutdown.

Process	
Identify the shutdown area	
Advise customers of the service interruption	
Average time for function	**145 minutes**

PROPOSED CHARGE = $280.00

46a). Insertion or Removal of Tee and Valve
(Valve Shutdown and Charge Up)

CURRENT CHARGE = $1,023

Function Overview:

In order to connect major developments to the water supply system a tee and valve must be inserted. This fee applies when the developer elects for Hunter Water to insert the tee and valve. Hunter Water determines the most appropriate shut down method to allow connections to existing fittings. This fee covers shutdown using valves, insertion of the tee and valve and recharging the main. This fee has been calculated on the basis that the developer provides all materials and performs any digging required to insert the tee and valve. A quotation will be supplied to those developers who request Hunter Water to perform the whole job (i.e. excavation, shutdown, supply and install fittings, recharging main).

Process	
Identify the shutdown area	
Advise customers of the service interruption	
Shutdown of the watermain using valves	
Insert tee and valve	
Restore water supply	
Average time for function	**535 minutes**

PROPOSED CHARGE = $1,034.00

46b). Insertion or Removal of Tee & Valve
(Non-valve Shutdown and Charge Up)

CURRENT CHARGE = $627

Function Overview:

In order to connect major developments to the water supply system a tee and valve must be inserted. This fee applies when the developer elects for Hunter Water to insert the tee and valve. Hunter Water determines the most appropriate shut down method to allow connections to existing fittings. This fee covers shutdown using a non-valve method (e.g. AquaStop inflatable in-line plug in the main), insertion of the tee and valve and recharging the main. The developer engages approved contractor to perform the shutdown.

This fee has been calculated on the basis that the developer provides all materials and performs any digging required to insert the tee and valve. A quotation will be supplied to those developers who request Hunter Water to perform the whole job (i.e. excavation, shutdown, supply and install fittings, recharging main).

Process

Identify the shutdown area

Advise customers of the service interruption

Insert tee and valve

Restore water supply

Average time for function **340 minutes**

PROPOSED CHARGE = **$646.00**

47. Application for Additional Sewer Connection Point

CURRENT CHARGE = $281

Function Overview:

Existing developments requiring an alternative sewer connection point within the development lot must make an application to Hunter Water to allow investigation and notification of requirements.

This charge covers processing of the application and connection advice to the applicant. It may be necessary for the applicant to engage an accredited design consultant to complete investigation of design options and make a recommendation to Hunter Water. Assessment of any resulting design or construction works are covered by other service charges.

Process
Register application
Determine requirement for additional capacity
Complete technical report
Prepare & issue advice

Average time for function	**230 minutes**

PROPOSED CHARGE =	**$322.00**

48. Tee and Valve Connection

CURRENT CHARGE = $205

Function Overview:

Water services greater than 80mm diameter require special connection arrangements to Hunter Water's mains and are covered by an agreement and technical specification prepared on application.

This charge covers the processing of an application for Tee and Valve connection in a large water main. .

Process	Time
Receive & receipt application & forward to Hunter Water's Network operations group for review	35 min
Prepare tee and valve technical report	90 min
Prepare tee and valve letter & mailing procedures	70 min
Average time for function	**195 minutes**

PROPOSED CHARGE = $255.00

49. Minor Works Inspection Fee

CURRENT CHARGE = $181

Function Overview:

Works constructed under minor works contracts must be audited to ensure that specified quality is being achieved

Process	
Administration of the contract	
On-site auditing to ensure materials and construction methods meet HWC standards (including follow-up checks during the 12 month maintenance period)	
Work-as-executed information detailed for inclusion in HWC plans and GIS (SWIMS) database	
Average time for function	**240 minutes**

PROPOSED CHARGE = $207.00

50. Major Works Inspection & WAE Fee

CURRENT CHARGE =	**Water Pump Stations**	**= $4,844**
	Sewer Pump Stations	**= $6,562**
	Recycled Water Pump Stations	**= $4,844**

Function Overview:

Comprises inspection / audit of works constructed under major works contracts to ensure that specified quality is achieved. Work-as-executed (WAE) comprises survey of the constructed work and modifying plans to detail the precise location of the work for inclusion in Hunter Water's GIS (SWIMS) database.

Both minor and major works inspection fees are applied by Hunter Water's contracts group for the management of works undertaken by developers. Contract management includes:

1) Review of the contractor's safety management plans, and
2) Regular inspection / audit of works to ensure that only approved materials are used and that the works comply with Hunter Water's standards.

Inspection fees for major and minor works also include components for collection of WAE data and subsequent survey information to ensure that the works are accurately updated on Hunter Water's GIS. The fees are approximately 4% of the estimated value of the assets constructed. This percentage compares favourably with contract management costs for capital works, which may range from 4% to 10%.

Process

Management of the contract

On-site auditing to ensure materials and construction meet Hunter Water standards (including follow-up checks during the 12 month defects period)

Pre-commissioning and commissioning inspections

Work-as-executed information detailed for inclusion in Hunter Water's GIS (SWIMS) database

PROPOSED CHARGE =

Water Pump Station	**$6,028.00**
Sewer Pump Station	**$8,165.00**
Recycled Water Pump Station	**$6,028.00**

51. Application to Assess Encroachment on Hunter Water Land, Easement Rights or Assets

CURRENT CHARGE = $387

Function Overview:

This charge is for a 'first pass' review of an application to allow Hunter Water to advise of requirements to be met and provision of a quote for additional, more detailed assessment.

Process	
Process application	
Refer to Hunter Water's property management group for comment	
Review by Hunter Water's network operations group (plan inspection etc.)	
Preliminary assessment of proposal	
Additional assessment at technical services hourly rate (if required)	$100 per hour
Average time for function	**160 minutes**

PROPOSED CHARGE = **$385.00**

Plus technical services hourly rate (if required)

52. Technical Services Hourly Rate

CURRENT CHARGE = $111 per hour

Function Overview:

This hourly, time-based fee provides for additional technical work to be undertaken where base services are exceeded.

Process	
Agreed work as required.	
Average time for function	**60 minutes or part there of**

PROPOSED CHARGE = $100 per hour

53. Remote Application Fee

CURRENT CHARGE = $240

Function Overview:

This charge covers applications made for a compliance certificate in an area remote from Hunter Water services. The charge covers the basic processing of each application to issue a certificate.

Explanation:

This service provides a more equitable charge for remote applications that only require a compliance certificate to be issued and avoids any technical assessment or assessment of developer charges.

Process	
Register applications	
Property management response	
Prepare section 50 certificate	
Review section 50 certificate	
Issue certificate (Certificate sent)	
Average time for function	**85 minutes**

PROPOSED CHARGE = $275.00

54. Preliminary Servicing Advice

CURRENT CHARGE = $366

Function Overview:

Some developers require advance advice of Hunter Water's likely water, sewer or recycled water requirements for a particular development. Usually the development would involve rezoning of land and/or would not have consent conditions issued by Local Council or the Department of Planning & Infrastructure at the time the application is lodged with Hunter Water. Any advice offered therefore is to be considered indicative only and can only be used as a guide.

This charge covers technical assessment of a proposed development and general advice on the level of developer charges. To determine preliminary advice is, in essence, the same as making an application under Section 50 for a formal Notice of Requirements.

Process
Register application
Identify DSP areas and charges
Determine requirements of additional capacity
Obtain capacity response from the Planning Group
Complete technical report
Prepare & issue preliminary servicing advice

Average time for function	**230 minutes**

PROPOSED CHARGE =	**$419.00**

55. Servicing Strategy Review

CURRENT CHARGE = $642

Function Overview: a) – Standard Review Process

Major developments often require preparation of water and sewer servicing strategies. In some circumstances, a recycled water servicing strategy may also be required. An Accredited Design Consultant is engaged by the developer to complete the necessary servicing strategies. Hunter Water reviews and approves these strategies to ensure that they are consistent with Hunter Water's broader regional strategies (where relevant), design standards and Operating Licence requirements. These reviews require considerable technical and engineering time/effort to review and typically are very complex to assess. This charge includes a preliminary and final review of each strategy. Each strategy (water, sewer and, if required, recycled water) attracts a separate Servicing Strategy Review fee. Hunter Water relies on the design consultant submitting high quality reports.

It is proposed that reports requiring further revisions will attract an additional fee per each review event (refer to the 55b) service description, below).

Process	
Receive comment from the planning group	
Review planning group's comments and strategy	
Prepare consultant response	
Await consultant comments	
Negotiate aspects of strategy	
Review final comments from consultant	
Approve strategy	
Technical services hourly rate ($100 per hour) if required	
Average time for function	**345 minutes**

PROPOSED CHARGE = $1075.00

Function Overview: b) – Additional Review Process

It is proposed that Servicing Strategies requiring additional review iterations by Hunter Water (ie in excess of the 2 review events included in the 55a) base fee), be charged a flat rate per event. The fee proposed provides for an average of 180 minutes of additional technical assessment per event.

Average time for function	**180 minutes**

PROPOSED CHARGE = $307.00

56. Environmental Assessment Report Review

CURRENT CHARGE = $642

Function Overview:

Major developments often require the preparation of an environmental assessment report for the water, sewer or recycled water infrastructure servicing the development. An accredited design consultant is engaged by the developer to complete the report. Hunter Water reviews and approves the report to ensure that it is consistent with legislation and the design requirements of Hunter Water.

This charge includes a preliminary and final review of the report. The review undertaken by Hunter Water requires the same time/effort as a servicing strategy review (Charge No. 55). Hunter Water relies on the consultant submitting high quality reports. Poor quality reports, requiring further revisions, attract additional fees at the technical services hourly rate.

Process	
Receive comment from the Planning Group	
Review Planning Group's comments and report	
Prepare consultant response	
Await consultant comments	
Negotiate aspects of report	
Review final comments from consultant	
Approve Report and Issue letter	
Technical Services Hourly Rate	**$100 per hour**
Average time for function	**345 minutes**

PROPOSED CHARGE =	**$1,075.00**
	Plus technical services hourly rate (if required)

57. Recycled Water Inspection and WAE Fee

CURRENT CHARGE = $10.60 per metre

Function Overview:

This charge is for the inspection/approval of recycled watermains constructed by developers that are longer than 25 metres and / or greater than 2 metres in depth.

Explanation:

The Charge Rate for Recycled Water is estimated to be 1.5 * $rate/metre for "Major Works Water mains". The rate adopted for "major works watermains" includes both watermain and consumer service. The cost rate for inspection and Work-as-Executed (WAE) for watermains and recycled watermains are the same. However, the level of inspection required from main to meter (consumer service) is significantly higher for recycled water than for potable water. To satisfy OHS compliance, 100% of recycled water consumer service require to be inspected.

Process
Approved material and colour for the drilling saddle/main tap
Drilling completed in accordance with standard
Approved work practices
Approved plumbing material/colour
Hydrostatic water test
Cross connection control at mains
Identification tape affixed
Locking device and tag installed on each water meter tap
Sand barrier and backfilling to standard
Stakes marking both services

PROPOSED CHARGE = $28.96 per metre

58. Reservoir Construction Inspection & WAE Fee

CURRENT CHARGE = Quote

Function Overview:

Comprises inspection / audit of reservoir construction works to ensure that specified quality is achieved. Work-as-executed (WAE) comprises survey of the constructed work and modifying plans to detail the precise location of the reservoir and associated work for inclusion in Hunter Water's GIS (SWIMS) database

Reservoir construction inspection fees are applied by Hunter Water's contracts group for the management of such works undertaken by developers. Contract management includes:

1) Review of the contractor's safety management plans, and
2) Regular inspection / audit of works to ensure that only approved materials are used and that the works comply with Hunter Water's standards.

Inspection fees for reservoir construction also include components for collection of (WAE) data and subsequent survey information to ensure that the works are accurately updated on Hunter Water's GIS (SWIMS) database. The fees are calculated on a job-by-job cost recovery basis.

Process	
Management of the contract	1hr/wk
On-site auditing to ensure materials and construction meet Hunter Water standards including follow-up checks during the 12 month defects period	7hrs/wk
Pre-commissioning and commissioning inspections	
Work-as-executed information detailed for inclusion in Hunter Water GIS	
Additional inspection and or management at the Technical Services Hourly Rate (if required)	$100/hour
Average time for function	**8hrs/wk**

PROPOSED CHARGE = Quote

59a). Inspection of a Water Cart Tanker

CURRENT CHARGE = $128

Function Overview:

Initial inspection of a new water cart tanker (or annual inspection of a water cart tanker) to ensure the air gap and backflow prevention is sufficient to protect HWC's potable water supply. The inspection location is negotiated with the customer (ie at either a field location nominated by the customer or at a HWC depot).

Process	Time
Process water cart tanker inspection fee	2 min
Arrange location & date for inspection with customer	3 min
Log inspection with plumbing inspector	3 min
Operations administrative functions (arrange for Inspector to attend site, record results & provide outcome to customer service staff)	12 min
Update water cart register	2 min
Prepare results letter & post to customer	5 min
Scan documentation to TRIM	3 min
Average time for function	**30 minutes**

Calculation and proposed charge

Hunter Water costs	$35.22
Australia Post	$0.58
Services requirement audit	$91.77
PROPOSED CHARGE	**$128.00**

59b). Reinspection of Water Cart Tanker Due to Non Compliance

CURRENT CHARGE = $111

Function Overview:

Reinspect a water cart tanker if non-compliant at initial inspection. The purpose of the inspection is to ensure the air gap and backflow prevention is sufficient to protect HWC's potable water supply. The inspection location is negotiated with the customer (ie at either a field location nominated by the customer or at a HWC depot). The fee is charged each time the tanker requires a follow-up inspection due to non-compliance.

Process	Time
Arrange location & date for re-inspection with customer	3 min
Process water cart tanker reinspection fee in CIS	3 min
Log inspection with plumbing Inspector	3 min
Update water cart register with results	3 min
Prepare results letter & post to customer	5 min
Scan documentation into TRIM	3 min
Average time for function	**20 minutes**

Calculation and Proposed Charge

Hunter Water costs	$23.48
Australia Post	$0.58
Services requirement audit	$91.77
PROPOSED CHARGE =	**$116.00**

60. Inaccessible Meter-reading Agreement

CURRENT CHARGE = $51.30

Function Overview:

Preparation of an agreement with a customer, whereby the customer provides HWC with water meter readings. This arrangement is necessary where the meter is not accessible to HWC as part of our normal meter reading processes. Both the customer's obligations and HWC's rights regarding access to the water meter are outlined in Section 10.4 of the Customer Contract.

Process	Time
Contact customer to establish a meter reading agreement with HWC (including negotiations with customer to advance matter through to agreement completion).	12 min
Prepare agreement/letter and mail to customer for signing	5 min
Follow up phone call/letter to obtain signed agreement.	5 min
Verify details of returned, signed agreement	2 min
Prepare letter and mail copy of signed agreement to customer	5 min
Update property notations on CIS	3 min
Scan related documents into TRIM file	3 min
Average time for function	**35 minutes**

Calculation and proposed charge:	
Hunter Water costs	$41.09
Australia Post postage cost	$0.58
PROPOSED CHARGE =	**$41.65**

61. Inaccessible Meter - Imputed Charge for Breach of Meter Reading Agreement

CURRENT CHARGE = $18.85 (plus imputed usage charge)

Function Overview:

Apply a charge for water and sewer usage when a customer breaches their meter reading agreement with HWC by failing to provide a meter reading within the specified time requested. The charge recovers the costs incurred in managing accounts when meter reading agreements have been breached and encourages the customer to provide a meter reading as per the agreement.

Both the customer's obligations and HWC's rights regarding access to the water meter are outlined in Section 10.4 of the Customer Contract. This charge allows for the additional cost associated with the inaccessible meter read compliance to be cost recovered. There is substantial time and effort invested in achieving full compliance with the Customer Contract.

Process	Time
Calculate estimated consumption and charges	4 min
Raise charges in CIS on customer account	3 min
Generate bill	1 min
Enter actual reading in CIS when received	3 min
Raise charges in CIS on customer account	4 min
Average time for function	**15 minutes**

Calculation components:

A = Annual average residential water consumption of 185 kls
B = Water usage rate per kilolitre for the financial year
C = Sewer usage rate per kilolitre for the financial year
D = Residential sewer discharge factor of 50%

Calculation: (A x B) + (A x D x C) / 3

Calculation and proposed charge	
Hunter Water costs	$17.61
PROPOSED CHARGE	**$17.60 plus imputed usage charge**

62. Damaged Meter Replacement

CURRENT CHARGE

20mm	**$78.95**	**25mm**	**$123**
32mm	**$167**	**40mm**	**$194**
50mm light meter	**$319**	**50mm heavy meter**	**$375**
65mm	**$476**	**80mm**	**$487**
100mm	**$509**	**150mm**	**$908**
250mm	**$3,149**	**300mm**	**$3,999**

Function Overview:

Replacement of meters wilfully or accidentally damaged by a third party as noted in Section 10.2 of the Customer Contract. In this situation the customer is responsible for the replacement cost of the asset. This does not include normal wear and tear.

Process	Time
Accept returned damaged meter at counter and process damaged meter replacement fee	4 min
Raise field activity on CIS and receipt payment	6 min
Average time for function	**10 minutes**

Calculation and proposed charges

20mm Meter

Hunter Water costs	$11.74
Contractor cost to affix replacement meter (new contract price quoted)	$12.65
Cost of meter	$36.00
PROPOSED CHARGE =	**$60.40**

25mm Meter

Hunter Water costs	$11.74
Contractor cost to affix replacement meter (new contract price quoted)	$12.65
Cost of meter	$76.00
PROPOSED CHARGE =	**$100.00**

32mm Meter

Hunter Water costs	$11.74
Contractor Cost to affix replacement meter (new contract price quoted)	$12.65
Cost of meter	$115.00
PROPOSED CHARGE =	**$139.00**

40mm Meter

Hunter Water costs	$11.74
Contractor cost to affix replacement meter (new contract price quoted)	$14.85
Cost of meter	$139.00
PROPOSED CHARGE =	**$166.00**

50mm Light Meter	
Hunter Water costs	$11.74
Contractor cost to affix replacement meter (new contract price quoted)	$93.50
Cost of meter	$250.00
PROPOSED CHARGE =	**$355.00**
50mm Heavy Meter	
Hunter Water costs	$11.74
Contractor cost to affix replacement meter (new contract price quoted)	$93.50
Cost of meter	$300.00
PROPOSED CHARGE =	**$405.00**
65mm Meter	
Hunter Water costs	$11.74
Contractor cost to affix replacement meter (new contract price quoted)	$93.50
Cost of meter	$390.00
PROPOSED CHARGE =	**$495.00**
80mm Meter	
Hunter Water costs	$11.74
Contractor cost to affix replacement meter (new contract price quoted)	$209.00
Cost of meter	$400.00
PROPOSED CHARGE =	**$621.00**
100mm Meter	
Hunter Water costs	$11.74
Contractor cost to affix replacement meter (new contract price quoted)	$214.50
Cost of meter	$420.00
PROPOSED CHARGE =	**$646.00**
150mm Meter	
Hunter Water costs	$11.74
Contractor cost to affix replacement meter (new contract price quoted)	$319.00
Cost of meter	$775.00
PROPOSED CHARGE =	**$1,106.00**
250mm Meter	
Hunter Water costs	$11.74
Contractor cost to affix replacement meter (new contract price quoted)	$407.00
Cost of meter	$3646.00
PROPOSED CHARGE =	**$4,065.00**
300mm Meter	
Hunter Water costs	$11.74
Contractor cost to affix replacement meter (new contract price quoted)	$616.00
Cost of meter	$4424.00
PROPOSED CHARGE =	**$5,063.00**

63. Affix a Separate Meter to a Unit

CURRENT CHARGE = $33.70

Function Overview:

Affix a meter to a unit within a registered Strata Plan where the meter frame is compliant with requirements. This fee will be applied for each meter that is affixed.

Process	Time
Receipt Fee	2 min
Identify property	2 min
Arrange contractor to affix meter	3 min
Amend meter and service agreement on CIS	8 min
Average time for function	**15 minutes**

Calculation and Proposed Charge	
Hunter Water costs	$17.61
Contractor costs	$38.50
PROPOSED CHARGE	**$56.10**

64. Recycled Water Meter Affix Fee

CURRENT CHARGE = $53.85

Function Overview:

Installation of a water meter to the recycled water connection framework for the recycled water supply. This fee covers the administration cost as well as the contractor cost to affix the meter to the meter frame.

Process	Time
Field activity raised in CIS for contractor to affix a water meter to the recycled water service	5 min
Field activity raised for contractor to verify that recycled water service is locked	5 min
If audit passes, update field activity	5 min
Account management (enter meter details, bill cycle route, sequencing)	5 min
Average time for function	**20 minutes**

Calculation and proposed charge

Hunter Water costs	$23.48
Contractor cost to affix meter	$12.65
PROPOSED CHARGE =	**$36.15**

65. Plumbing Non-Compliance Follow Up Inspection Fee

CHARGE NO LONGER REQUIRED (FUNCTION NOW PERFORMED BY NSW DEPARTMENT OF FINANCE & SERVICES)

As a result of the new plumbing legislation passed by the NSW Parliament in 2012, this function will now be performed by the NSW Department Of Finance And Services (not Hunter Water).

66). Application for Recycled Water Service Connection – Domestic

CURRENT CHARGE = (a) Pre-laid Service - $322 (b) Redevelopment - $411

Function Overview:

This function covers two separate connections types:

a) Pre-Laid Service: The processing of applications to connect a new recycled water service. The current charges also relates to mandatory inspections of recycled water service components to confirm compliance with the current plumbing legislation. Due to the recent changes in plumbing legislation, Hunter Water will no longer be the regulator for the plumbing industry in our area of operations. This function will now be conducted by NSW Fair Trading.

b) Redevelopment: The processing of properties being redeveloped and connecting to an existing recycled water service that has NOT been pre-laid. Hunter Water will still be required to conduct inspections of recycled water services where a new recycled connection is required. In this instance the inspection will include the recycled watermain drilling & the recycled property service.

Process	
Identify property on Hunter Water's customer services database	
Identify property on plan to confirm that recycled water is available.	
Raise a recycled water connection case against property account on customer services database including administration fees & inspection scheduling	
Receipt payment	
Update property information on customer service database	
Raise field activity for plumbing inspection	
Perform plumbing inspection (redevelopment only) – 60 minutes	
Average time for function	**40 minutes**

Calculation and proposed charge

a) Pre-laid service:	
Administration costs	$46.96
PROPOSED CHARGE	**$46.95**
b) Redevelopment:	
Administration costs	$46.96
Plumbing inspection costs	$91.77
PROPOSED CHARGE	**$138.75**

APPENDIX P ACTIVITY AND REVENUE SUMMARY - DEVELOPMENT APPLICATION FEE MISCELLANEOUS CHARGES

Table P.1 Activity and revenue summary – development application fee

Service No	Function	Description	Existing Charge	Proposed Charge ($12-13)	Predicted Quantity	Predicted Income
13	Application to assess a water main adjustment (Moving and fitting and / or adjusting a section of water main up to and including 25 metres in length)	Charge for preliminary advice as to the feasibility of a project and covers either: 1) A rejection of the project (in which case the fee covers the associated investigation costs); or 2) Conditional approval (in which case the fee covers the administration costs associated with the investigation and record amendment).	$297	$340	Included with Application Fee (no. 43)	Included with Application Fee (no. 43)
19	Major works inspection fee	Charge for the inspection of water and sewer mains constructed by developers that are longer than 25 metres and / or greater than 2 metres in depth.	a) Water mains - $7.75/m b) Gravity sewer mains -$11.65/m c) Rising sewer mains or LPSS - $7.75/m	a) $9.61/m b) $14.48/m c) $9.61/m	25,782m 32,346m 2,005m	$247,763 $468,372 $19,266
33	Stormwater channel connection	New developments unable to drain to the street drainage system may be serviced by a Hunter Water stormwater channel (if available). This charge covers the cost of the technical assessment.	$281	$322	7	$2,254
35	Pump station design assessment	Charge for the auditing of water, recycled water and sewer pump station designs prepared by consultants to ensure compliance with Hunter Water standards.	WPS: $3,793 SPS: $4,177 RWPS: $3,793	WPS: $4,342 SPS: $4,782 RWPS: $4,342	1 3 1	$4,342 $14,346 $4,342

Service No	Function	Description	Existing Charge	Proposed Charge ($12-13)	Predicted Quantity	Predicted Income
36	Application to assess sewer main adjustment	Charge for preliminary advice as to the feasibility of a project and covers either: 1) A rejection of the project in which case the fee covers the associated investigation costs, or 2) Conditional approval in which case the fee covers the administration costs associated with the investigation and record amendment.	$387	$443	Included with Application Fee (no. 43)	Included with Application Fee (no. 43)
37	Indicative developer charge application	Charge covers assessment of a proposed development and determination of indicative developer charges.	$224	$255	0	$0
38	Revision of development assessment	Charge covers the cost of recalculating a developer charge and reviewing the design and construction requirements.	$321	$368	208	$76,544
39	Bond application	Charge covers the lodging and release of a bond (and an estimation of the cost of outstanding works), where a developer wishes to provide security in lieu of constructing works to facilitate early release of Hunter Water Section 50 Compliance Certificate.	$1,463	$1,676	3	$5,028
40	Bond variation	Charge covers Hunter Water's administration cost for adjustment of securities.	$211	$242	1	$242
41	Development assessment application (S.50) *(previously application processing fee)*	Charge covers the basic processing of each application to determine if there are any requirements (eg developer charges), or the design and/or construction of works.	$387	$443	1364	$604,252
42	Application for water / sewer main extensions	Unserviced property owners can apply for approval to extend water and / or sewer mains. Hunter Water calculates appropriate developer charges and extension options based on system capacity and topographical constraints.	$387	$443	Included with Application Fee (no. 43)	Included with Application Fee (no. 43)

Service No	Function	Description	Existing Charge	Proposed Charge ($12-13)	Predicted Quantity	Predicted Income
43	Assessment of minor works	Some applications require relatively minor works (eg 1 in to 2 lot subdivisions in urban areas where water and sewer facilities are connected to the lot being subdivided). The resources required to assess minor works designs are considerably less than those required for large developments.	$693	$795	289	$229,755
44a)	Major works design review and contract preparation	This category consists principally of large subdivisions or 'greenfield' sites. As a result of the works being large scale, applicants are required to engage consultants to prepare designs. Following approval of designs, construction is supervised by Hunter Water, which also carries out the work-as-executed survey and connections to live water mains. These fees are separately charged.	$2,367	$2,709	143	$387,387
44b)	Major works design re-assessment	When a design consultant submits poor quality designs (associated with Charge 44a) it may be necessary for Hunter Water to complete an additional phase of design review. In such circumstances, the Major Works Design Re-Assessment charge is applied.	$312	$358	4	$1,432
47	Application for additional sewer connection point	Existing developments requiring alternative sewer connection points must make an application to Hunter Water. Charge covers the review of options and assessment of drawings or designs.	$281	$322	25	$8,050
49	Minor works inspection fee	Auditing of works constructed under minor works contracts to ensure that specified quality is being achieved.	$181	$207	246	$50,922
50	Major works inspection & WAE fee	Comprises inspection / audit of works constructed under major works contracts to ensure that specified quality is achieved. Work-as-executed comprises survey of the constructed work and modifying plans to detail the precise location of the work for inclusion in Hunter Water's GIS database.	a) WPS - $4844.00 b) SPS - $6,562.00 c) RWPS – $4,844.00	a) $6,028 b) $8,165 c) $6,028	1 3 0	$6,028 $24,495 $0

Service No	Function	Description	Existing Charge	Proposed Charge ($12-13)	Predicted Quantity	Predicted Income
53	Remote application fee	Charge covers applications made for a compliance certificate in an area remote from Hunter Water services and includes the basic processing of each application to issue a certificate.	$240	$275	76	$20,900
54	Preliminary servicing advice	Charge covers technical assessment of a proposed development and general advice on the level of developer servicing plan charges.	$366	$419	39	$16,341
55	Servicing strategy review	Major developments often require preparation of a servicing strategy for the whole development. Consulting engineers are engaged to prepare this strategy on behalf of a developer and Hunter Water reviews same, to ensure they provide optimal connection options and are consistent with current guidelines.	$642	$1075	35	$37,625
56	Environmental assessment report review	Developments often require preparation of Environmental Assessment Reports in association with water and sewer design and construction activities. Consultants are engaged by the developer to prepare this report and Hunter Water reviews same, to ensure outcomes comply with relevant legislative and regulatory requirements.	$642	$1075	1	$1,075
57	Recycled water inspection & WAE fee	Some developments require inspection and WAE services for dual reticulation (recycled water). This is in addition to the Major Works Water and Sewer Inspection Fees (Charge19).	$10.60/m	$28.96/m	2434	$70,496
58	Reservoir construction inspection & WAE fee	Comprises inspection / audit of reservoir works constructed under major works contracts to ensure that specified quality is achieved. Work-as-executed comprises survey of the constructed work and modifying plans to detail the precise location of the work for inclusion in Hunter Water's GIS database.	Quote	Quote	Quote	Quote
TOTAL INCOME						**2,301,257**

Source: Hunter Water

APPENDIX Q SUMMARY OF HWC RESPONSES TO 2009 REVIEW COMMENTS

Ref	Report Section[1]	Issue / Action Proposed	Hunter Water Response
1	Maintenance expenditure [2]	Rationalise the AOMS and Ellipse work order systems	Management currently reviewing the business case for integrating the approach under ellipse.
2		Implement electronic despatch	The preliminary work for this was done under the MARS program. This will now be considered as part of the ellipse upgrade
3		Implement GPS tracking	Completed - All HWC vehicles installed with GPS tracking
4		Implement use of tough-book / tablets	Completed
5	Opex business improvement[3]	Use of timesheets for maintenance staff.	All maintenance staff complete timesheets. Improvements to the existing system are envisaged and this will be considered as part of the new ellipse system.
6	Optimisation of maintenance expenditure[4]	Develop and integrate macro modelling of renewal requirements	Asset renewal management plan has been developed.
7		Develop and integrate renewal projections in long term financial models	See above
8	Efficiency related salaries and wages[5]	Merge asset ownership with strategic business management (ie SSS with the BS of BS&C)	Not adopted. Other organisation restructure initiated early 2012. All asst and capital planning now under Chief Operating Officer.
9	Future opex CI recommendations[6]	Undertake enhanced macro modelling of the renewal maintenance requirement to optimise the balance between reactive and planned maintenance	Program in place for water and sewer pipes. Renewal maintenance for pumps under preparation. Two-year rolling program for maintenance management developed and implemented for pumps and switchboards.
10		Implementation improvement opportunities in: - electronic work order despatch - in-vehicle GPS tracking - portable computer facilities	 Preliminary work has been done under MARS. This will now be developed under the new ellipse program. Completed Completed

Ref	Report Section[1]	Issue / Action Proposed	Hunter Water Response
11		Enhanced cost modelling to improve alignment between: - activities and systems - activities and service functions	Not yet implemented as this was scheduled to be rolled out with MARS. These improvements will be part of the new ellipse program.
12		Continue activity costing that facilitates alignment of costs and service categories	
13	Stormwater capex[7]	Review stormwater maintenance and identify average maintenance requirement for long-term opex planning	Capital expenditure review and operating expenditure review underway
14	Asset management - functions	Amalgamate the Strategy component of BS&C with SSS to avoid overlap	See box 8 above.
15		Amalgamate Business Services and People and Change to contain costs	Completed in 2012 organisation restructure. These areas now both report to Executive Officer/Company Secretary.
16	Investment planning[8]	Establish a connection between the 20 year investment plan and the Strategic Business Plan	The gateway approval process, business case development and the prioritisation tool all link back to the Strategic Business Plan.
17		Link the 20 year investment plan to the Ellipse system	To be considered if Ellipse technical upgrade adopted
18	Program management[9]	Integration of expenditure tracking into Ellipse	The integration was part of the MARS program and therefore the preliminary work has been done. This will now be rolled out under Ellipse. However, business intelligence systems are being been implemented which utilise better reporting and analysis of costs.
19		Tracking of project delivery against the gateway process	Tracking tool developed for treatment and network projects
20		Tracking of initial estimates, costs to date, forecast costs to complete, identification of re-phased costs, and recording of outturn costs	Under consideration as future improvement
21		Inclusion of details of the assets to be delivered and links to the asset registers for existing assets	Enhancements to the existing system are envisaged as part of the ellipse upgrade.

Ref	Report Section[1]	Issue / Action Proposed	Hunter Water Response
22		Focused link to project drivers – regulatory, statutory or other	Prioritisation framework links each project to strategic drivers and regulatory compliance drivers.
23		Inclusion of information on the impact on operating costs of the capital works	The business case and gateway processes require the capture of operating cost impacts of capital woks to be identified and captured in the opex forward estimates.
24	Catch-up efficiencies[10]	Management of contingencies at program level	Under consideration for future improvement
25		Ellipse based project expenditure tracking system	See 18 above

Source: Hunter Water

[1] Shown in the order in which they occur
[2] Review of Capital and Operating Expenditure of Hunter Water Corporation (2009 Determination) – Final Report (ver 2.4) – page 31
[3] Ibid page 32
[4] Ibid page 32
[5] Ibid page 38
[6] Ibid page 56
[7] Ibid page 89
[8] Ibid page 114
[9] Ibid page 120
[10] Ibid page 121-123

APPENDIX R IPART SUBMISSION CHECKLISTS

This Appendix presents IPART's various submission requirements and provides a guide to where the relevant requirement of question is addressed in the submission. The appendix provides two separate checklists covering:

- The submission content checklist from IPART's April 2011 submission guidelines
- The information requirements set out in Appendix B of IPART's June 2012 Issues Paper

Table R.1 IPART Submission Guidelines Checklist

IPART Requirement	Submission reference
An Executive Summary has been included	Chapter 1
Role and functions of the agency have been explained	Chapter 2
Performance over current determination period • Service levels • Revenue • Sales volumes and customer connections • Historic operating expenditure. Data presented in nominal $. • Historic capital expenditure. Data presented in nominal $. • Implementation of current determination under s.18(5) IPART Act	Chapter 3 and Appendix A Chapter 5 Chapter 6 Chapter 2
Standards of service • Explained service levels (quantity, quality and scope) for next determination period	Chapters 2 and 3
Forecast operating expenditure • 5 years of future operating costs by service are provided • Operating costs are in real $ of last year of current determination period • Drivers, justification and services levels are explained • A robust business case for proposed operating expenditure is presented • Explained key assumptions underlying forecasts and identified risks • Explained potential efficiency gains	Chapter 5
Forecast capital expenditure • 5 years of capital expenditure by service is provided • Capital expenditure is in real $ of last year of current determination period • Drivers, justification and service levels explained • A robust business case for proposed capital expenditure is presented • Explained key assumptions underlying forecasts and identified risks	Chapter 6 and Appendixes C, D and E
Elements of Regulatory Framework • Length of determination period • Other issues eg, prices charged between agencies	Chapter 7 Chapter 8
Proposed WACC, Depreciation and Asset Lives • Proposed WACC, WACC components and supporting analysis • Outline of proposed depreciation method	Chapter 7

IPART Requirement	Submission reference
• Proposed asset lives	
Sales Volumes • Sales volumes and methodology used to forecast sales	Chapter 4
Customer Numbers • Connection numbers by year and service (metropolitan water utilities)	Chapter 4
Outstanding Issues from the Previous Determination • Explanation of how outstanding issues have progressed with a summary of analysis in appendix	Appendix O
Proposed Prices • Proposed tariffs for each service over the next 5 years	Chapters 8, 9, 10, 13 and 14
Impacts of Proposed Prices • Transitional arrangements to manage or mitigate price changes • Rebates and other measures to mitigate price impacts • Other impacts, environment, section 15 etc • Analysis of affordability • Financial impacts on the agency	Chapter 11 and Appendixes I and J
Quality Assurance Requirements • QA check has been performed	Chapter 1 and Appendix Q

P.2 Issues Paper Information requirements

This section provides a guide as to where the information requirements set out in Appendix B of IPART's Issues paper are addressed. Mostly, the following provides a reference to particular parts of the submission. In some cases, where specific detail was requested, that is not outside the context of the chapters of the submission, it is provided below.

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1 The monopoly services Hunter Water delivered over the 2009 determination period, including service levels; that is the quantity, quality and scope of the services provided by Hunter Water.

Response: See Chapters 2 and 3 of the submission.

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2 The variations between the service levels forecast in the 2009 determination and the actual service levels delivered, and a detailed explanation of the reasons for variations.

Response: See Appendix A of the submission.

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3 The monopoly services and service levels that Hunter Water proposes to deliver over the 2013 determination period. How Hunter Water has determined the appropriateness of these service levels, and how these service levels relate to forecast costs. Where service levels are determined by Government policy, specific references to that policy or decision should be provided.

Response: See chapter 2 of the submission

4 The uncertainties/risks in Hunter Water's operating environment over the 2013 determination period and beyond, including the nature of these uncertainties/risks and the likelihood of them affecting specific costs and service levels (for example, electricity charges).

Response: See Chapter 5 of the submission

5 The appropriate length of the price path for the 2013 determination period and the reasons for this view.

Response: See Chapter 7 of the submission.

6 Hunter Water's actual and forecast operating expenditure by year over the 2009 determination period, drivers of this operating expenditure and service outcomes achieved.

Response: See Chapter 5 of the submission.

7 Comparison of Hunter Water's actual and forecast operating expenditure by year over the 2009 determination period with that allowed in the 2009 determination, and justifications for any differences.

Response: See Chapter 5 of the submission.

8 Hunter Water's projected operating expenditure by year over the 2013 determination period, drivers of this expenditure, the potential for efficiency gains, specific efficiency programs, service outcomes to be achieved, and stakeholders' willingness to pay for service levels.

Response: See Chapter 5 for operating cost information and Chapter 12 on stakeholder consultation.

9 The methodology and major assumptions used to develop Hunter Water's forecast operating expenditures.

Response: See Chapter 5 of the submission.

10 Clear separation between Hunter Water Corporation and its subsidiary Hunter Water Australia, and the underlying rationale and assumptions.

Response: See Chapter 5 of the submission.

11 Hunter Water's actual and forecast unregulated income for the 2009 and 2013 determination periods, and any yearly deductions proposed from the notional revenue requirement - ie, noting that deductions for unregulated income should not be made from actual and proposed operating or capital expenditures.

Response: See Chapter 5 of the submission.

12 Hunter Water's actual and forecast capital expenditure by year over the 2009 determination period, drivers of this expenditure and service outcomes achieved.

Response: See Chapter 6 and Appendix C

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13 Comparison of Hunter Water's actual capital expenditure by year over the 2009 determination period with that allowed in the 2009 determination, and justifications for any differences.

Response: See Chapter 6 and Appendix C

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14 Hunter Water's annual expenditures by year for each capital project proposed for the 2009 determination (as set out in the confidential Appendix D of Hunter Water's January 2009 submission).

Response: See Appendix B of the submission. Note: With IPART's agreement, the projects in Appendix D of the 2009 submission were revised after the final determination was issued in July 2009 to take account of IPART's final decision on allowable capital expenditure. The information presented in Appendix B relates to the revised Appendix D.

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15 Hunter Water's performance against the requirements of the 2009 determination, including the output measures listed in Appendix E in the 2009 Final Report.

Response: See chapter 5 and 6 and Appendixes A, B and C of the submission.

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16 Hunter Water's projected capital expenditure over the 2013 determination period; drivers of this expenditure; expected service outcomes; the robustness of the business case for these expenditures; the practicality of the projects being delivered within the proposed timeframe; the reasonableness of cost estimates; stakeholder willingness to pay for service levels; and the major capital projects driving these levels of expenditure.

Response: Most of this information is provided in Chapter 6 and Appendixes E and D. Chapter 12 for information on stakeholder consultation. Information about cost estimates is available to IPART in individual project gateway forms and business cases.

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17 Hunter Water's annual expenditures by year for each capital project proposed over the 2013 determination.

Response: See Chapter 6 and the Special Information Return (SIR)

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18 The value, timing and description of any contributions (including contributed assets) to Hunter Water from government and/or other sources by year.

Response: See Chapter 7 of the submission for Government contributions and Annual Information Return for projections of value and timing of contributed assets.

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19 The extent to which Hunter Water has carried out options analysis for proposed service delivery expenditures (eg, testing contestability of tasks and services provided, conducting cost benefit analysis and business case analysis).

Response: See Chapter 5 for details relating to operating expenditure and Chapter 6 and Appendix F for options details relating to capital expenditure. The Appendix F listing follows the template for outlining options that is set out on page 9 of IPART's April 2011 submission guidelines. Further details are contained in individual project business case documentation to be made available to IPART's consultants.

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20 Proposals for the 2013 determination period to undertake expenditure above regulatory requirements, or where there are no standards - ie, 'discretionary' expenditure. Hunter Water will need to provide evidence of customer support for this expenditure if it wishes to pass these costs through to customers.

Response: Hunter Water is not proposing any material discretionary expenditure in the 2013-14 to 2016-17 price determination period.

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21 Hunter Water's approach to meeting the environmental standards placed on it over the 2009 determination period. Also, Hunter Water's approach to assessing options available for meeting these environmental standards, and how it chose the options that met the standards at least cost.

Response: See Chapter 6 and Appendix F for summary listing of options considered. Further details are contained in individual project business case documentation to be made available to IPART's consultants.

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22 Hunter Water's approach to assessing options available for meeting environmental standards placed on it over the 2013 determination in order to choose the least cost option.

Response: Same as response for 21. Options are listed in summary form in Appendix F using the template on page 9 of IPART's April 2011 submission guidelines. Further details are contained in individual project business case documentation to be made available to IPART's consultants.

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23 Costs and benefits arising from the changes to the operating licence that differ from those provided for the cost-benefit analysis (if any).

Response: See Chapter 5 of the submission. Hunter Water believes the cost and benefit estimates developed and considered by IPART's as part of the 2011-12 review of the operating licence are still appropriate.

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24 An explanation of the costs arising from Hunter Water's operating licence obligations that Hunter Water seeks to pass through to customers in prices.

Response: See Chapter 5 of the submission. Hunter Water believes the estimates considered as part of IPART's 2011-12 review of the operating licence are still appropriate and are included in the operating costs.

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25 Hunter Water's approach to the allocation of shared or common costs to activities and customers and the rationale for this allocation.

Response: See Chapter 5 of the submission.

26 Hunter Water's proposed approach to the treatment of depreciation of assets for the 2013 determination.

Response: See Chapter 7 of the submission.

27 Hunter Water's intentions in regards to the land holdings at the Tillegra Dam site over the 2013 determination period.

Response: See Chapter *6 of the submission.*

28 Hunter Water's proposed allowance for taxation, including the assumptions used.

Response: See Chapter 7 of the submission.

29 The range for input parameters and underlying assumptions for the weighted average cost of capital (debt and equity).

Response: See Chapter 7 and Appendix H of the submission.

30 The proposed rate of return and the justification for this rate of return.

Response: See Chapter 7 of the submission.

31 The non-systematic risks for Hunter Water and, to the extent necessary, how these should be reflected in the determination.

32 Actual metered water sales and customer numbers over the 2009 determination period; and forecast metered water sales and customer numbers for the 2013 determination period (a minimum of 5 years data should be provided). A description of the reasons for any significant variation should be provided.

Response: Historic information for 2009 determination period is provided in Appendix A and projected information for the 2013 determination period is in Chapter 4 of the submission.

33 Hunter Water's proposed price structures and levels for the 2013 determination for each tariff included in the 2009 determination, as well as price structures and levels for recycled water schemes. If Hunter Water proposes that a tariff is no longer required, Hunter Water should give reasons.

Response: See Chapter 8 for proposed water prices and recycled water services, Chapter 9 for proposed wastewater prices and Chapter 10 for proposed drainage prices. Proposed trade waste and miscellaneous prices are outlined in Chapters 13 and 14 and Appendixes J, K and L.

34 The reasoning or justification for each of Hunter Water's proposed tariffs that address the following factors:

a) The relationship between the proposed tariff and the forecast costs of service provision.

Response: See Chapter 7 of the submission for revenue requirements split by water, wastewater and drainage services.

b) The impact of the proposal on customers (eg, actual and annual percentage change to bills).

Response: See Chapter 11 of the submission for a detailed customer impact analysis.

c) Analysis of any customer 'willingness to pay' information available to Hunter Water, and/or a discussion of any customer consultation engaged in its pricing proposals.

Response: See Chapter 12 of the submission for discussion of customer consultation.

d) The methodology for calculating the tariff, including major assumptions.

Response: For wastewater and water services, the methodologies followed are the revenue hypothecation methods illustrated by Figures 7.2 (sewerage prices) and Figure 8.2 (water prices) of IPART's March 2012 final report on price structures for metropolitan water utilities. See submission chapters relating to individual services and to trade waste and miscellaneous charges.

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35 Any estimates Hunter Water has developed for the long-run and short-run marginal cost of water and the assumptions used in developing these estimates. Hunter Water's assessment of whether it is nearing a capacity constraint, the future options for supply augmentation and the cost and timing of these augmentations.

Response: See discussion of long-run marginal cost in Chapter 8.

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36 The avoided costs of recycled water schemes that Hunter Water is seeking to recover through water and sewerage prices for the 2013 determination period, and the impact that the proposals will have on prices.

Response: See details of avoided cost applications and calculations in Chapter 7 and Appendix M of the submission.

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37 Evidence for Hunter Water's recycled water avoided cost proposals, including evidence of the implementation of the guidelines for calculating recycled water avoided costs (including ring-fencing of costs and revenues).

Response: The only avoided cost Hunter Water is seeking to include in the Regulatory Asset Base is that relating to deferred water expenditure as a result recycled water from the Kooragang Island Industrial Recycled Water replacing current potable water demand and deferring some water supply augmentation. This is discussed in Chapter 7 and Appendix M.

See Chapter 5 for comments on ring-fencing of costs and revenues

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38 Progress on Dungog Shire infrastructure projects.

Response: This information is provided in Appendix N.

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39 Dungog Shire specific infrastructure upgrade expenditure (excluding ordinary maintenance expenditure and excluding Clarence Town sewerage scheme expenditure) which:

a) has been recovered from Dungog Shire residents from the higher than standard water service charge

Response: See Appendix N

b) is outstanding and has yet to be recovered

Response: See Appendix N and Chapter 8 regarding water pricing. Hunter Water is proposing to discontinue the higher water service charge for Dungog Shire customers.

c) forecast for 2013 determination period.

Response: Only ordinary maintenance and capital expenditure is proposed for the 2013 determination period. See Appendix N.

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40 Incurred Clarence Town sewerage scheme costs over the 2009 determination period which have been recovered from:

a) State Government Community Service Obligation payments

Response: Details are provided in Appendix N.

b) Environmental Improvement Charges

Response: Details are provided in Appendix N.

c) the Clarence Town Sewerage Levy.

Response: Details are provided in Appendix N.

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41 Clarence Town sewerage scheme costs that have been incurred but are yet to be recovered.

Response: See Appendix N.

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42 Forecast annual Clarence Town sewerage scheme expenditures until scheme completion.

Response: Only around $193,000 remains to be spent for finalisation of the treatment plant irrigation system and finalisation of land purchases. Details are provided in Appendix N.

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43 Outstanding and forecast Clarence Town sewerage scheme costs that are expected to be recovered over the 2013 determination period from:

a) State Government Community Service Obligation payments

Response: Approximately $115,000 remains to be paid by the NSW Government under the assistance program. See Appendix N.

b) Environmental Improvement Charges

Response: See Chapter 9 and Appendix N

c) the Clarence Town Sewerage Levy.

Response: See Chapter 9 and Appendix N.

44 Hunter Water's proposed prices (including level and structure) for its transfers of water to the Central Coast over the 2013 determination period, and justification for its proposal.

Response: See Chapter 8 of the submission.

APPENDIX S QUALITY ASSURANCE

Hunter Water Corporation

Quality assurance review of 2012 Pricing Submission

Danu Consulting Pty Ltd has been engaged by Hunter Water Corporation to undertake quality assurance of the financial information included in its submission to Independent Pricing and Regulatory Tribunal for the 2013 pricing determination. The terms of reference for the review were:

> The check should reconcile all figures included in the submission with those in the AIR, SIR, financial accounts, output measures, and pricing model. The check should also ensure that the submission figures are correctly sourced and review the accuracy of the calculations.
>
> More specifically, the quality assurance process needs to independently confirm whether:
>
> 1. The information in the submission is consistent with that in the information return, the agency's financial accounts, and reports against output measures, as relevant. Where there are variations in figures, these need to be explained.
> 2. Figures in the submission are accurate and correctly sourced. The figures sum correctly and are in the same terms (i.e., all figures are in nominal or real dollars). The use of nominal or real dollars should also be explained in clear and simple terms so that stakeholders can follow the logic of their use.
> 3. All the issues IPART has requested information on are addressed in the submission.
> 4. The submission includes proposed prices for all monopoly services of the water agency along with justification for the price movement.

Danu Consulting Pty Ltd confirms that the following has been completed:

- As appropriate financial costs or revenue included in the submission as provided (Master v2.0 14 Sep 12.pdf and Master Appendix v2.0 14 Sep 12.pdf) have been agreed to:
  - Annual and Special information return (Master AIR – Final for IPART.xlsx)
  - Support information prepared or used by Hunter Water Corporation to support the pricing submission.
  - Financial Statements

  One departure from IPART's pricing framework in the calculation of the opening regulatory asset base (2013) has been identified. The impact of this departure on the revenue needs proposed in the pricing submission is minor.
- The financial information in the pricing submission is correctly notated as being in real or nominal dollars.
- The pricing submission has addressed all information requested by IPART
- The pricing submission proposes prices for all monopoly services together with appropriate support.

In undertaking the quality assurance review reliance has been placed upon information provided by Hunter Water Corporation. Hunter Water Corporation advises that the non-financial data included in the Annual Information Return e.g. volumes of product, customer numbers has been sourced mainly from its operational

systems; this data has not been validated; however where such data has been used in the pricing submission it has been verified that it is consistent with that included in the Annual Information Return.

The review has not considered the scope or appropriateness of information presented by Hunter Water Corporation in its pricing submission.

The quality assurance review cannot be considered as an audit of either the pricing submission or its supporting data.

Ian Burrows
14 September 2012

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