IPART
New South Wales

Independent Pricing and Regulatory Tribunal

Hunter Water Corporation's water, sewerage, stormwater drainage and other services

Review of prices from 1 July 2013 to 30 June 2017

Water — Final Report
June 2013

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1 Executive summary

The Independent Pricing and Regulatory Tribunal of NSW (IPART) is responsible for setting the prices Hunter Water Corporation (Hunter Water) can charge for water supply, sewerage, stormwater drainage and a range of miscellaneous services, including trade waste services.

We recently completed our review of the maximum prices for these services over the 4 years from 1 July 2013 to 30 June 2017 (the 2013 determination period).

This Final Report explains our Determination on these prices, including the rationale and analysis that underpin our final decisions. We also reviewed the prices of some recycled water services and decided how these services should be regulated.

Box 1.1 Dollar values used in this report

This report sets out Hunter Water's efficient costs of providing water, sewerage and stormwater drainage services, the maximum prices it can charge for these services and indicative bills for customers. We express the dollar values of these figures in different ways.

- Costs and charges are expressed in **real dollars** ($2012/13), with the exception of the sewage usage charge which is set in nominal dollars. Real dollar costs and charges in future years **do not include inflation**. We indicate that the increases are "without inflation" or "before inflation is applied".
- We have presented the amounts of customers' bills in **nominal dollars**. Nominal dollars in future years **include the relevant forecast inflation**. We have used nominal dollars to make it easier for customers to understand the combined impact of the new prices and inflation on the amount they may be expected to pay.
- The **forecast annual inflation** used in this report is 2.5% per annum between 2013/14 and 2016/17. This means that inflation over the 4 years is forecast to be 10.4%.

1.1 Overview of the Determination

Our decisions in this Final Determination mean that the water and sewerage bill for a typical house[1] are estimated to increase by 10.1%, which is in line with our estimate of inflation of 10.4% over the 4 years of the determination period.

Typical flats and units will see their water and sewerage bills increase by an estimated 19.3% over the next 4 years, including the effects of inflation. This is because we have changed price structures to ensure that flats and unit owners pay their fair share of the costs in providing water and sewerage services to their homes. The typical bill for units and flats is estimated to be $862 by June 2017, which will remain lower than the typical bill of $1,130 for a house. This reflects lower water consumption by units, on average.

The majority of small businesses operating in the Hunter region will see significant decreases in their combined water and sewerage bills, both before and after inflation is taken into account. This is due to a reduction in the sewerage service charge to put them on par with residential houses. The typical bill for a small business is estimated to decrease by 13.1% compared with the 2012/13 bill. Most other non-residential customers will see their bills restrained below the rate of inflation.

This is a welcome development for most customers after average bill increases of 30.7% over the 4 years of the 2009 determination period ending in June 2013.[2]

Our decisions compare to Hunter Water's pricing proposals,[3] under which a typical residential bill would increase over the 4 years of the determination period by $201 or 19.6%.

Hunter Water's September 2012 price submission requested moderate price increases for the 4 years from 1 July 2014 to 30 June 2017. The submission demonstrates sound management, commercial discipline and customer focus by Hunter Water. We have recognised and responded to this submission by accepting Hunter Water's proposals, except the weighted average cost of capital (WACC) which is based on market parameters that have changed since the time of the submission. We have also made minor technical adjustments outlined below.

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1 Throughout this report we have calculated a typical residential bill for a customer in a house based on 200 kL consumption per year. Hunter Water's typical residential bill is based on usage of 185 kL per year, based on a decline in average consumption. We have used 200 kL so that bills can be compared across the water businesses and over time.

2 IPART, *Review of prices for water, sewerage, stormwater and other services for Hunter Water Corporation – Final Report*, July 2009, p 2.

3 We have calculated the impact of Hunter Water's pricing proposal for a typical customer using 200 kL. Hunter Water's submission calculated bill impacts based on usage of 185 kL per year.

1.1.1 Our decisions on Hunter Water's revenue requirement

In its September 2012 submission, Hunter Water proposed a revenue requirement of $1,134.7 million[4] over the 4 years of the determination period. This is based on:

- modest increases from Hunter Water's base operating costs in 2012/13
- a capital program of $299.3 million over the 4 years,[5] which is $359.6 million or 55% less than its expenditure in the 2009 determination period
- a WACC of 5.6%.[6]

We consider that to meet its efficient costs, Hunter Water's revenue requirement will be $1,054.5 million over the 4 years. This is an increase of $30.8 million compared with the revenue requirement in the Draft Determination due to:

- an increase in the return on assets, reflecting an increase in the WACC from 4.2% to 4.6% ($35.4 million), and working capital ($0.5 million)
- a decrease in the depreciation allowance due to a correction to asset lives (-$2.0 million)
- a decrease in the tax allowance due to an increase in the cost of debt from 5.6% to 6.5% (-$3.1 million).

The main reason that the revenue requirement we have allowed is lower than Hunter Water's proposal is that we have decided on a WACC of 4.6%, which is lower than the 5.6% initially proposed by Hunter Water. The WACC has increased from the Draft Determination by 0.4 percentage points due to the:

- adoption by IPART of an interim methodology for determining the WACC
- updated market parameters as of 16 April 2013.

The final value for the real post-tax WACC has been determined by taking the midpoint of 2 WACC estimates, which are derived from current market data and long term averages. We came to this position after considering Hunter Water's proposals, the views of stakeholders, the views of finance experts and our own analysis.

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4 Hunter Water submission, 18 September 2012, pp 88-89.

5 Hunter Water's submission states that its proposed capital program for the determination period is $325.4 million. This includes $26.0 million in costs related to the Kooragang Industrial Water Scheme. Hunter Water submission, 14 September 2012, pp 70-73. See Chapters 3 and 12 for our treatment of these costs.

6 In December 2011, following consultation, we decided to calculate a more accurate and commercially-based tax allowance as a discrete building block, and to use a post-tax weighted average cost of capital (WACC). We adopted this approach in the 2012 Sydney Water and Sydney Catchment Authority Determinations and have done so in this Final Report for Hunter Water.

Our interim methodology represents a change in methodology from the previous approach, as it gives greater weight to the WACC estimated using the long-term averages.[7] Hunter Water considered our interim methodology to provide a more realistic rate of return for the coming determination period to June 2017.[8]

We are currently reviewing our WACC methodology to address concerns that the use of current market data to estimate the expected cost of debt and long-term average data to estimate the expected cost of equity may be problematic in more uncertain and changeable market conditions.[9] The purpose of our WACC methodology review is to determine how we can improve the way we calculate the WACC to ensure it enables us to meet our regulatory objectives in a range of financial market conditions and industry circumstances.

We are releasing an interim report on the WACC methodology after this Determination. We invite stakeholders to comment on the interim WACC methodology, and the further work we plan to undertake before making a final decision on the WACC methodology, which we would apply in future determinations.

Other minor adjustments that we made to Hunter Water's proposals are shown in Box 1.2.

7 The previous methodology (used to determine the WACC in our Draft Determination) had regard to the WACC estimated using long-term averages, but constrained the WACC to be no more than the upper-bound of the WACC range derived from our existing WACC methodology.

8 Hunter Water submission, 12 April 2013, p ii.

9 IPART, *Review of method for determining the WACC - Discussion Paper*, December 2012.

Box 1.2 Adjustments made by IPART to Hunter Water's proposals

We have adjusted Hunter Water's proposals regarding its efficient costs for the following reasons:

- Hunter Water made 2 changes subsequent to its initial submission, for extra superannuation costs and to reduce the estimated benefits to customers from its Kooragang Industrial Water Scheme. We have accepted these changes.
- Hunter Water stated at the Public Hearing that it had not included any costs associated with Tillegra Dam.[a] We removed a small maintenance cost for land purchased for the project, as we considered it could be met from rental income from the land and the land is not needed for Hunter Water's regulated services. We have not included any costs related to Tillegra Dam in Hunter Water's prices.
- We have also reduced the allowance for carbon costs to reflect our use of an inflation escalator which includes carbon costs, whereas Hunter Water used an escalator which did not include carbon costs.

The net effect of these changes is to increase Hunter Water's operating expenditure by about $7.5 million over the determination period (see Table 5.6). Further information is provided in Chapter 5. We have also applied our standard methodologies for regulatory depreciation and tax, which result in minor changes to required revenue.

a IPART, Public Hearing transcript, 13 November 2012, pp 16 and 19.

Hunter Water's target revenue

So that Hunter Water's prices and revenue remain steady across the determination period, we have made a decision to smooth year-to-year variations in the revenue requirement. If we had not applied smoothing:

- Hunter Water's revenue requirement in 2013/14, the first year of the determination period, falls significantly compared to the revenue we have allowed it for the previous year.
- Required revenue then rises steadily in each year of the determination period.

Setting prices to target these annual revenue requirements would result in volatile prices, which could create price shocks for some customers and harm Hunter Water's short-term financial position.

Hunter Water's final prices are set to recover as closely as possible its notional revenue requirement, given its assumed sales volumes.[10] In coming to this decision, we considered the potential implications on customers of uneven price changes throughout the determination period, and the total revenue required for Hunter Water to fund its operating and capital expenditure needs.

Hunter Water proposed a pricing approach similar to ours, with target revenue requirements each year that smooth out uneven price changes arising from projected step changes in demand.[11] Under its proposal, Hunter Water would recover $26.4 million less than the revenue it estimated it would require to meet its costs over the 4 years of the determination period.[12]

We note that Hunter Water based its revenue requirement on a WACC of 5.6%. We have adopted a lower WACC of 4.6%, which results in a lower target revenue and smaller price increases over the determination period than those proposed by Hunter Water.

1.2 Our regulatory approach

In this Hunter Water Determination, we have adopted a proportionate approach to regulation. This is possible where businesses demonstrate sound governance and management, and make their price proposals based on efficient operating and capital expenditures supported by their customers.

In response to Hunter Water's moderate proposals, we have broadly accepted its expenditure and pricing proposals. In order to establish that this is reasonable in terms of price outcomes and impacts on Hunter Water's services and assets, we have followed our normal processes to set Hunter Water's notional revenue requirement and then to convert this revenue requirement into prices.

As we have done for other water businesses, we undertook a detailed and evidence-based analysis of prudent and efficient operating and capital expenditures. This analysis resulted in operating and capital expenditure allowances that are only marginally different to Hunter Water's revised proposal, and this was a confirmation that Hunter Water's proposal was reasonable. Consequently, we accepted Hunter Water's proposals with the minor changes noted in Box 1.2.

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10 The total of this target revenue requirement is $0.1 million less than the revenue Hunter Water would require to meet its efficient costs over the 4-year period. We note that this represents about 0.01% of Hunter Water's total notional revenue requirement. In Net Present Value terms, there is an over-recovery of $0.5 million – see Sections 1.4 and 4.4.

11 Hunter Water submission, 14 September 2012, p 88.

12 Calculated from Hunter Water submission, 14 September 2012, pp 88-89.

We also took account of Hunter Water's extensive customer engagement on its pricing proposals. In its price submission, Hunter Water has fulfilled our request to provide:

- a plain English summary of its entire pricing proposal
- evidence on discretionary expenditure proposals
- evidence on price structure proposals.

We have accepted Hunter Water's proposals and we commend Hunter Water on its customer consultations for the 2013 price review. We consider that Hunter Water's customer consultations achieved the objectives that we identified in our recent review of customer engagement.[13] These were to improve community acceptance of proposals on discretionary spending and price structures, and to streamline our review process by reducing our need to look at other evidence.

1.3 Our decisions on prices and customer bill impacts

1.3.1 Our decision to restructure prices

In 2012, we concluded a broad review of the price structures of the 4 metropolitan water agencies,[14] engaging stakeholders including Hunter Water.[15] The review found that under existing price structures, the charges that some customers are paying do not reflect the costs of making the services available to them. This means that other customer groups are paying more than the cost of providing their service.

The review defined a set of principles around which each agency's price structures should be designed.[16] These principles were first implemented in Sydney Water's 2012 Determination.[17] We have continued their use in our consideration of Hunter Water's price structures.

This price restructuring does not increase the total revenue received by Hunter Water for services. Rather it improves that balance between customers in all groups so that bills that represent the costs imposed on Hunter Water and prices send more efficient signals about the costs of providing water, sewerage and stormwater services. Where there are significant impacts on certain groups of customers, we have tried to minimise these impacts by transitioning prices over a period of time.

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13 IPART, *Customer engagement on prices for monopoly services – Final Report,* August 2012, p 24.
14 IPART, *Review of price structures for metropolitan water utilities – Final Report,* March 2012, p 3.
15 Sydney Water Corporation, Hunter Water Corporation, Gosford City Council and Wyong Shire Council.
16 IPART, *Review of price structures for metropolitan water utilities - Final Report*, March 2012.
17 IPART, *Review of prices for Sydney Water Corporation's water, sewerage, stormwater drainage and other services from 1 July 2012 to 30 June 2016 – Final Report,* June 2012.

1.3.2 Customer control over bills

Hunter Water's reported results of its customer survey and a number of stakeholder submissions indicated that customers wanted more control over their bills. In other words, they wanted higher usage charges and lower service (fixed charges).

We took account of customers' preferences to have greater control over their bills at each step of our process in setting prices. We have set the water usage price with reference to an upper bound estimate of long-run marginal cost of water supply. This has resulted in a high usage price relative to a very low water service charge. This gives customers a significant degree of control over their bills.

We have not re-introduced Hunter Water's residential sewerage usage charge, which we discontinued in 2009. This is because the costs of providing sewerage services are almost entirely fixed, with less than 10% of the costs being directly related to the volume of discharges. Further, it is not economically viable to measure residential sewerage flows. Our analysis also shows that there is significantly less variability in the volume of residential sewerage discharges than there is in residential water consumption.

We consider that we have met customers' requests for higher usage charges and lower service charges to the greatest extent possible, whilst also applying our pricing principles. In general terms, our pricing principles state that prices should reflect the costs of servicing customers. This is because we consider cost-reflective prices to be fair and to encourage an efficient use of resources. Section 10.5.4 provides further explanation.

1.3.3 Changes to the structure of water prices

Our decisions on water prices are:

- to keep the water usage price at its current level of $2.08/kL in real terms over the next 4 years
- to set a standard water service charge for all residential customers, regardless of their type and ownership structure:
  - this fixed charge is $16.60 ($2012/13) in every year of the determination period
  - this change means that the service charge for the average flat or unit[18] will rise from $11.37 to $16.60 ($2012/13) in the first year of the determination period and will increase with inflation in each of the following years.

[18] Flats and units have different ownership structures. A block of units has many individual strata owners, whereas a block of flats has one owner with many tenants.

1.3.4 Changes to the structure of sewerage charges

Our decisions on sewerage charges are to:

- Maintain the sewerage service charge for residential houses at its current level of $555.23 per year ($2012/13) for 4 years.
- Increase the sewerage service charge for flats, units and townhouses from 65% to 75% of the service charge paid by houses.
- Reduce the sewerage service base charge for small businesses with a standalone 20mm meter by 50%, so that it is the same as for a residential house.
- Phase in a sewerage usage discharge allowance for non-residential customers that will reach 75 kL per year by the end of the determination period. A sewerage discharge allowance is a 'free' level of sewerage discharge that is allowed before a volumetric charge is levied. The customer pays a volumetric charge where the sewerage discharge exceeds the allowance.
- Maintain the non-residential sewerage usage charge at $0.67/kL in nominal terms in every year of the Determination; it will not change with inflation. We have done this to move the charge towards a level that reflects the short run marginal cost of sewerage services.

1.3.5 Changes to the structure of stormwater drainage charges

Our decisions on stormwater charges are to:

- Adopt Hunter Water's proposed stormwater charges, with a real reduction of 30% over the determination period for most customers.[19] For houses, the charge decreases from $86 in 2012/13 to $60 in 2016/17, excluding the effects of inflation.
- Adopt Hunter Water's proposed new category for residential flats, units and townhouses. For this category, there is a real reduction of 74% in the stormwater charge by the end of the determination period. For flats, the charge decreases from $86 in 2012/13 to $22 in 2016/17, excluding the effects of inflation.

We consider that Hunter Water's stormwater charges represent a substantial decrease to consumers. See Chapter 11 for more information on stormwater charges.

[19] This equates to nominal decreases in stormwater charges of 23% for houses and 72% for flats, units and townhouses, when inflation is included.

1.3.6 Price outcomes

For most customers, we have been able to set prices that either stay constant or decline in real dollars (that is, excluding the effects of inflation).

In line with Hunter Water's proposal and our price structure principles, the exception to this is for the average residential flat, unit and townhouse, where:

- the water service charge will rise to the charge paid by houses – an average increase of less than $6 in nominal terms over the next 4 years
- the sewerage service charge will rise to 75% of the charge paid by houses – an increase of $96 in nominal terms over the next 4 years.

A summary of IPART's decisions on the maximum prices that Hunter Water can charge for water and sewerage services is in Table 1.1, Table 1.2 and Table 1.3.

A summary of our decision for water charges is in Table 1.1. We have set prices in real terms, and they will increase each year with the consumer price index. We also show our estimate of the prices in nominal terms.

Table 1.1 Summary of IPART's decisions on Hunter Water's water charges

Financial year ending 30 June	2012/13	2013/14	2014/15	2015/16	2016/17
$2012/13 – we have set prices in real terms					
Water service charge (house)	**18.92**	**16.60**	**16.60**	**16.60**	**16.60**
Water service charge (flats, units, townhouses)	**11.37**	**16.60**	**16.60**	**16.60**	**16.60**
Non-residential (20mm individually metered property) service charge	**18.92**	**16.60**	**16.60**	**16.60**	**16.60**
Non-residential meter based service charge (25mm equivalent)[a]	**29.56**	**27.10**	**27.10**	**27.10**	**27.10**
Water usage charge ($/kL)	**2.08**	**2.08**	**2.08**	**2.08**	**2.08**
$ nominal - prices in nominal terms for comparison[b]					
Residential water service charge (house)	18.92	17.02	17.44	17.88	18.32
Residential water service charge (flats, units, townhouses)	11.37	17.02	17.44	17.88	18.32
Non-residential (20mm individually metered property) service charge	18.92	17.02	17.44	17.88	18.32
Non-residential meter based service charge (25mm equivalent)[a]	29.56	27.78	28.47	29.18	29.91
Water usage charge ($/kL)	2.08	2.13	2.19	2.24	2.30

a Meter based charge is based on a 25mm meter. Applicable meter charge is set using the following formula: (Meter size)^2 x meter based charge/625. A more extensive list of meter based prices is provided in **Table 10.7**.

b These prices are estimates based on our assumptions for growth in the consumer price index of 2.5% from 2012/13 to 2013/14 and the same figure of 2.5% increase for each subsequent year to 2016/17.

A summary of our decision for sewerage service charges is in Table 1.2. We have set prices in real terms, and they will increase each year with the consumer price index.

Table 1.2 IPART's decision on sewerage service charges[a] ($ per annum)

Financial year ending 30 June	2012/13	2013/14	2014/15	2015/16	2016/17
$ real 2012/13 – we have set prices in real terms					
Residential sewerage service charge	**555.23**	**555.23**	**555.23**	**555.23**	**555.23**
Residential multi-premises service charge (per property)	**363.20**	**374.78**	**388.66**	**402.54**	**416.42**
Non-residential (20mm individually metered property) service charge	**1,110.46**	**555.23**	**555.23**	**555.23**	**555.23**
Non-residential meter based service charge[a]	**1,735.10**	**1,724.00**	**1,724.00**	**1,724.00**	**1,724.00**
$ nominal – prices in nominal terms for comparison[b]					
Residential sewerage service charge	555.23	569.11	583.34	597.92	612.87
Residential multi-premises service charge (per property)	363.20	384.15	408.34	433.49	459.65
Non-residential (20mm individually metered property) service charge	1,110.46	569.11	583.34	597.92	612.87
Non-residential meter based service charge[a]	1,735.10	1,767.10	1,811.28	1,856.56	1,902.97

a Meter based charge is based on a 25mm meter. Charges for all possible meter sizes are listed in detail in Chapter 10.

b These prices are estimates based on our assumptions for growth in the consumer price index of 2.5% from 2012/13 to 2013/14 and the same figure of 2.5% increase for each subsequent year to 2016/17.

Our decision on the sewerage usage charge is shown in Table 1.3. We have set sewerage usage prices in nominal terms, that is, they will not change in the determination period. Customers will pay the same amount each year.

We consider that the sewerage usage charge should reflect the short run marginal cost of transporting, treating and disposing of sewerage. A usage charge set on this basis will improve cost-reflectivity and send appropriate price signals to the market. We estimate Hunter Water's short-run marginal cost to be about $0.28/kL.[20] However, because Hunter Water's current usage charge is at $0.67/kL and lower than other utilities, we have decided to keep Hunter Water's sewerage usage charge at $0.67/kL in nominal terms throughout the determination period. This is as sought by Hunter Water.

[20] Reported by Hunter Water to the Inter-Agency Working group meeting of 7 April 2010.

Table 1.3 IPART's decision on the sewerage usage charge for non-residential customers ($/kL)

	2012/13	2013/14	2014/15	2015/16	2016/17
$ nominal - we have set prices in nominal terms					
Sewerage usage charge (nominal)	0.67	0.67	0.67	0.67	0.67
$ real 2012/13 - prices in real terms for comparison[a]					
Sewerage usage charge ($2012/13)	0.67	0.65	0.64	0.62	0.61

[a] These prices are estimates based on our assumptions for growth in the consumer price index of 2.5% from 2012/13 to 2013/14 and the same figure of 2.5% increase for each subsequent year to 2016/17.

1.3.7 Impact on residential bills

Under our Determination:

Residential - Houses

- Water and sewerage bills for a typical house with consumption of 200 kL will increase by $104 or 10.1% over the next 4 years, which is marginally less than the forecast inflation of 10.4% over the same period.

Residential – Flats and Units

- Water and sewerage bills for flats and units with consumption of 150 kL will increase by $140 or 19.3% over the next 4 years, which includes the effects of expected inflation of 10.4% over the same period. Excluding inflation the increase is approximately $58 or 8.1%. This is because we have started to transition the sewerage service charge for residential flats and units in line with our price structure principles. By the end of this determination period they will be at 75% of the charge for a house.

Pensioners

- Water and sewerage bills for a pensioner with consumption of 100 kL will increase by $53 or 10.0% over the next 4 years, which is marginally less than forecast inflation of 10.4% over the same period.

1.3.8 Impact on non-residential bills

Under our Determination:

Small Businesses

Water and sewerage bills will decrease for many small business customers. The typical water and sewerage bill for a business with a 20mm stand-alone connection will decrease by $177 or 13.1%.[21] The main reason is that these customers will now pay the same sewerage service charge as for residential houses, which is in most cases considerably lower than the current charge.[22] The sewerage service charge for these businesses will fall by up to 35%, even allowing for expected inflation of 10.4%.[23]

Larger Businesses

For a non-residential customer with a 40mm meter consuming 1,000 kL per year, the annual water and sewerage bill will increase by $489 or 8.2%.[24] This is a marginal decrease compared with an expected inflation rate of 10.4% over the same period.

1.4 Impact on Hunter Water

Under our Determination, Hunter Water is expected to generate a total of $1,054.4 million in revenue over the 4-year determination period. This is an increase of $23.8 million on the Draft Determination which reflects a higher WACC.

We consider that this target revenue is sufficient for Hunter Water to recover its efficient costs over the determination period and to earn a reasonable rate of return on its assets over this period.[25] We are satisfied that Hunter Water will be financially sustainable over the 2013 determination period and consider that Hunter Water's financial ratios under the 4.6% WACC are consistent with an investment grade firm.

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21 This is for consumption of 200 kL/pa and assumed discharge factor of 74%, and equates to a real decrease of $288 (-21.3%).

22 The base sewerage service charge is being reduced by approximately 50%. Previously, a discharge factor was applied to the base charge. From 2013/14, 20mm standalone non-residential customers will pay the standard residential sewerage service charge with no discharge factor to be applied.

23 This is a fall of over 41% in real dollars (excluding inflation). The current 2012/13 base sewerage service charge is $1,110.46 and the maximum discharge factor that any business has is 85%. The sewerage service charge for a business with an 85% discharge factor is $943.89 and the maximum decrease under the Determination is calculated from that charge.

24 This assumes a discharge factor of 74% and equates to a real decrease of $120 (-2.0%).

25 In Net Present Value (NPV) terms, target revenue over-recovers costs by $0.5 million over the 4 years. There is an over-recovery in NPV terms because the under-recovery of revenue in the last 2 years of the determination reduces in size when discounted. Chapter 4 provides more information.

In assessing Hunter Water's financial viability, we analysed its forecast financial performance, financial position and cash flows and the financial ratios that result from our Determination. Our financial modelling indicates that Hunter Water will maintain a solid financial position over the 2013 determination period based on the maximum prices in the Determination. We consider that Hunter Water will have sufficient cash available to meet its operating obligations and dividend payments,[26] and can partially fund its capital expenditure program from its revenue rather than borrowing the whole amount. The results of our analysis are presented in Chapter 14.

As noted above, compared with its earlier plans, Hunter Water has reduced its capital expenditure for the 2013 determination period citing customer affordability, combined with a need to maintain its financial position, as the key reasons.

Hunter Water reported that it has considered regulatory compliance requirements and risks when developing its capital expenditure proposal. It is of the view that the risks are manageable, and should not lead to breaches of licence conditions, provided that the assumptions underpinning its capital expenditure program hold, including:

- that no improvements in performance will be required by any of its 5 main operational regulators
- that connectivity growth will remain at, or below, 1.4% per year and in areas with spare asset capacity.[27]

Hunter Water states that the proposed capital expenditure program will reduce the current headroom against the System Performance Standards in its operating licence.[28]

Our consultant noted that Hunter Water has performed well against its Operating Licence but considered its asset performance is only fair compared with other Australian utilities.[29] There is no objective standard that a water utility should meet and so comparisons should ideally include customer willingness to pay for service outcomes, location specific factors and a technical and economic assessment of asset management.

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26 We have used NSW Treasury's standard reference point of a dividend payout ratio of 70% of after-tax profit for government businesses. NSW Treasury, *Financial Distribution Policy for Government Businesses,* November 2009, TPP 09/06, p 2.

27 Hunter Water submission, 14 September 2012, pp 64-66.

28 Hunter Water submission, 14 September 2012, p 21.

29 Atkins/Cardno, *Review of Hunter Water Corporation's Operating and Capital Expenditure – Final Report*, December 2012, p 47.

1.5 Structure of this report

This report explains decisions for the Determination in detail, including analysis that guided each decision.

Following this chapter is a list of our decisions. The remainder of the report is structured as follows:

- Chapter 2 outlines the context for the review, including our review process, Hunter Water's operating and regulatory environment, and Hunter Water's submissions and its proposed prices
- Chapter 3 outlines our price setting approach and decisions related to the regulatory framework
- Chapter 4 provides an overview of our decisions on Hunter Water's notional revenue requirement
- Chapters 5 to 7 discuss our decisions on these individual components in more detail:
  - Chapter 5 explains the decisions on Hunter Water's efficient operating expenditure
  - Chapter 6 explains the decisions on Hunter Water's capital investment
  - Chapter 7 explains the decisions on the allowances for a return on assets and regulatory depreciation
- Chapter 8 discusses our decisions on Hunter Water's forecast water sales
- Chapters 9 to 11 explain the decisions on Hunter Water's price structures and set out the price levels
- Chapter 12 explains the decisions on Hunter Water's recycled water schemes
- Chapters 13 and 14 assess the implications of our pricing decisions, including the impacts on Hunter Water, its customers and the environment.

The appendices provide more information on technical matters including:

- reports that Hunter Water will provide on its output measures (Appendix C)
- the regulatory tax allowance, the WACC and our financial viability assessment (Appendices D, E and F)
- the impact on customer bills due to the 2008 decision to set certain developer charges at zero (Appendix G).

List of Final Decisions

1 IPART's decision is to adopt a 4-year determination period from 1 July 2013 to 30 June 2017. 30

2 IPART's decision is to allow $10 million, being the sum paid by Hunter Water as a subsidy for the Kooragang Industrial Water Scheme, to be recovered through water charges in accordance with the Section 16A Direction from the NSW Government. 38

3 IPART's decision is to require Hunter Water to: 40

- Report annually on progress against the output measures described in Appendix C. 40
- Submit a completed Annual Information Return by the last working day of October in each year of the 2013 determination period. This is an Excel spreadsheet template provided annually by IPART to Hunter Water. 40
- Report on progress on the major capital projects, as listed in the confidential Appendix F in Hunter Water's 2012 submission, at the time of the next pricing review. 40
- Provide a reconciliation of its expenditures and outcomes against the IPART operating and capital expenditure allowances at the time of the next pricing review. 40

4 IPART's decision is not to determine a maximum price for any future water banking arrangement that might arise from the Lower Hunter Water Plan, noting that this would allow Hunter Water and the Central Coast Councils to set a commercially negotiated price for these transfers instead. 43

5 Hunter Water's notional revenue requirement is as shown in Table 4.2. 47

6 IPART's decision is to apply a smoothed target revenue to set prices for Hunter Water as shown in Table 4.1. 49

7 IPART's decision is to deduct from Hunter Water's target revenue the revenue raised through other fees and charges as shown in Table 4.3. 51

8 IPART's decision is that the efficient level of Hunter Water's operating expenditure for the 2013 determination period is as shown in Table 5.1. 53

9 IPART's decision is to adopt capital expenditure incurred by Hunter Water in 2008/09 and over the 2009 determination period as shown in Table 6.1. 65

10 IPART's decision is that the prudent and efficient level of Hunter Water's capital expenditure for the 2013 determination period is as shown in Table 6.2. 65

11 IPART's decision is that the allowance for a return on assets and the allowance for regulatory depreciation is as shown in Table 7.1. 75

12 IPART's decision is that for the purposes of calculating the allowance for a return on assets, a real post-tax WACC of 4.6% is appropriate. 81

13 IPART's decision is to calculate regulatory depreciation using a straight line depreciation method, and to adopt asset lives shown in Table 7.6. 83

14 IPART's decision is to adopt Hunter Water's forecast metered water sales and forecast sales to Gosford Council and Wyong Council as shown in Table 8.1. 85

15 IPART's decision is to provide for a mechanism to adjust Hunter Water's revenue to address the impact of a material variation between the net level of actual water demand over the 2013 determination period and the forecast demand used in making the determination, and to: 90

- define material variation as more than 10% (+ or -) over the whole determination period 90
- indicate that only the impact of variation outside of this 10% variation level will be adjusted for 90
- decide how best to make the revenue adjustment in our next price review, if a material variation eventuates. 90

16 IPART's decision is to determine the maximum water charges for Hunter Water as set out in Table 10.1. 102

17 IPART's decision is that all residential dwellings (including houses, flats and units) will pay the standard residential water service charge. 105

18 IPART's decision is that non-residential properties will pay the service charges as set out in Table 10.7. 106

19 IPART's decision is to determine the maximum water usage charges for Hunter Water as set out in Table 10.8. 107

20 IPART's decision is to set the unfiltered water charge equal to the standard water usage charge less the avoided costs of filtration. The avoided cost of filtration is deemed to be $0.30/kL. We will transition the unfiltered water price to its new level over 4 years. 108

21 IPART's decision is to continue with a discounted water usage price for customers' consumption that is in excess of 50,000 kL/pa. These prices are shown in Table 10.10. 109

2 Context for this review

In this chapter, we outline our review process and matters that we are required to consider as part of our review, and provide a summary of Hunter Water's submission. More detail is provided in later chapters.

2.1 Overview of Hunter Water's operations

Hunter Water provides water and sewerage services to more than half a million people in the Lower Hunter region. Hunter Water was formed as a State Owned Corporation under the *Hunter Water Act 1991*. Under the Act, the principal functions of Hunter Water are to provide, construct, operate, manage and maintain systems and services for:

1. supplying water
2. providing sewerage and drainage services, and
3. disposing of waste water

subject to the terms of the operating licence.[30]

Hunter Water's area of operations covers approximately 5,400km^2, serving a population of about 560,000 in the local government areas of Cessnock, Lake Macquarie, Maitland, Newcastle, Port Stephens, Dungog, and part of the Singleton Shire in the Lower Hunter.[31] Hunter Water has also supplied water to Gosford City Council and Wyong Shire Council (Central Coast Councils) in response to their drought conditions in those areas. The link between Hunter Water's system and the Central Coast has the capacity to transfer approximately 35 ML per day.[32]

Further information on Hunter Water's operations, and its regulatory environment, is provided in Hunter Water's price submission[33] and our Issues Paper for the review.[34]

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30 *Hunter Water Act 1991* sections 4A and 12.

31 Hunter Water Corporation website, http://www.hunterwater.com.au/About-Us/Our-Organisation/Our-Organisation.aspx, accessed 8 June 2012.

32 Hunter Water submission, 14 September 2012, p 33.

33 Hunter Water submission to IPART on prices to apply from 1 July 2013, 14 September 2012.

34 IPART, *Review of prices for water, sewerage, stormwater drainage and other services for Hunter Water Corporation - Issues Paper*, June 2012.

2.2 IPART's review process

Our review has included an extensive investigation and public consultation process. In particular, we have:

- released an Issues Paper in June 2012 to assist in identifying and understanding the key issues for review
- invited Hunter Water to make a submission to the review detailing its pricing proposal, and requiring it to provide extensive financial and performance data on the future capital and operating expenditure necessary to maintain service levels and respond to regulatory demands[35]
- invited other interested parties to make submissions on the Issues Paper and Hunter Water's submission, and received 26 submissions
- held a Public Hearing on 13 November 2012 to discuss a wide range of issues raised by Hunter Water and other stakeholders
- engaged an independent consultant, WS Atkins International Ltd in association with Cardno (Atkins/Cardno), to review Hunter Water's capital expenditure, asset planning and operating expenditure proposals[36]
- released a Draft Report and Draft Determination in March 2013, and invited stakeholders to make submissions in response to our draft decision, to which we received 10 submissions.

In making our Determination in June 2013, we have considered matters raised in submissions made in response to the Issues Paper and Draft Determination. The new charges are expected to apply from 1 July 2013.

IPART's Issues Paper and Draft Report and Determination, Hunter Water and stakeholder submissions, the transcript from the Public Hearing, and Atkins Cardno's report are available on IPART's website (www.ipart.nsw.gov.au).

IPART has 2 concurrent reviews of relevance to Hunter Water's price review. These are *Review of Method for Determining the Weighted Average Cost of Capital* and *Financeability Test in Price Regulation*. We outline how we have taken these reviews into account in this Hunter Water price review in Chapters 7 and 14.

35 Hunter Water's submission was received on 14 September, 2012.
36 Atkins Cardno's final report was received in December 2012.

2.3 Matters we are required to consider

Our power to determine prices is derived from our governing Act, the *Independent Pricing and Regulatory Tribunal Act 1992* (IPART Act). This review is being conducted under Section 11 of the IPART Act, which provides IPART with a standing reference to conduct investigations and make reports to the Minister on the determination of the pricing for a government monopoly service supplied by a government agency.[37]

Section 15 of the IPART Act requires IPART to consider a broad range of matters when making determinations,[38] including:

- **consumer protection** – the protection of consumers from abuses of monopoly power; the quality, reliability and safety standards of the services concerned; and the social impact of pricing decisions and their effect on inflation
- **economic efficiency** – the need for greater efficiency in the use and supply of services; the need to promote competition; and the need to consider demand management and least-cost planning
- **financial viability** – the cost of providing the services concerned, the appropriate rate of return on public sector assets; and the impact of pricing decisions on the agency's borrowing, capital and dividend requirements
- **environmental protection** – the need to promote ecologically sustainable development through appropriate pricing policies.

In considering these matters, we aim to balance the diverse needs and interests of stakeholders, while also ensuring that Hunter Water is adequately recompensed for the services it provides. We also take into account the principles issued by the Council of Australian Governments (COAG) and contained in the National Water Initiative.[39]

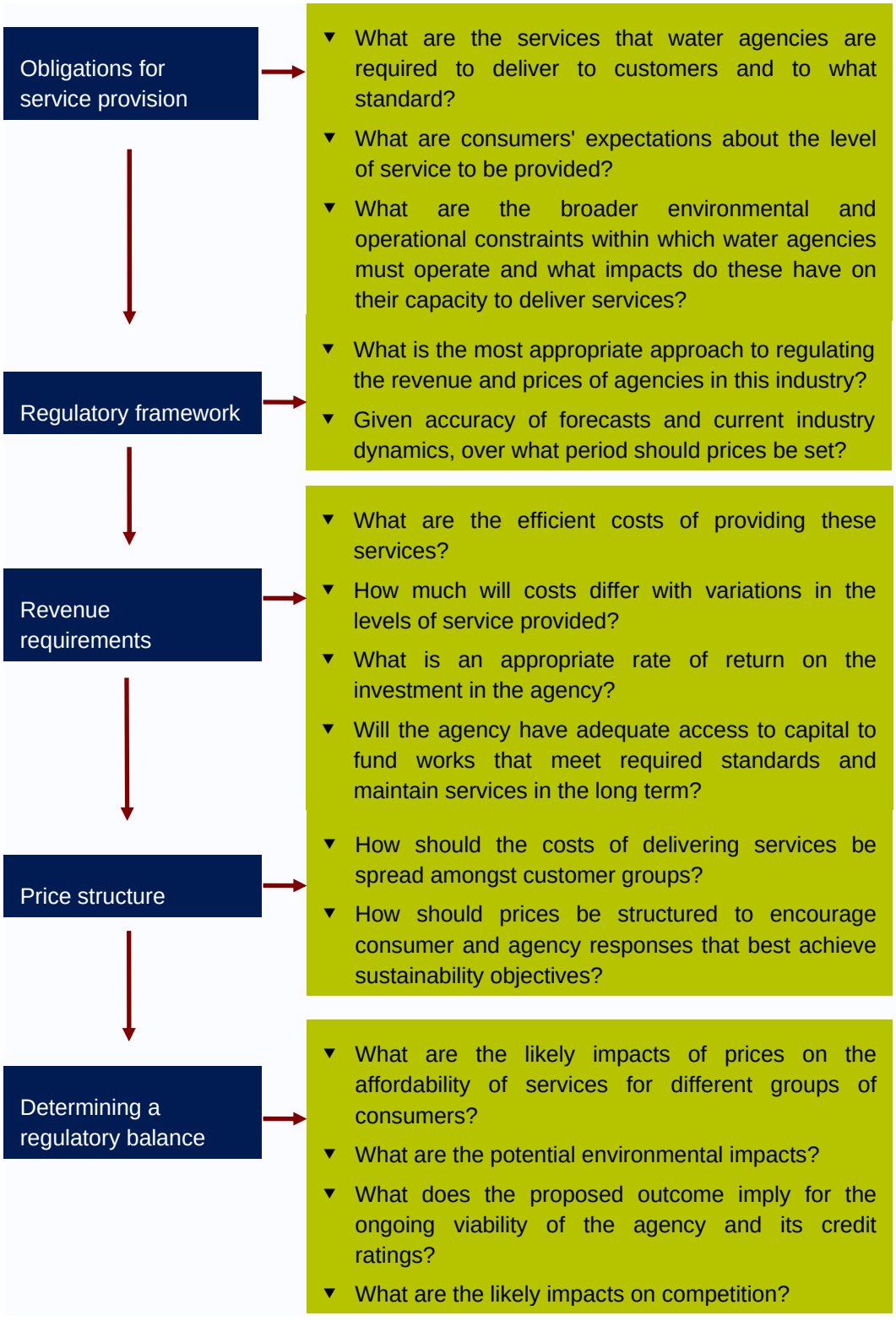
With these requirements in mind, we have developed a general approach to determining monopoly prices for water agencies. That approach is set out in Figure 2.1 below. We have followed that approach in considering stakeholder submissions and making our final decisions.

[37] The government agency must be specified in Schedule 1 of the IPART Act. Hunter Water is listed as a government agency for the purposes of Schedule 1 of the IPART Act.

[38] The Section 15 requirements are listed in full in Appendix A.

[39] The National Water Initiative has built on the principles established in the 1994 COAG Water Reform Framework.

Figure 2.1 IPART's Determination Process



2.4 Overview of Hunter Water's submission

2.4.1 Hunter Water's submission to our Issues Paper

Prices and customer bills

Hunter Water proposed relatively modest price changes for the 2013 determination period:[40]

- an increase of 2.1% per year, excluding inflation, for the water usage price (we estimate that including inflation, the increase would be about 4.6% per year)
- a decrease of 3.1% per year, excluding inflation, for water service charges for households (we estimate that once inflation is added, the decrease would be about 0.7% per year)
- an increase of 2.3% per year, excluding inflation, for sewerage service charges for households (we estimate that once inflation is added the increase would be about 4.8% per year)
- a decrease of 8.6% per year, excluding inflation, for stormwater for houses (we estimate that including inflation the decrease would be about 6.3% per year).

Hunter Water's price proposals reflect its view of the efficient costs that it needs to recover from customers. Our analysis shows that the price increases for water and sewerage are largely driven by increases in operating expenditure and reductions in demand.[41] For stormwater, the price decrease is largely driven by a lower operational expenditure and capital expenditure proposal.[42]

Under its proposed prices, Hunter Water estimates that:

- The combined water and sewerage bill for a typical residential house using 185 kL would increase by $83 from $995 ($2012/13) to $1,078 by 2016/17, excluding inflation.[43] This represents an increase of 8.3% over the 4 years to 2016/17.[44] Including inflation, we estimate the water and sewerage bill for this house under Hunter Water's proposed prices to be $1,197 by 2016/17, an increase of $202 (or by about 20% over the determination period).

40 Hunter Water submission, 14 September 2012, p 124. We have converted the prices and bills presented in Hunter Water's submission to include inflation, based on an inflation rate of 2.5% per year.
41 See Chapter 5 and 8 respectively.
42 Hunter Water submission, 14 September 2012, pp 46-48, 61 & 71.
43 Hunter Water submission, 14 September 2012, p 124.
44 Hunter Water submission, 14 September 2012, p 124.

- The combined water and sewerage bill for a typical pensioner household using 140 kL per year would increase by $53 from $607 ($2012/13) to $660 per year in 2016/17 (excluding inflation).[45] This represents an increase of about 9% over the determination period. Including inflation, we estimate a pensioner's bill under Hunter Water's proposed prices to increase by $126 to $733 in 2016/17 (or by about 21% over the determination period).

Hunter Water proposed a sewerage service charge for residential flats and units that rises to 75% of the sewerage service charge for houses by 2016/17.[46] This is an increase from 65% under the current Determination. After 4 years, the average strata unit bill is estimated to increase by $125, excluding inflation, or by about 19%, from $665 in 2012/13 to $790 in 2016/17.[47] Including inflation, we estimate the average strata unit bill to increase by $212 to $878 in 2016/17 (or by about 32%).

Based on its customer survey (which indicated that customers wanted more control over their bills), and on evidence on the cost of servicing units, Hunter Water's proposal confined price increases to the water usage price rather than the fixed service charge.[48]

Hunter Water tested perceptions of affordability as part of its customer engagement and found that 60% of customers, including pensioners, agreed that bills are affordable.[49]

Customer engagement

Hunter Water engaged an external consultant to undertake customer engagement research, including a survey of customers. Hunter Water reported that the survey attracted 1,910 respondents, including 701 telephone interviews and 1,209 online surveys.[50] It considered the response rate makes the findings highly reliable. The majority of demographics gained robust sample sizes, with the exception of Dungog local government area residents and flat renters.

Hunter Water used the results of the survey to shape its proposals on price structures (as noted above), and its discretionary spending and service levels.

Hunter Water also fulfilled our request to provide a plain English summary of its entire pricing proposal.

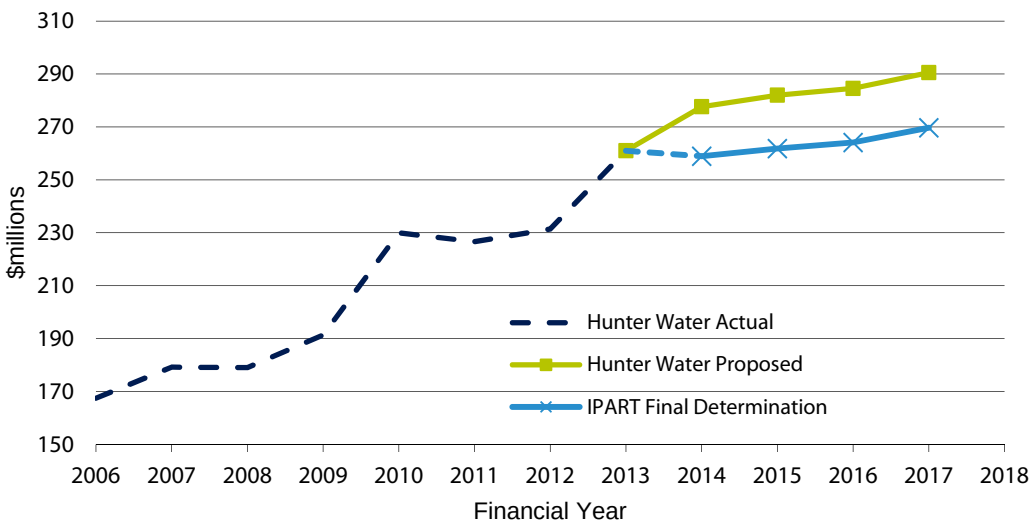
45 Hunter Water submission, 14 September 2012, p 125.
46 Hunter Water submission, 14 September 2012, p 108.
47 Hunter Water submission, 14 September 2012, pp 124-125.
48 Hunter Water submission, 14 September 2012, p iv.
49 Hunter Water submission, 14 September 2012, p 128.
50 Hunter Water submission, 14 September 2012, p 142.

Revenue requirement

Hunter Water's September 2012 submission proposed a revenue requirement for the 2013 determination period of about $1,135 million, excluding inflation.[51] Subsequent to its initial submission, Hunter Water requested $2.8 million per year in additional superannuation expenses.[52] Following Atkins/Cardno's review of Hunter Water's business case for deferred costs of the Kooragang Industrial Water Scheme, Hunter Water revised its modelling assumptions to reduce its avoided cost proposal to $9.5 million (from $15.7 million)[53].

Hunter Water's proposed revenue requirement, excluding these adjustments, is shown in Figure 2.2. A moderate real increase of 2.7% per year over 2013/14 to 2016/17 is proposed. This is from a high base following large capital investment in the 2009 determination period. IPART's determined Annual Revenue Requirement is also shown in Figure 2.2.

Figure 2.2 Hunter Water's proposed revenue requirement and actual revenue and IPART's 2013 Determination ($2012/13)



Note: Hunter Water's revenue requirement does not include its revised submission with additional superannuation costs. Costs relating to Tillegra Dam have been removed from revenue figures.

Data source: Hunter Water submission, 14 September 2012, pp 88, 89 and IPART analysis.

51 Hunter Water submission, 14 September 2012, pp 88-90 (using unsmoothed target revenue requirement).

52 Letter from Hunter Water to IPART, 29 November 2012.

53 Atkins/Cardno, *Review of Hunter Water Corporation's Operating and Capital Expenditure – Final report*, November 2012, p 152.

Hunter Water's proposed revenue requirement over the 4 years includes the following elements:

- Operating expenditure of $476.3 million. This compares with actual operating expenditure in the 2009 determination period of $444.6 million.[54] Increases in costs are due mainly to higher labour costs, electricity costs (including carbon costs), and sewerage treatment costs.[55]
- Capital expenditure of $299.3 million.[56] This compares with actual capital expenditure for the 2009 determination period of $658.9 million.[57]
- A real post-tax WACC of 5.6%. This is the WACC we used in the Sydney Water and Sydney Catchment Authority Determinations of June 2012.
- A water consumption forecast that is 7% below the consumption forecast it proposed (and IPART accepted) for the current determination period (2009-2013). The forecast is, however, in line with actual consumption over the 2009 determination period.
- Costs of Tillegra Dam have been excluded, following the NSW Government's discontinuation of the project in 2011.

Despite an increase in operating costs, Hunter Water forecasts a decline in real operating costs per property from $525 in 2012/13, the last year of the 2009 determination period, to $497 by 2016/17.[58] This is because it forecasts the rate of growth in connections to exceed the rate of growth of operating expenditure.

Hunter Water reported that it is on course to deliver its capital investment portfolio of $657.9 million as allowed for the 2009 determination with actual capital expenditure of $658.9 million over same period.[59] There have been some changes in management and organisational priority, with an over-expenditure in sewerage and an under-expenditure in water. Chapter 6 provides details.

Compared with earlier plans, Hunter Water has reduced its 2013 capital expenditure proposal to $299.3 million, citing customer affordability, combined with a need to maintain its financial position, as the key reasons.

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54 Hunter Water reports operating expenditure of $430.9 million over the 2009 determination period summed in nominal terms. We have converted this to real $2012/13. Hunter Water submission, 14 September 2012, p 38.

55 Hunter Water submission, 14 September 2012, pp 48-51.

56 Hunter Water proposed a capital program for the determination period of $325.4 million. This includes $26 million relating to the Kooragang Industrial Water Scheme. Hunter Water submission, 14 September 2012, pp 60 and 71. We treat expenditures related to the Kooragang Industrial Water Scheme separately and so have removed them from Hunter Water's capital expenditure proposal - see section 3.3.2.

57 Hunter Water reported total capital expenditure in the 2009 determination period of $639.3 million summed in nominal terms. We have converted this to $2012/13. Hunter Water submission, 14 September 2012, p 60.

58 Hunter Water submission, 14 September 2012, p 48.

59 Hunter Water submission, 14 September 2012, p 58.

Hunter Water's proposal is a selected subset of the 20-year portfolio of capital projects in its 2011/12 Statement of Corporate Intent (SCI), which included approximately $1.1 billion of projects for the 2013/14 to 2016/17 period. In April 2012, Hunter Water reduced its preferred capital expenditure program to $606 million. Hunter Water submits that this would have seen real price rises of approximately 17% by the end of 2013 determination period.[60] For its price submission, Hunter Water has further reduced its capital expenditure program by deferring or eliminating projects while considering the risk presented by not proceeding with these projects.

Impact on Hunter Water

Hunter Water considered it should be able to mitigate risks to its performance that may result from its moderate expenditure proposal.[61] Its proposal includes assumptions that no performance improvement will be required from regulators and that growth in connections will remain at or below 1.4% per year and will occur in areas with spare asset capacity.[62]

Hunter Water states that it made its pricing proposals, including its restrained capital program, to achieve customer affordability and to make appropriate dividend distributions and maintain an investment grade credit rating. Hunter Water assesses that under its proposal, its overall credit rating would be an investment grade of Baa, based on Moody's credit rating methodology.[63]

2.4.2 Hunter Water's submission to our Draft Report and Determination

Hunter Water raised the following concerns with our Draft Determination:

- A real post-tax WACC estimate of 4.2% used to set the rate of return Hunter Water can earn on its regulatory asset base. Hunter Water states a preference for a long term average WACC of 5.4% instead of using current market parameters.
- Its financeability over the 2013 determination period, particularly under a 4.2% WACC.
- The deduction made to operating costs to avoid double counting of carbon costs when prices are indexed by CPI.
- Changes to billing arrangements for usage charges for multi-premises; stormwater charges for non-residential strata title properties; and the need to pro-rata billing of usage charges when 1 July falls within the meter reading period.
- The calculation of location-based prices.

These issues are considered, and our reasoning explained, in the chapters below.

60 Hunter Water submission, 14 September 2012, pp 64-66.
61 IPART, Public Hearing transcript, 13 November 2012, pp 18, 19 and 22.
62 Hunter Water submission, 14 September 2012, pp 65-66.
63 Hunter Water submission, 14 September 2012, pp 135 - 136.

3 Approach to setting prices

In response to Hunter Water's moderate proposals, we have broadly accepted its expenditure and pricing proposals. In order to establish that this is reasonable in terms of price outcomes and impacts on Hunter Water's services and assets, we have followed our normal processes to set Hunter Water's notional revenue requirement and then to convert this revenue requirement into prices.

The sections below provide an overview of our price setting approach and discuss our final decisions, including:

- the length of the 2013 determination period
- our approach for determining the notional revenue requirement
- adjustments to the Regulatory Asset Base (RAB) for a Section 16A Direction regarding Kooragang Industrial Water Scheme and the discontinued Tillegra Dam[64]
- our approach for converting the notional revenue requirement into prices
- requirements for Hunter Water to report on its progress against output measures
- pricing for recycled water schemes
- a regulatory mechanism to address the risk of significant variation between actual and forecast water sales
- addressing the costs of bulk water purchased from the Central Coast councils
- pricing water transfers for potential banking between Hunter Water and the Central Coast councils.

64 Appendix B contains the Section 16A Direction, and Section 3.3 provides detail on the Direction.

3.1 Length of the determination period

Decision

1 IPART's decision is to adopt a 4-year determination period from 1 July 2013 to 30 June 2017.

For each water pricing review, we make a decision on the length of the determination period taking into account the circumstances at that time.

The advantages of a longer determination period include stronger incentives for Hunter Water to increase efficiency; greater stability and predictability (which may lower Hunter Water's business risk and assist investment decision making); and reduced regulatory costs. However, there are also disadvantages which include increased risk associated with potential inaccuracies in the data used to make the determination; possible delays in customers benefitting from efficiency gains (because prices are not set to account for these gains until the next determination); and the risk that changes in the industry will affect the appropriateness of the determination.

We consider a 4-year determination period to be appropriate as it:

- provides the right balance between a stable operating environment for Hunter Water and allowing customers to benefit from efficiency gains
- is supported by most stakeholders, including Hunter Water
- aligns the determination period for Hunter Water's prices with the determination periods for Gosford and Wyong Councils, which is important given the water supply management arrangements between the regions (eg, the interchange sales and possible water banking under the Lower Hunter Water Plan).

Hunter Water's preference is for a 4-year determination period.[65] It considered that shorter determination periods impose considerable resourcing costs in terms of preparing for, and servicing, the review process while periods longer than 4 years can reduce the capacity to adjust prices for unforeseen circumstances. At the Public Hearing, Hunter Water noted that a longer determination would expose it to too much interest rate risk given the current historic lows.[66]

We consider another factor weighing against a longer determination period is that outcomes of the Lower Hunter Water Plan are not yet known, and therefore not included in Hunter Water's operating and capital expenditure forecasts. This presents Hunter Water with a source of risk, which we discuss in more detail below.

65 Hunter Water submission, 14 September 2012, p 83.
66 IPART, Public Hearing transcript, 13 November 2012, p 12.

Other stakeholders, including the Total Environment Centre and the Public Interest Advocacy Centre, also express a preference for a 4-year determination period on the basis that it strikes a balance between giving Hunter Water certainty with which to plan its investment decisions and the length of time that consumers will have to wait to benefit from gains in efficiency made earlier in the determination.[67]

Stakeholders also consider that alignment between the price paths for Hunter Water and Gosford and Wyong Councils should be maintained given the connection between the 3 utilities and the sales of water between them.[68]

3.2 Approach for determining the notional revenue requirement

The notional revenue requirement represents our view of Hunter Water's full, efficient costs in providing the regulated services for each year of the determination period. As in previous reviews, we use a building block approach to calculate Hunter Water's notional revenue requirement over the determination period (Figure 3.1). To apply this approach, we estimate the amount of revenue Hunter Water will require in each year of the period, including:

- **The revenue required for operating expenditure** over the period. This amount represents our estimate of Hunter Water's forecast efficient operating, maintenance and administration costs.
- **An allowance for a return on the assets** used to provide the regulated services. This amount represents our assessment of the opportunity cost of the capital invested in Hunter Water by its owner, and ensures that it can continue to make efficient investments in capital in the future.
- **An allowance for a return of assets (regulatory depreciation)**. This allowance recognises that through the provision of services to customers, a water utility's capital infrastructure will wear out over time and therefore revenue is required to recover the cost of maintaining the regulatory asset base.
- **An allowance for meeting tax obligations.** For this review, we used a real post-tax WACC and calculated Hunter Water's tax liability as a separate cost block.[69] We consider this method more accurately estimates the tax liability that would be achievable by a similar, well-managed, privately owned business. This Determination is the first time we have implemented our changed approach to tax for Hunter Water. Appendix D outlines our calculation of Hunter Water's tax allowance. This approach was first adopted in the 2012 Sydney Water and Sydney Catchment Authority Determinations.
- **An allowance for working capital.** This allowance represents the holding cost of net current assets.

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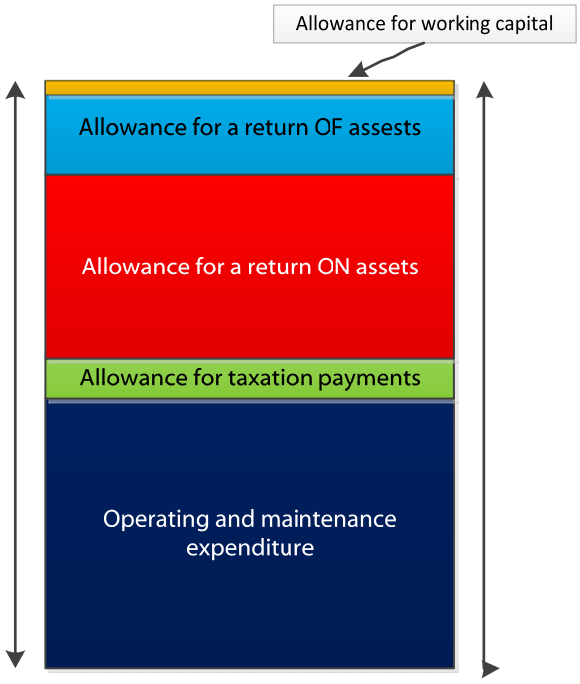
67 PIAC submission, 12 October 2012, p 9. TEC submission, 9 October 2012, p 2 - TEC considers that a 4-year determination strikes an appropriate balance between certainty and limiting delays in introducing necessary pricing reforms.

68 IPART, Public Hearing transcript, 13 November 2012, pp 31 and 42.

69 IPART, *The incorporation of company tax in pricing determinations*, December 2011.

Our final findings on the notional revenue requirement are presented in Chapter 4, and discussed in detail in Chapters 5 and 6.

Figure 3.1 Building block approach



3.2.1 Our adoption of a proportionate approach to regulation

In this Determination, we have adopted a proportionate approach to regulation. We have responded to Hunter Water's price proposal, and its management and commercial discipline and customer focus, by accepting its proposal with minor modifications.

Hunter Water made 2 changes subsequent to its initial submission, for extra superannuation costs and to update the benefits to customers from its Kooragang Industrial Water Scheme, and we have accepted these. We have also removed an extra allowance for carbon costs that was not required and applied our standard methodologies for regulatory depreciation and tax.

As we have done for other water businesses, we undertook a detailed and evidence-based analysis of prudent and efficient operating and capital expenditures. This analysis resulted in operating and capital expenditure allowances that are only marginally different to Hunter Water's revised proposal. This was confirmation that Hunter Water's proposal was reasonable.

We have also recognised Hunter Water's extensive engagement with its customers, as outlined in Section 3.2.2.

Our approach is consistent with the proportionate approach used by other regulators. For example, in its statement of principles for the next round of UK water reviews, Ofwat provides that where a utility presents a well evidenced plan including evidence of customer engagement and compliance with its other obligations, it will adopt a less detailed approach to the assessment of the utility's business plans (ie, the process of review of the entity's plans and assessment of the expenditures needed to deliver services).[70]

3.2.2 Hunter Water's consultation with its customers

Hunter Water actively participated in our recent review of customer engagement on prices.[71] In its price submission, it fulfilled our request to provide:

- a plain English summary of its entire pricing proposal
- evidence on discretionary expenditure proposals
- evidence on price structure proposals.

We commend Hunter Water on its customer consultation for the 2013 price review. We consider that Hunter Water's customer consultation achieves the objectives that we sought from such consultation. These were to improve community acceptance of proposals on discretionary spending and price structures, and to streamline our review process by reducing our need to look at other evidence.

Hunter Water also consulted customers about matters in addition to discretionary spending and price structures, which we did not specifically ask it to consider. These include affordability, control over bills, whether customers would prefer lower bills arising from reduced performance, and customer hardship programs.

Hunter Water's consultation was extensive and included:

- discussions with major stakeholders and in its Consultative Forum
- focus groups to assist with survey design
- randomly selected telephone interviews with both residential and business customers
- making the survey available online and consultation sessions in libraries for people who do not have internet access.

The Public Interest Advocacy Centre (PIAC) asked that we clarify the weight that we give to the customer engagement activities undertaken by utilities in preparing their pricing proposals.[72]

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70 http://www.ofwat.gov.uk/future/monopolies/fpl/pap_pos201205fplprincip.pdf, p 10.
71 IPART, *Customer engagement on prices for monopoly services: Final Report*, August 2012, p 7.
72 Public Interest Advocacy Centre submission, 9 April 2013, p 2.

In making water price determinations, we consider a range of factors, set out in section 15(1) of the IPART Act, and the weighting of these factors for the purpose of our decision-making varies from review to review. Similarly, the way in which we take account of customer engagement evidence will be determined on a review-by-review basis.

For this review, we took account of customers' preferences to have greater control over their bills at each step of our process in setting prices. We consider that we have met customers' requests for higher usage charges and lower service charges to the greatest extent possible, whilst also applying our pricing principles. In general terms, our pricing principles state that prices should reflect the cost of servicing customers. This is because we consider cost-reflective prices to be fair and to encourage an efficient use of resources. Section 10.5.4 provides further explanation.

Hunter Water's consultation on discretionary spending

Hunter Water has included discretionary spending of $4.1 million in its proposed operating expenditure and $13.0 million in its proposed capital expenditure program over the upcoming 4-year price path.[73]

In consultation on its spending proposals, Hunter Water asked its customers about discretionary spending on the following programs:

- odour reduction from sewerage pipes and from sewerage treatment works
- removal of graffiti (ie, whether Hunter Water should spend less on these 3 programs – no quantification of costs or savings)
- catchment management (ie, should Hunter Water spend $4 million more on defined activities, with a $2 annual bill impact)
- a $100,000 payment assistance scheme for families experiencing hardship (ie, should Hunter Water spend more, the same or less on a program that is targeted to families in need, with a 14c bill impact).

The results from respondent groups in both the telephone and online surveys were similar:

- Current spending on odour control was supported (>60% of each sample).
- For graffiti reduction, 51% of the telephone survey supported current spending, with 37% supporting a reduction and 12% 'don't know'. For the online survey, a lower percentage (45%) supported current spending.
- Increased spending was supported for catchment management and the payment assistance scheme (around 70%).

73 Hunter Water submission, 14 September 2012, pp 71 and 144-145.

Hunter Water used the results of its customer consultation to inform its discretionary spending proposals on these 5 programs and we have accepted them, consistent with our adoption of Hunter Water's proposals.

We note that the above survey results demonstrate strong support for discretionary expenditure where:

- the basis for the expenditure and the effect of discontinuing the expenditure can be reasonably defined
- the impact of the expenditure on customers' bills can be identified and is relatively small compared with the overall bills
- the spending contributes to the welfare of the community generally.

After our review is complete, we will work with Hunter Water to develop and strengthen its approach. For example, Hunter Water combined its telephone survey and online survey results and the resulting sample is likely not to be representative of Hunter Water's population. Hunter Water's telephone survey was of sufficient size to provide views that were representative of the community, which we note is good practice.[74] Achieving representative views will be important if Hunter Water seeks to test more significant variations to its current services, performance and prices.

3.3 Adjustments to the Regulatory Asset Base (RAB) for Section 16A Directions

For the 2009 Determination, the then Minister for Water directed IPART under section 16A of the IPART Act to include in its determination the efficient costs of Hunter Water complying with a Government direction to:

- Immediately bring forward the construction of a 450 billion litre dam at Tillegra.
- Provide a subsidy of up to $10 million for the Kooragang Island water recycling project.

We received advice from the Minister for Finance and Services that this Section 16A Direction only applied from July 2009 to June 2013 (ie, the 2009 determination period) and therefore does not apply to our future determinations (ie, the 2013 determination period). A copy of the letter is provided in Appendix B.

For Tillegra Dam, we have not included any of its costs in Hunter Water's prices.

74 IPART, *Fact sheet for Councils - Community consultation for special variation applications*, November 2011, p 5.

For the Kooragang recycling project, the Minister for Finance and Services has issued IPART a new Section 16A Direction that is identical in wording to the original Section 16A Direction that was issued as part of the 2009 Determination (Appendix B).

In the sections below we discuss our requirements to comply with the Section 16A Direction on the Kooragang Island project, and the adjustments we have made to Hunter Water's Regulatory Asset Base (RAB) to remove all Tillegra Dam related costs.

3.3.1 Treatment of the discontinued Tillegra Dam

As part of the 2009 Determination, we allowed Hunter Water to retrieve through prices the following Tillegra Dam costs:

- For 2005/06 to 2008/09: $90.1 million Tillegra-related assets in the roll forward of the RAB to 1 July 2009 ($2008/09). This included land costs and pre-construction costs incurred over 2005/06 to 2008/09.
- For 2009/10 to 2012/13: $244.9 million for the planning and construction of Tillegra Dam over the 2009 price path ($2008/09).[75] However, only 40% was included in the RAB in 2009/10 to reflect the drought security value of Tillegra Dam. The value in the RAB increased to about 42.4% of proposed expenditure by 2012/13 reflecting growth in connections during the determination period.[76] Residual capital expenditure and holding costs are held as a Deferred Asset - they would have been recovered over subsequent determinations.

Hunter Water incurred some expenditures for Tillegra Dam prior to 2005/06 but these were not included in the RAB for the 2009 Determination.

75 IPART, *Review of prices for water, sewerage, stormwater and other services for Hunter Water Corporation - Final Report*, July 2009, pp 97 and 100.

76 IPART, *Review of prices for water, sewerage, stormwater and other services for Hunter Water Corporation - Final Report*, July 2009, p 52.

Refund of Tillegra Dam costs 1 July 2009 to 30 June 2013

In December 2010, the then NSW Government announced that it would not grant planning approval for Tillegra Dam. Following a Section 9 request, we calculated a refund of amounts paid by customers toward the cost of Tillegra Dam in prices to March 2011. The refund was provided by way of a reduction in the water service charge and totalled approximately $20.2 million ($2008/09).[77] The refund represented the return on capital and depreciation component of any Tillegra capital expenditure allowed in the RAB.

The Government also asked IPART to set new water prices to apply from March 2011 to June 2013, removing any further costs associated with Tillegra Dam that were included in prices for the 2009 determination. To implement the Section 9 direction, we calculated a 2009 opening water RAB excluding Tillegra costs of $652.3 million for water ($2008/09).

Regulatory treatment of Tillegra Dam expenditures post 1 July 2009

In this Determination, we have not included Tillegra Dam costs in Hunter Water's prices. This is consistent with the Government's advice that the Section 16A Direction on Tillegra Dam does not apply to the 2013 Determination.

Hunter Water has stated in its current submission[78] and at our Public Hearing[79] that the costs of Tillegra Dam are not included in prices sought from 1 July 2013. We confirm that Hunter Water has removed all Tillegra capital expenditure from its RAB post 1 July 2009. Our Section 9 adjustment to the opening RAB and our adjustments for actual expenses in this review have removed all allowances for Tillegra Dam identified in the 2009 Determination.[80]

There is also a small operating cost of about $0.3 million[81] associated with land maintenance for Tillegra Dam that is included in Hunter Water's proposed operating costs in 2012/13 and 2013/14. We have removed these costs from Hunter Water's notional revenue requirement and therefore from prices from 1 July 2013. Instead, Hunter Water can meet these costs from the portion of unregulated income which it retains for its own use.

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77 IPART, *Charges for Hunter Water Customers - Refund to customers and adjustment to charges resulting from the decision not to proceed with Tillegra Dam*, January 2011, p 7.

78 Hunter Water submission, 14 September 2012, p 58.

79 IPART, Public Hearing transcript, 13 November 2012, pp 19 and 20.

80 In line with the revisions that Hunter Water made to its historical capital expenditure, an additional $5.9 million ($2008/09) in 2008/09 on Tillegra Dam has been excluded from the RAB. That is, Tillegra Dam capital expenditure in 2008/09 was $26.6 million ($2008/09), which exceeded the forecast of $20.7 million.

81 Correspondence with Hunter Water (Email), 13 December 2012.

This decision reflects the fact that Tillegra Dam lands are not being used by Hunter Water for its regulated activities. We note that the Minister announced that Tillegra Dam is not to be considered in the Lower Hunter Water Plan, which will decide on water demand and supply measures for Hunter Water. He has also instructed Hunter Water to progress discussions with landholders who have the first right of refusal on buy back of the properties and to commence development of a land use strategy.[82]

3.3.2 Subsidy for the Kooragang Industrial Water Scheme

Decision

2 IPART's decision is to allow $10 million, being the sum paid by Hunter Water as a subsidy for the Kooragang Industrial Water Scheme, to be recovered through water charges in accordance with the Section 16A Direction from the NSW Government.

In July 2008, the then Minister for Water directed Hunter Water, under section 20P of the *State Owned Corporations Act 1989,* to "provide a subsidy of up to $10 million for the Kooragang Island recycled water project". This section 20P direction is still standing.

At the time, we were also directed by the Government under Section 16A of the IPART Act to include in our determination the efficient costs of Hunter Water complying with the Government direction to provide a subsidy of up to $10 million for the Kooragang Island water recycling project. (A copy of that direction is included at Appendix B.)

Hunter Water did not apply for the subsidy in the 2009 Determination for the following reasons:

- Commercial negotiations with potential recycled water customers were at a very early stage.[83]
- The project cost structure and the proposed charging regime at the time suggested that a subsidy would not be required. Hunter Water expected that the revenue generated from recycled water sales and the recovery of avoided costs through periodic prices would be sufficient to ensure the viability of the scheme.[84]

82 NSW Auditor-General's Report to Parliament, Volume Six 2012, Hunter Water Corporation p 58.
83 Hunter Water submission, 14 November 2013, p 87.
84 Correspondence with Hunter Water (Email), 28 October 2008.

The Minister for Finance and Services has issued IPART a new Section 16A Direction to ensure the subsidy is taken into account in Hunter Water's prices over the 2013 determination period (see Appendix B). With the completion of commercial negotiations for Kooragang Industrial Water Scheme (KIWS), Hunter Water is seeking the inclusion of the full $10 million subsidy as part of proposed water capital expenditure in the RAB to ensure the viability of the scheme.[85]

Our final decision is to allow $10 million for the Kooragang Industrial Water Scheme as a subsidy that Hunter Water will recover through prices. This final decision is made in accordance with the new Section 16A Direction from the Government. We note that the new direction does not change any modelling undertaken in our Draft Determination, as we foreshadowed the new Section 16A Direction and included the $10 million subsidy in Hunter Water's draft prices.

We retain discretion as to whether the subsidy is recovered from water or sewerage prices. In the background section of the Section 20P direction, however, it is assumed that the cost of the subsidy will be passed through to water prices:

> The payment for the Kooragang Island recycling project will enable the price of recycled water to be set at levels competitive with the price of potable water, which is set by the Independent Pricing and Regulatory Tribunal.

Therefore, our final decision is that the subsidy be rolled into the water RAB in perpetuity and recovered through water charges. We consider that this minimises the impact of the subsidy on customers' bills.

We note that the $10 million subsidy represents a cross-subsidy from broader water customers to recycled water customers.

The subsidy is different from our final decision to allow Hunter Water to recover $9.5 million of avoided costs from KIWS through water charges. We consider this to be efficient. This is because the avoided costs represent the benefits water customers will receive from the volume of recycled water sales from KIWS and the consequent reduction in potable water use. These benefits include the deferral of upgrades to Grahamstown water treatment plant (see Chapter 11 for further details about avoided costs).

85 Hunter Water submission, 14 September 2012, p 71.

3.4 Approach for converting the notional revenue requirement into prices

Having calculated Hunter Water's notional revenue requirement for the determination period, we then converted that requirement into prices. To do this, we needed to make a number of final decisions, including:

- the target revenue for each year – see Chapter 4
- the revenue expected from trade waste, miscellaneous services and other sources - see Chapter 4
- the forecasts of Hunter Water's customer numbers and water sales over the determination period – see Chapter 8
- the structure of Hunter Water's prices, and the revenue to be generated from each type of charge – see Chapters 9 and 10
- the level of prices - see Chapters 9 and 10.

3.5 Obligations on Hunter Water to report on its progress against output measures and major capital projects

Decision

3 IPART's decision is to require Hunter Water to:

- Report annually on progress against the output measures described in Appendix C.
- Submit a completed Annual Information Return by the last working day of October in each year of the 2013 determination period. This is an Excel spreadsheet template provided annually by IPART to Hunter Water.
- Report on progress on the major capital projects, as listed in the confidential Appendix F in Hunter Water's 2012 submission, at the time of the next pricing review.
- Provide a reconciliation of its expenditures and outcomes against the IPART operating and capital expenditure allowances at the time of the next pricing review.

We set output measures for the water agencies we regulate as a means of determining whether they are delivering on the capital expenditure plans they outline in their pricing submissions. This is important because we set prices to enable them to recover the forecast efficient costs of those plans.

While meeting output targets is important, we take a pragmatic approach to assessing an agency's performance against output targets. There may be reasonable explanations why targets are not met. For example, as circumstances evolve over a determination period, changing a target may result in a better outcome for stakeholders. However, ongoing inability to meet output targets

may also indicate that the required levels of service, to which we have linked our prices, are not being met and there is a deficiency in the planning and delivery of capital projects.

Hunter Water reported on physical output measures that were set in the 2009 Determination, as well as expenditure on major capital projects over the current period.[86] Hunter Water reported that it has met most of the physical output measures (see Appendix D of its submission), and Atkins/Cardno considered that Hunter Water has provided valid reasons for any over or under target performance.[87]

Atkins/Cardno also reviewed Hunter Water's capital expenditure in the current period and found that it was largely prudent and efficient, even where expenditure was significantly higher than allowed for in the 2009 Determination (see section 6.2.2).[88]

We have decided to maintain the use of output measures over the 2013 determination period, as a starting point for the assessment of prudent capital expenditure and the basis for reporting on any deviation from targets established.

Hunter Water proposed a new set of output measures for the 2013 determination period,[89] which were reviewed and largely accepted by Atkins/Cardno. Our final output measures include 3 additional output measures to those proposed by Hunter Water and 3 minor adjustments, based on Atkins/Cardno's recommendations (see Appendix C). Hunter Water has accepted these changes.

We have also included an output measure to track the avoided costs claimed in relation to KIWS. In particular, we expect that the deferral of Stage 3 upgrades to Grahamstown Water Treatment Plant to commence no earlier than 2018/19, as presented in Hunter Water's business case.

Hunter Water will also be required to submit a completed Annual Information Return by the last working day of October in each year of the 2013 determination period. This is an Excel spreadsheet template provided annually by IPART to Hunter Water.

In its submission, Hunter Water provided a commercial-in-confidence list of major capital projects for the 2013 determination period. We will require Hunter Water to report on progress on these projects at the time of the next pricing review, along with a reconciliation of its expenditures and outcomes against the IPART capital and operating expenditure allowances.

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86 Hunter Water submission, 14 September 2012, Appendix C and Appendix D.

87 Atkins/Cardno, *Review of Hunter Water Corporation's Operating and Capital Expenditure – Final Report,* December 2012, p 155.

88 See Appendix C of Hunter Water's submission for a report on incurred expenditure on major capital projects compared with original estimates.

89 Hunter Water submission, 14 September 2012, Appendix H.

3.6 Our approach for pricing of recycled water schemes

It is our intention not to set prices for Hunter Water's mandated recycled water schemes in this and future determinations. Rather, our preference is to monitor prices set by Hunter Water in accordance to IPART's 2006 pricing guidelines.

We have made this decision on the basis that it represents more proportionate regulation, which is best practice and ensures that prices are only regulated in proportion to the costs and benefits of regulation.[90] The decision to not set prices for Hunter Water's mandated recycled water schemes is consistent with that made in the 2012 Sydney Water review.[91]

We have undertaken a high-level review of Hunter Water's recycled water prices for its 2 mandated schemes. Based on the information provided by Hunter Water, we are satisfied that Hunter Water's proposed recycled water prices for Thornton North and Gillieston Heights are set in accordance with our guidelines.

We will reassess Hunter Water's recycled water prices by 30 June 2018.

We discuss our decisions relating to Hunter Water's recycled water schemes in more detail in Chapter 12.

3.7 Approach for setting the interchange charge for water sales between Hunter Water and the Central Coast councils

Hunter Water has a water trading arrangement with Gosford and Wyong Councils, under which either party can supply potable drinking water to the other under a water supply contract.[92] Hunter Water began supplying water to the Central Coast in 2004/05 due to extremely low levels in the Gosford City Council and Wyong Shire Councils' storages.

The water supply agreement between Hunter Water and the Councils remains in place until 2026. We were requested by both parties to set the price for these water transfers over the 2009 determination period.

90 IPART, *Review of prices for Sydney Water Corporation's water, sewerage, and stormwater drainage and other services – Final Report*, June 2012, p 133.

91 IPART, *Review of prices for Sydney Water Corporation's water, sewerage, and stormwater drainage and other services – Final Report*, June 2012, p 130.

92 The agreement in which water is supplied is subject to minimum storage levels for each party and a need for a greater than 5% difference between the two parties' storage levels.

For the 2013 determination period, we have made a final decision to set the interchange price at around the short-run marginal cost of these transfers. This departs from the average cost pricing approach we used in the 2009 Determination. Therefore, any increase in revenue for Hunter Water for any volume of sales is likely to be largely offset by an increase in operating costs and thus we do not need to make an offset to notional revenue for these revenues.

Wyong Shire Council considered that our approach to pricing water sales between Hunter Water and the Central Coast Councils is reasonable.[93]

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.

Details on this decision can be found in Chapters 8 and 9.

3.8 Pricing water transfers for potential banking between Hunter Water and the Central Coast councils

Decision

4 IPART's decision is not to determine a maximum price for any future water banking arrangement that might arise from the Lower Hunter Water Plan, noting that this would allow Hunter Water and the Central Coast Councils to set a commercially negotiated price for these transfers instead.

Hunter Water noted in its submission that inter-regional transfers for water banking with the Central Coast is one water supply option being considered as part of the LHWP.[94] 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.

Hunter Water noted that any water banking arrangement would require an agreement to be established with the Central Coast Councils. It considered that these arrangements would be separate to the current supply agreement covering the 'on request' interregional transfers for which IPART sets a price.[95]

93 Wyong Shire Council submission, 11 April 2012, p 2.

94 Hunter Water submission, 14 September 2012, p 104.

95 Hunter Water has an agreement with the Central Coast Councils (Gosford City Council and Wyong Shire Council) under which either party can supply potable drinking water to the other under a water supply contract until 2026. The agreement in which water is supplied is subject to minimum storage levels for each party and a need for a greater than 5% difference between the two parties' storage levels. In the 2009 Hunter Water Determination, IPART set an interchange charge for these inter-regional sales using an average cost method.

In particular, Hunter Water noted that an IPART-determined interchange price would be a major disincentive to water banking because the transfers are not intended as outright sales but as credits for later consumption.[96] Hunter Water also considered the cost basis for the interchange price to be inappropriate for water banking 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).[97]

We note that any future water banking arrangement that arises from the LHWP is a relevant consideration for IPART insofar that it would fall within the definition of a declared monopoly service supplied by Hunter Water (or the Councils), and therefore a service that IPART would need to consider setting a maximum price for.

However, we agree with Hunter Water that the case for regulating inter-regional transfers for banking is weak and that Hunter Water should be free to develop separate water banking arrangements with the Central Coast Councils as part of the LHWP.[98] We have made a final decision therefore not to determine a maximum price for any future water banking arrangement that might arise from the LHWP. This allows Hunter Water and the Central Coast Councils to set a commercially negotiated price for these transfers instead. Wyong Shire Council considered that our decision to enable a commercially negotiated price for water banking between Hunter Water and the Central Coast Councils is reasonable.[99]

We have drafted the Determination so that the interchange charge is qualified to only apply to inter-regional water transfers for immediate use (and not any future water banking arrangement made between Hunter Water, Gosford Council and Wyong Council).

As a high-level principle, we note however that water banking should not impose any additional costs on Central Coast customers. Therefore, the price for water banking should have regard to the costs of advancing any future supply augmentation measures in the Central Coast as a result of water banked by Hunter Water.

We also note that if the parties cannot agree upon a commercially negotiated price for water banking arrangements, the parties may seek IPART's involvement in the setting of prices.

96 Hunter Water submission, 14 September 2012, p 104.
97 Hunter Water submission, 14 September 2012, p 104.
98 Hunter Water submission, 14 September 2012, p 104.
99 Wyong Shire Council submission, 11 April 2012, p 1.

4 Revenue requirement

As Chapter 3 discussed, we used a building block approach to calculate Hunter Water's notional revenue requirement in each year of the determination period.

The section below summarises our findings and decisions on Hunter Water's revenue requirements for the 2013 determination period. The subsequent sections summarise:

- Hunter Water's proposed notional revenue requirement
- our final findings on Hunter Water's notional and target revenue requirements
- Hunter Water's revenue from other fees and charges
- our treatment of Hunter Water's unregulated income.

Chapters 5 to 7 discuss our findings on the individual components of the notional revenue requirement in more detail.

4.1 Summary of findings and decisions on revenue requirements

We have decided to set Hunter Water's notional revenue requirement and target revenue as shown in Table 4.1 below. The following sections outline how we reached our decisions on the levels of the notional and target revenue requirement.

Table 4.1 IPART's findings and decisions on Hunter Water's notional revenue requirement and target revenue ($millions, $2012/13)

	2013/14	2014/15	2015/16	2016/17	Total
Hunter Water proposal					
Operating expenditure	115.7	119.1	119.5	122.1	476.4
Depreciation (regulatory)	30.1	30.8	31.4	32.2	124.5
Return on assets	118.7	120.8	122.7	125.1	487.3
Return on working capital	1.4	1.7	1.6	1.7	6.4
Tax allowance	11.7	9.6	9.4	9.5	40.1
Notional revenue requirement	**277.6**	**282.0**	**284.5**	**290.5**	**1,134.7**
Target revenue	**267.6**	**273.3**	**279.1**	**288.3**	**1,108.3**
IPART draft decision[a]					
Operating expenditure	117.6	121.0	121.3	123.9	483.9
Depreciation (regulatory)	30.6	31.4	32.3	33.4	127.8
Return on assets	90.1	91.1	92.5	94.2	367.9
Return on working capital	0.8	0.8	0.7	0.8	3.1
Tax allowance	11.8	9.7	9.6	9.9	41.0
Notional revenue requirement	**250.9**	**254.0**	**256.5**	**262.3**	**1,023.7**
Target revenue	**261.3**	**257.9**	**255.5**	**256.0**	**1,030.6**
Average rate of return (real post-tax)	4.7%	4.4%	4.2%	3.9%	4.3%
IPART final decision[a]					
Operating expenditure	117.6	121.0	121.3	123.9	483.9
Depreciation (regulatory)	30.5	31.1	31.7	32.5	125.8
Return on assets	98.8	99.9	101.4	103.3	403.3
Return on working capital	0.9	0.9	0.9	0.9	3.6
Tax allowance	11.1	9.0	8.8	9.0	37.9
Notional revenue requirement	**258.9**	**261.8**	**264.1**	**269.7**	**1,054.5**
Target revenue[b]	**263.0**	**262.4**	**262.8**	**266.2**	**1,054.4**
Average rate of return (real post-tax)	4.8%	4.6%	4.5%	4.4%	4.6%

a We have made adjustments to Hunter Water's operating expenditure to exclude part of its proposed carbon cost allowance, and to include the additional superannuation contribution it subsequently sought.

b In net terms, target revenue, to be recovered in prices, under-recovers costs (ie, notional revenue) by $0.1 million over the 4 years. In Net Present Value terms, target revenue over-recovers costs by $0.5 million over the 4 years – see Section 4.4.

Note: Numbers may not add due to rounding.

Source: Hunter Water submission, 18 September 2012, pp 88-89.

4.2 Hunter Water's revenue proposal

Hunter Water proposed a notional revenue requirement over the 2013 determination period of $1,134.7 million (Table 4.1). Compared to its IPART determined revenue of $265 million in 2012/13, Hunter Water proposed an increase of $12.6 million or 4.8% in 2013/14. Hunter Water's revenue needs are based on a WACC of 5.6%, in line with the recent 2012 Sydney Water Determination.

Hunter Water proposed a target revenue approach to smooth out any pricing effects arising from projected step changes in demand over the determination period.[100] Under its proposal, Hunter Water would recover $26.4 million less than the revenue required to meet its costs over the 4 years of the determination period. The under-recovery of revenue was proposed for sewerage prices, with slight over-recoveries proposed for water and stormwater prices.[101]

Hunter Water calculated that to meet its proposed target revenue requirement, a typical[102] household's water and sewerage bill needs to increase from $994.84 in 2012/13 to $1,077.79 in 2016/17.[103] This represents an increase of $82.95 over the 4 years (in addition to inflation).

4.3 IPART's finding on Hunter Water's notional revenue requirement

Finding

5 Hunter Water's notional revenue requirement is as shown in Table 4.2.

Our final decisions on Hunter Water's building block result in a notional revenue requirement of $1,054.5 million over the determination period, which is $80.2 million lower than Hunter Water proposed. The main reason for this difference is our decision to use a post-tax real WACC of 4.6%, which is lower than Hunter Water's proposed WACC of 5.6%.

Our notional revenue requirement is around $54.8 million (or 5.5%) higher than the notional revenue allowed for the 2009 determination period.[104] It increases from the Draft Determination by about $30.8 million over the 4 years due to:

- an increase in the return on assets due to an increase in the real post-tax WACC from 4.2% to 4.6% ($35.4 million), and working capital ($0.5 million)
- a decrease in the depreciation allowance due to a correction to asset lives (-$2.0 million)
- a decrease in the tax allowance due to an increase in the cost of debt from 5.7% to 6.5% - to calculate the cost of debt, we use the midpoint of 2 estimates, which are derived from current market data and long term averages (-$3.1 million).

Our final finding on Hunter Water's notional revenue requirement by business is presented below in Table 4.2.

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100 Hunter Water submission, 14 September 2012, p 88.
101 Hunter Water submission, 14 September 2012, pp 88-89.
102 Based on Hunter Water's assumption of a residential property consuming 185 kL of water per year.
103 Hunter Water submission, 14 September 2012, pp v and vi.
104 This calculation excludes all Tillegra Dam costs from the notional revenue requirement.

Table 4.2 IPART's finding on Hunter Water's notional revenue requirement by business ($millions, $2012/13)

	2013/14	2014/15	2015/16	2016/17	Total
Total Business					
Operating expenditure	117.6	121.0	121.3	123.9	483.9
Depreciation (regulatory)	30.5	31.1	31.7	32.5	125.8
Return on assets	98.8	99.9	101.4	103.3	403.3
Return on working capital	0.9	0.9	0.9	0.9	3.6
Tax allowance	11.1	9.0	8.8	9.0	37.9
Notional revenue requirement	**258.9**	**261.8**	**264.1**	**269.7**	**1,054.5**
Water					
Operating expenditure	51.0	53.2	52.6	55.0	211.8
Depreciation (regulatory)	13.9	14.2	14.5	14.9	57.6
Return on assets	45.1	45.8	46.7	47.8	185.3
Return on working capital	0.4	0.4	0.4	0.4	1.5
Tax allowance	4.1	4.2	4.1	4.2	16.5
Notional revenue requirement	**114.5**	**117.8**	**118.2**	**122.4**	**472.9**
Sewerage					
Operating expenditure	65.4	66.6	67.5	67.7	267.3
Depreciation (regulatory)	16.1	16.4	16.7	17.0	66.1
Return on assets	52.0	52.4	53.1	53.9	211.4
Return on working capital	0.5	0.5	0.5	0.5	2.0
Tax allowance	7.0	4.8	4.7	4.8	21.3
Notional revenue requirement	**141.1**	**140.7**	**142.4**	**143.9**	**568.1**
Stormwater drainage					
Operating expenditure	1.2	1.2	1.2	1.2	4.7
Depreciation (regulatory)	0.5	0.5	0.5	0.5	2.1
Return on assets	1.7	1.7	1.7	1.7	6.6
Return on working capital	0.0	0.0	0.0	0.0	0.1
Tax allowance	-	-	-	-	-
Notional revenue requirement	**3.4**	**3.4**	**3.4**	**3.4**	**13.5**

Note: Numbers may not add due to rounding.

4.4 IPART's decision on Hunter Water's target revenue

Decision

6 IPART's decision is to apply a smoothed target revenue to set prices for Hunter Water as shown in Table 4.1.

Once Hunter Water's notional revenue requirement has been calculated, we decide on the approach to use to convert this amount into prices. This involves deciding on the target revenue for each year – that is, the actual revenue we will expect Hunter Water to generate from prices and charges for that year. Target revenue includes revenue from:

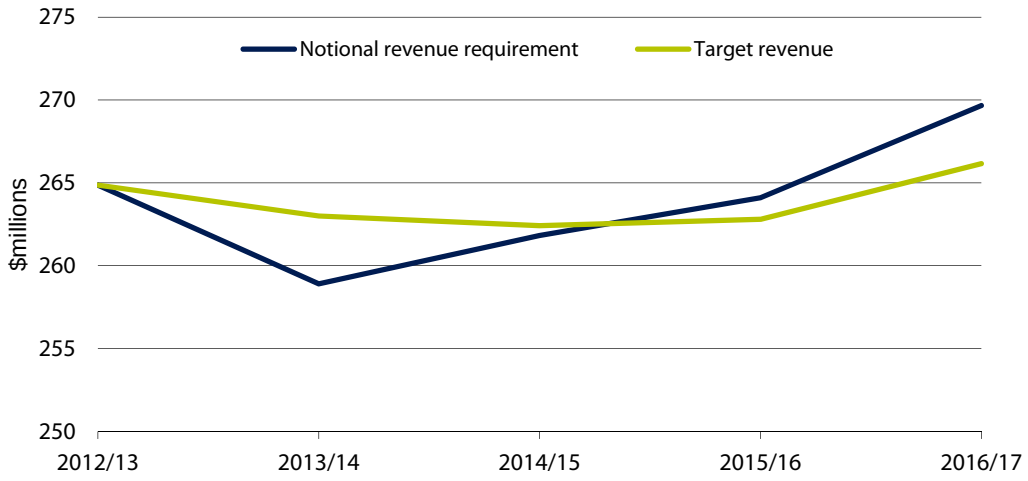
- water, sewerage and stormwater charges
- trade waste charges
- ancillary and miscellaneous fees.

Depending on how we set prices, the target revenue will not necessarily match the notional revenue requirement from year to year. Where there are significant jumps or drops in the notional revenue requirement from one year to the next, we may set prices so that there is a smooth transition over the determination period. This provides a more steady change in prices for both customers and Hunter Water and eases the potential for price and revenue shocks.

Our analysis of Hunter Water's annual notional revenue requirement shows that, in the first year of the determination period, the revenue requirement falls significantly compared to the target revenue for the previous year. It then rises steadily in each year of the determination period. Setting prices to target these annual revenue requirements would result in volatile prices, which could create price shocks for some customers and harm Hunter Water's short-term financial position.

Our final decision on Hunter Water's target revenue (and a comparison to the notional revenue requirement) is outlined above in Table 4.1 and in Figure 4.1 below.

Figure 4.1 IPART's decisions on the notional revenue requirement and target revenue to be recovered through prices in the 2013 determination period



We have made a final decision to smooth the year-to-year variations in revenue requirement, so that Hunter Water's prices and revenue remain steady across the determination period given assumed sales volumes.

Hunter Water's final prices recover as closely as possible its notional revenue requirement. In Net Present Value (NPV) terms, target revenue over-recovers costs by $0.5 million over the 4 years. There is an over-recovery in NPV terms because the under-recovery of revenue in the last 2 years of the determination reduces in size when discounted.

In coming to our final decision on the appropriate target revenue, we considered the potential implications on customers and the revenue required for Hunter Water to fund its operating and capital expenditure needs. We note that Hunter Water bases its revenue requirement on a post-tax WACC of 5.6%. We have adopted a lower post-tax WACC of 4.6%, which results in a lower target revenue and smaller price increases over the determination period than those proposed by Hunter Water.

4.5 IPART's decision on revenue from trade waste, miscellaneous and other fees and charges

Decision

7 IPART's decision is to deduct from Hunter Water's target revenue the revenue raised through other fees and charges as shown in Table 4.3.

To calculate the revenue to be recovered from water, sewerage and stormwater drainage charges, we subtract from Hunter Water's overall target revenue requirement the revenue it requires from other fees and charges. Other fees and charges include:

- trade waste charges
- miscellaneous and ancillary service charges.

Hunter Water proposed a real increase of 9% in trade waste revenue over the 2013 determination period, which equates to an increase of about $157,000.[105] Total revenue from trade waste charges is a small proportion of Hunter Water's total regulated revenue – less than 1%.[106]

Hunter Water proposed about a 17% increase in revenue from its miscellaneous and ancillary charges in 2013/14.[107] The total revenue expected from miscellaneous charges is approximately $3.8 million for 2013/14 (or 1.4% of proposed total revenue for 2013/14).[108]

We have accepted Hunter Water's proposal to be reasonable and discuss our decision on trade waste charges and miscellaneous and ancillary charges in detail in Chapter 11.

Table 4.3 IPART's decision on revenue from other fees and charges to be subtracted from target revenue ($millions, $2012/13)

	2013/14	2014/15	2015/16	2016/17
Revenue from trade waste charges	1.9	1.9	1.9	1.9
Revenue from ancillary waste charges	3.8	3.8	3.8	3.8
Total revenue from other fees and charges	**5.8**	**5.8**	**5.8**	**5.8**

[105] Calculated by IPART from Hunter Water, Annual Information Return, 14 September 2012.
[106] Calculated by IPART from Hunter Water, Annual Information Return, 14 September 2012.
[107] Hunter Water, Annual Information Return, 14 September 2012. (Adjusted to real figures.)
[108] Hunter Water, Annual Information Return, 14 September 2012. (Adjusted to real figures.)

4.5.1 Treatment of unregulated income

Some regulated businesses earn income from assets included in the Regulatory Asset Base (RAB) through unregulated activities (eg, activities in addition to water sales such as rental income). Our standard policy is to share unregulated revenue equally between customers and the business. This provides an incentive for the business to optimise earnings from regulated assets and shares the gains with consumers.

Hunter Water did not show any unregulated income in its submission derived from assets included in the RAB.

Hunter Water's submission[109] showed unregulated revenues from Tillegra Dam land rents. For this review, we have modelled on the basis that Tillegra Dam assets and costs since 1 July 2009 are not to be included in prices. Therefore, we do not apply a 50% deduction for Tillegra Dam rents because they are derived from assets outside the regulatory cost base and thus are not included in the notional revenue requirement.

The No Tillegra Dam Group recommends that any profits from the sale of the Tillegra lands be spent on water efficiency methods, maintaining infrastructure and reducing water bills.[110] Because we have not included the costs of Tillegra Dam assets in prices, this will be a matter for Hunter Water and its shareholders.

[109] Hunter Water, Annual Information Return, 14 September 2012.
[110] No Tillegra Dam Group submission, 12 April 2013, p 2.

5 Operating expenditure

In this chapter we outline our final findings and decisions on Hunter Water's prudent and efficient operating expenditures for the current and upcoming determination periods. In doing so, we consider Hunter Water's reported actual and proposed operating expenditures, Atkins/Cardno's analysis, and stakeholders' comments.

Section 5.1 provides a summary of our final findings and decisions. Sections 5.2 and 5.3 provide more detailed explanations for our findings and decisions.

5.1 Summary of IPART's findings and decisions

Decision

8 IPART's decision is that the efficient level of Hunter Water's operating expenditure for the 2013 determination period is as shown in Table 5.1.

We have decided to allow operating expenditure for the 2013 determination period of $483.9 million (Table 5.1). In doing so, we accept Hunter Water's proposal with 1 minor change. We also make 2 adjustments to reflect changing circumstances outside Hunter Water's control.

We also reviewed Hunter Water's reported actual and projected operating expenditure for the 2009 determination period of $444.6 million. This exceeds the 2009 Determination allowance by $32.8 million, or 8.0%.

Our decision to largely accept Hunter Water's proposal reflects our view that Hunter Water is a well-run business, and it has put forward a moderate expenditure proposal supported by its customers. The detailed analysis of Hunter Water's proposal that formed part of this review suggested expenditure levels only marginally different to the proposal. This confirms that the proposal is balanced and well considered.

Table 5.1 IPART's decision on Hunter Water's operating expenditure allowances in the upcoming determination period ($millions, $2012/13)

	2013/14	2014/15	2015/16	2016/17	Total
Water	36.1	37.6	36.8	38.4	**148.9**
Sewerage	46.8	47.8	48.3	48.3	**191.2**
Stormwater drainage	0.8	0.8	0.9	0.8	**3.4**
Corporate	33.9	34.7	35.3	36.4	**140.4**
Total	**117.6**	**121.0**	**121.3**	**123.9**	**483.9**

Source: Hunter Water's submission, 14 September 2012, and IPART's analysis.

5.2 Hunter Water's operating expenditure in the current determination period

5.2.1 Hunter Water's submission

Hunter Water exceeds the allowances provided for in the 2009 Determination, in particular for corporate and sewerage expenditures (Table 5.2). Key reasons for the over-expenditure reported by Hunter Water include:

- additional cost items approved by NSW Treasury (as representatives of its shareholding Ministers) such as development of the Lower Hunter Water Plan
- external cost pressures such as electricity and carbon costs
- reallocation of some expenditure that was allocated to the unregulated business in the 2009 Determination.[111]

Hunter Water noted that these additional costs were not recovered through prices, but rather funded by Hunter Water and its shareholders.[112]

[111] Hunter Water submission, 14 September 2012, pp 38-42.
[112] Hunter Water submission, 14 September 2012, pp 38-42.

Table 5.2 Hunter Water's actual operating expenditure vs Determination allowances for the current determination period ($millions, $2012/13)

	2009/10	2010/11	2011/12	2012/13 (projected)	Total
2009 Determination allowance[a]					
Water	35.3	34.8	34.7	35.2	**140.0**
Sewerage	39.4	39.6	40.3	41.1	**160.4**
Stormwater drainage	1.4	1.5	1.7	1.5	**6.1**
Corporate	26.9	26.7	26.0	25.7	**105.3**
Total Determination allowance	**103.0**	**102.6**	**102.7**	**103.5**	**411.8**
Hunter Water's actual (projected) operating expenditure[b]					
Water	30.6	30.1	35.1	41.2	**136.9**
Sewerage	41.2	41.5	43.6	46.5	**172.9**
Stormwater drainage	1.4	1.6	0.7	0.8	**4.5**
Corporate	30.1	31.4	35.3	33.5	**130.3**
Total actual operating expenditure	**103.3**	**104.5**	**114.7**	**122.0**	**444.6**

a IPART, *Review of prices for water, sewerage, stormwater and other services for Hunter Water Corporation, Final Report*, July 2009, p 61.

b Hunter Water's submission, 14 September 2012, pp 45-47.

Note: All figures converted to $2012/13 by IPART. Numbers may not add due to rounding.

5.2.2 Atkins/Cardno's review

Atkins/Cardno did not identify areas of Hunter Water's operating expenditure in the current determination period to be materially inefficient. However, Atkins/Cardno expects forecast operating expenditure for 2012/13 to be $1.8 million below Hunter Water's projection due to inconsistencies in Hunter Water's reported labour vacancy rates.[113]

Atkins/Cardno reported that by excluding the additional costs incurred over the period (approved by Treasury and those due to external drivers), and including the likely lower operating expenditure for 2012/13, Hunter Water's total operating expenditure for the period is generally consistent with the total 2009 Determination allowance.[114]

[113] The labour vacancy rate is the percentage of existing full-time equivalent positions that are unoccupied at a particular point in time. Atkins/Cardno, *Review of Hunter Water Corporation's Operating and Capital Expenditure – Final Report*, December 2012, pp 91-92.

[114] Atkins/Cardno, *Review of Hunter Water Corporation's Operating and Capital Expenditure – Final Report*, December 2012, p 104.

5.2.3 Stakeholder comments

Only 2 stakeholder submissions commented on Hunter Water's expenditure proposal:

- The Public Interest Advocacy Centre (PIAC) noted that the savings Hunter Water reported to have made in electricity costs represent a significant benefit to consumers.[115]
- One stakeholder is of the view that Hunter Water has not made appropriate labour cost savings, given changes in its operating environment such as the decommissioning of Tillegra Dam and loss of large customers.[116]

5.2.4 IPART's findings on Hunter Water's operating expenditure in the current determination period

We accept that Hunter Water's operating expenditure in the 2009 determination period has been prudent and efficient. We consider the reasons given by Hunter Water for additional and higher than allowed costs to be reasonable, and note that Atkins/Cardno did not find areas of operating expenditure that were materially inefficient.

5.3 Hunter Water's operating expenditure in the upcoming determination period

5.3.1 Hunter Water's submission

Hunter Water proposed an operating expenditure allowance of $476.3 million for the 2013 determination period (Table 5.3). It noted this is larger than the operating expenditure incurred over the current determination period, due to:

- a higher expenditure base
- expected additional cost increases of $27.9 million over the 4-year period.

[115] Public Interest Advocacy Centre submission, 12 October 2012, p 4.
[116] R. Banyard submission, 12 October 2012, p 8.

Table 5.3 Hunter Water's proposed operating expenditure in the upcoming determination period ($millions, $2012/13)

	2013/14	2014/15	2015/16	2016/17	Total
Hunter Water's original submission					
Water	36.4	37.9	37.1	38.8	**150.2**
Sewerage	47.2	48.3	48.8	48.8	**193.1**
Stormwater drainage	0.8	0.8	0.9	0.8	**3.3**
Corporate	31.3	32.0	32.7	33.7	**129.7**
Total	**115.7**	**119.0**	**119.5**	**122.1**	**476.3**

Note: Numbers may not add due to rounding.

Source: Hunter Water submission, 14 September 2012, p 48.

Hunter Water's submission provides that the higher operating expenditure base is primarily due to external cost pressures such as electricity and carbon costs, and the reallocation of some expenditure that was allocated to the unregulated business in the 2009 Determination.

Hunter Water reported that it faces a number of operating cost increases in the upcoming determination period, including higher labour-related costs and additional sewerage treatment costs. It also reported a continuing upward pressure on costs from increasing electricity and carbon costs (Table 5.4). The cost increases are on top of Hunter Water's reported higher operating expenditure base in 2012/13.[117]

Hunter Water includes $19.6 million in savings to offset some of the cost increases (Table 5.4).[118] The majority of the efficiency gains relate to labour cost savings.

[117] Hunter Water submission, 14 September 2012, pp 48-53.

[118] Hunter Water submission, 14 September 2012, pp 48-53.

Table 5.4 Hunter Water's proposed increases and savings in operating expenditure for the upcoming determination period ($millions, $2012/13)

Proposed operating expenditure increases	Total 2013/14 – 2016/17
Electricity costs	3.4
Carbon costs	1.3
Labour costs	10.9
Sewerage treatment costs	4.6
Strategies and studies	3.2
Compliance with changes to the Australian Drinking Water Guidelines[a]	2.1
Electrical and mechanical maintenance	2.1
Other increases	0.3
Total proposed increases	**27.9**
Proposed operating expenditure savings	**Total 2013/14 – 2016/17**
Labour cost savings	11.4
Reduced electricity use	2.0
Reduced sewerage treatment costs	3.1
Sludge disposal cost savings	1.4
Discontinuation of in-kind support to NSW Dams Safety Committee	0.4
Lower credit and hardship program costs	1.3
Total proposed savings	**19.6**

a Compliance is required by Hunter Water's operating licence.

Source: Hunter Water submission, 14 September 2012, p 52.

Additional superannuation costs

Hunter Water announced at the Public Hearing that it will be required to increase employer superannuation contributions from 1 July 2013. This represents an operating expense in addition to those proposed in Hunter Water's submission.

Hunter Water has informed us that the NSW State Super SAS Trustee Corporation (State Super) has recommended to the NSW Treasurer that full funding of the Hunter Water schemes should be achieved within a 10-year time-frame, resulting in an increase in operating expenditure of $2.8 million per year for 10 years.[119]

[119] Letter from Hunter Water to IPART, 29 November 2012.

5.3.2 Atkins/Cardno's review

Atkins/Cardno recommends total operating costs of $468.5 million for the 4-year period. It largely accepted Hunter Water's proposal as prudent and efficient, but recommends the adjustments outlined in Table 5.5. Detailed explanations for the recommended adjustments can be found in Atkins/Cardno's Final Report on our website.

Table 5.5 Atkins/Cardno's recommended adjustments to Hunter Water's proposed operating expenditure for the upcoming determination period ($millions, $2012/13)

	Total
Hunter Water's proposal[a]	**476.3**
Atkins/Cardno's recommended adjustments	
Additional savings	
Continuing efficiency adjustment	-1.5
Adjustment for reduced water sales	-0.6
Smaller cost increases	
HWA sewerage costs	-1.6
Elec/mech maintenance costs	-1.0
Spoil disposal costs	-3.0
Compliance with changes to the Australian Drinking Water Guidelines	-1.0
Expenditure on strategies and studies	-0.6
Other adjustments	
Reversal of corporate overheads erroneously allocated to recycled water	+0.6
Allowance for pre-efficiency studies	+0.8
Atkins/Cardno's total recommended adjustments	**-7.9**
Atkins/Cardno's total recommended operating expenditure	**468.5**

a As per Hunter Water's original submission. This does not include the estimated additional $11.2 million for increased superannuation costs, nor the carbon cost adjustment.

Note: Numbers may not add due to rounding.

Source: Atkins/Cardno, *Review of Hunter Water Corporation's Operating and Capital Expenditure – Final Report*, December 2012, p 104.

5.3.3 Stakeholder comments

Only PIAC made comments of relevance to Hunter Water's operating expenditure in the upcoming period. In its submission, PIAC recommends that Hunter Water increase the resources devoted to energy efficiency and other measures to reduce its electricity costs during the upcoming determination period. PIAC recommends that Hunter Water examine all possible options for reducing its electricity bill, including via energy efficiency measures and further opportunities to shift consumption to periods of lower energy tariffs.[120]

[120] Public Interest Advocacy Centre submission, 12 October 2012, p 4.

5.3.4 IPART's findings and decision on Hunter Water's operating expenditure in the upcoming determination period

We accept Hunter Water's proposed operating expenditure for the upcoming period, with the following 3 adjustments (Table 5.6):

1. removal of proposed $80,000 annual expenditure on maintenance of land that originally formed part of the Tillegra Dam project[121]
2. inclusion of $2.8 million per year in additional superannuation expenses as identified by Hunter Water in correspondence to IPART[122]
3. adjustment of the carbon cost allowance to reflect our use of carbon-cost inclusive inflation escalators, as opposed to carbon-cost exclusive inflation escalators which Hunter Water's submission was based on.

These adjustments add $7.5 million over the 2013 determination period. Our final decision represents an average operating expenditure allowance per year of $121.0 million in the upcoming period, which is 17.5% higher than the average operating expenditure allowance in the current period of $102.9 million.

The adjustment to remove Tillegra Dam related expenses reflects a decision not to approve part of Hunter Water's underlying proposal. The other 2 adjustments reflect new information or a change in procedures that were not foreseen at the time of Hunter Water's submission. The adjustments are discussed in more detail below, including stakeholder comments on these matters.

While we consider most of Atkins/Cardno's findings and recommendations to be sound and appropriate, we choose not to adopt the recommended adjustments to Hunter Water's operating expenditure allowance for the upcoming period. In accepting Hunter Water's proposal over Atkins/Cardno's recommendations, we are providing Hunter Water with a little more capacity to better manage and respond to any risks to performance that it may encounter in the upcoming determination period.

Nevertheless, we expect Hunter Water to carefully consider Atkins/Cardno's findings and recommendations when planning for and incurring operating expenditure in the upcoming and subsequent determination periods.

In the Draft Determination, we made some assumptions on allocation rates for corporate expenditures that are minor variations from Hunter Water's submission. Hunter Water considered that our adjustments essentially reflect the corporate allocations for the regulated product lines that are presented in its price submission.[123]

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121 Correspondence with Hunter Water (Email), 13 December 2012.
122 Letter from Hunter Water to IPART, 29 November 2012.
123 Hunter Water submission, 12 April 2013, p 14.

Table 5.6 Hunter Water's proposed operating expenditure in the upcoming determination period, and IPART's adjustments ($millions, $2012/13)

	2013/14	2014/15	2015/16	2016/17	Total
Hunter Water's original submission					
Water	36.4	37.9	37.1	38.8	**150.2**
Sewerage	47.2	48.3	48.8	48.8	**193.1**
Stormwater drainage	0.8	0.8	0.9	0.8	**3.3**
Corporate	31.3	32.0	32.7	33.7	**129.7**
Total	**115.7**	**119.0**	**119.5**	**122.1**	**476.3**
IPART's adjustments					
Removal of Tillegra related expenditure	-0.1	-0.1	-0.1	-0.1	**-0.3**
Additional superannuation expenditure	+2.8	+2.8	+2.8	+2.8	**+11.2**
Adjustment of carbon cost allowance	-0.8	-0.8	-0.9	-0.9	**-3.4**
Total adjustments	***+1.9***	***+1.9***	***+1.9***	***+1.9***	***+7.5***
Total operating expenditure allowance	**117.6**	**121.0**	**121.3**	**123.9**	**483.9**

Note: Numbers may not add due to rounding.

Source: Hunter water submission, 14 September 2012, p 48.

Removal of Tillegra Dam related expenditures

Hunter Water's proposed operating expenditure includes $80,000 per year for maintenance of land that originally formed part of the Tillegra Dam project.[124]

As the NSW Government decided in November 2010 not to proceed with the project, we consider that this land no longer contributes to the provision of services to customers and that therefore customers should not be required to pay for the maintenance of this land. We have reduced Hunter Water's operating expenditure allowances for the upcoming period by $80,000 per year.

We note that stakeholders submissions to our Draft Determination support our decision to exclude Tillegra Dam related costs from Hunter Water's prices.[125]

Allowance for additional superannuation costs

Hunter Water has informed us it will be required to increase employer superannuation contributions from 1 July 2013. NSW Treasury has advised Hunter Water that a final decision on the funding plan will not be made by the Treasurer for a number of months.[126] Given a decision will not be made prior to our Determination, we allow increases in Hunter Water's operating expenditure

[124] Correspondence with Hunter Water (Email), 13 December 2012.

[125] Total Environment Centre submission, 9 April 2013, p 2; No Tillegra Dam Group submission, 11 April 2013, p 2.

[126] Letter from Hunter Water to IPART, 29 November 2012.

allowance by $2.8 million per year to reflect the 10-year funding plan recommended to Treasury by State Super.

Adjustment to reflect use of carbon-inclusive CPI

In the Draft Determination we applied a one-off permanent reduction of 0.7% to operating costs for each year of the price path to compensate for carbon cost impacts that will be reflected in the CPI adjustment to prices each year.[127] Hunter Water considered that we have overestimated the double-counting of the carbon price impact in the Draft Determination for 2 reasons:

- The impact should reflect only the CPI impacts in 2012/13 of 0.7 percentage points and 2015/16 of 0.2 percentage points, as foreshadowed by the Commonwealth Treasury. Therefore, deductions to operating costs should only occur in these years and by these amounts.
- The adjustment should only apply to operating expenditure related to services that will have prices indexed by the CPI. We note that in the Draft Determination, this was for sewerage services and stormwater services and their proportion of allocated corporate expenditure.[128]

We disagree with Hunter Water's first point, but agree with its second point.

We make a deduction of 0.7% to operating costs in each year of the determination period (and not just the first year as proposed by Hunter Water) because prices are indexed to reflect dollars of the day in each year of the determination period from a $2012/13 base.[129] Therefore, the escalated prices in each year will include the one-off 0.7% CPI impact from the carbon price in 2012/13.

Treasury's modelling suggests that the carbon price will add another 0.2% to the CPI by the end of 2015/16.[130] However, we decided not to apply this additional deduction due to the uncertainty of the actual impact on the CPI, in particular once the cap-and-trade scheme commences in 2015. This is a favourable outcome for Hunter Water.

We agree with Hunter Water that any deduction made for possible double-counting of the carbon price impact should apply to only to those costs for which prices are set in real terms and indexed throughout the determination period.

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[127] The operating expenditure allowances sought in Hunter Water's submission included additional allowances for carbon costs Hunter Water submission, Appendix B, 14 September 2012, pp B.1-B.3.

[128] Hunter Water submission, 12 April 2013, pp 11-13.

[129] This is because we set prices for each year of the 2013 determination period to recover cost allowances that are set in real dollars ($2012/13).

[130] Commonwealth of Australia Treasury, *Strong growth, low pollution: Modelling a carbon price – Update*, September 2011, p 2.

However, our final pricing decision is to set prices in real terms, other than the sewage usage charge (and not to set water prices in nominal terms as we did in the Draft Determination). This means that all prices, except the sewerage usage charge, will be indexed over the determination period and that our carbon allowance (and thus adjustment) in the Draft Determination remains appropriate for the Final Determination (Table 5.7). We consider that the carbon cost allowances set out below, combined with prices indexed over the determination period by a carbon-inclusive CPI, should let Hunter Water recover the carbon costs it proposed in its submission.

Table 5.7 IPART's decision on carbon cost allowance ($millions, $2012/13)

	2013/14	2014/15	2015/16	2016/17	Total
Hunter Water's proposed carbon cost allowance	3.5	3.6	3.7	3.7	**14.5**
IPART's decision on carbon cost allowance	2.7	2.8	2.8	2.8	**11.1**
Difference	-0.8	-0.8	-0.9	-0.9	**-3.4**

Source: Hunter Water submission, 14 September 2012, Appendix B, Table B.1; and IPART modelling.

We agree with Hunter Water that for reporting purposes, actual operating expenditure over the 2013 Determination period should be compared to IPART's operating cost allowances in Table 5.1 plus the adjustment made to the carbon cost allowance. This is because actual operating costs, as incurred, will include the full carbon price impact. Table 5.8 shows Hunter Water's operating expenditure for reporting during the 2013 determination period.

Table 5.8 Hunter Water's operating expenditure for reporting purposes ($millions, $2012/13)

	2013/14	2014/15	2015/16	2016/17	Total
Hunter Water's operating expenditure to be recovered in prices (see Table 5.1)	117.6	121.0	121.3	123.9	483.9
IPART's decision on carbon cost allowance (see Table 5.7)	2.7	2.8	2.8	2.8	**11.1**
Total operating expenditure	**120.3**	**123.7**	**124.2**	**126.8**	**495.0**

Note: Numbers may not add due to rounding.

6 Capital expenditure

In this chapter we outline our findings and decisions on prudent and efficient capital expenditures by Hunter Water in the current and upcoming determination periods. In doing so, we consider Hunter Water's reported actual and proposed capital expenditures, Atkins/Cardno's analysis, and stakeholders' comments.

In this chapter, we consider only costs relating to the water, sewerage, stormwater and corporate business areas. Recycled water issues, including avoided and deferred costs, are considered separately in Chapter 12.

Section 6.1 provides a summary of our final findings and decisions. Sections 6.2 and 6.3 provide more detailed explanations for our findings and decisions.

6.1 Summary of IPART's findings and decisions

We have accepted Hunter Water's reported actual and proposed capital expenditure without modifications. This decision reflects:

- our view that Hunter Water is a well-run business that makes considered investment decisions
- Atkins/Cardno recommended only slight amendments to Hunter Water's reported and proposed expenditures
- Hunter Water considered that it should be able to mitigate risks to performance that may arise from its moderate expenditure proposal.[131]

Our decisions on Hunter Water's capital expenditures in the current and upcoming determination periods are discussed in further detail below.

[131] IPART, Public Hearing transcript, 13 November 2012, pp 18, 19 and 22.

6.1.1 Summary of IPART's findings and decision on Hunter Water's capital expenditure in the current determination period

Decision

9 IPART's decision is to adopt capital expenditure incurred by Hunter Water in 2008/09 and over the 2009 determination period as shown in Table 6.1.

We accept Hunter Water's reported actual and projected capital expenditure in the 2009 determination period of $658.9 million, which is $1.0 million, or 0.2%, higher than the Determination allowance of $657.9 million.

We also accept Hunter Water's reported actual capital expenditure in 2008/09 of $151.9 million[132]. This is $6.3 million, or 4.3%, higher than we allowed in the opening RAB for the 2009 determination period.

Table 6.1 IPART's decision on Hunter Water's capital expenditure in the current determination period ($millions, $2012/13)

Business area	2008/09	2009/10	2010/11	2011/12	2012/13 (projected)	Total
Water[a]	63.4	49.8	46.9	41.0	59.5	**197.1**
Sewerage	78.4	115.3	141.9	82.1	72.2	**411.5**
Stormwater drainage	0.5	0.4	1.0	1.4	1.1	**4.0**
Corporate	9.6	11.4	12.6	12.5	9.7	**46.1**
Total	**151.9**	**176.9**	**202.4**	**137.0**	**142.5**	**658.9**

[a] Excludes all Tillegra Dam related expenditure

Note: We have converted Hunter Water's reported expenditure from nominal dollars to $2012/13 dollars. Numbers may not add due to rounding.

Source: Hunter Water's submission, 14 September 2012, p 61; 2012 Annual Information Return to IPART, and IPART's modelling.

6.1.2 Summary of IPART's findings and decision on Hunter Water's capital expenditure in the upcoming determination period

Decision

10 IPART's decision is that the prudent and efficient level of Hunter Water's capital expenditure for the 2013 determination period is as shown in Table 6.2.

We adopt Hunter Water's proposed capital expenditure program for the 2013 determination period of $299.3 million.[133] This represents a relatively modest capital program compared with the $658.9 million we accept as prudent and efficient in the current period.

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[132] At the time of the 2009 review, Hunter Water's capital expenditure for 2008/09 was a forecast. We adjust the RAB to reflect what we consider to be prudent and efficient expenditure for this year based on Hunter Water's actual expenditure.

[133] Excluding Kooragang Industrial Water Scheme related costs. See section 3.3 and section 12.3 of this report.

Table 6.2 IPART's decision on Hunter Water's capital expenditure allowances in the upcoming determination period ($millions, $2012/13)

Business area	2013/14	2014/15	2015/16	2016/17	Total
Water	32.7[a]	20.0	38.0	32.2	**122.8**
Sewerage	34.1	28.4	34.7	37.5	**134.7**
Stormwater drainage	0.4	0.4	0.4	0.4	**1.4**
Corporate	8.7	7.8	15.5	8.2	**40.3**
Total	**75.8**	**56.6**	**88.5**	**78.3**	**299.3**

[a] Excluding KIWS related costs. See section 3.3 and section 12.3 of this report.

Note: Numbers may not add due to rounding.

Source: Hunter Water's submission, 14 September 2012, p 70; and IPART's analysis.

6.2 Hunter Water's capital expenditure in the current determination period

6.2.1 Hunter Water's submission

In its submission to the Draft Determination, Hunter Water revised its likely expenditure outcome for the current period to $630.4 million against its original price submission and IPART's draft decision of efficient expenditure of $658.9 million - ie, an under expenditure of $28.5 million (4%).[134]

Hunter Water reported that the under-expenditure is mainly associated with projects 'delayed' until the 2013 Determination period and some 'deferred' to beyond 2017/18.[135] Of the under expenditure in the current determination period, those associated with 'delays' or 'carryover' that will have a direct impact on the next determination period, is estimated at $21.3 million.[136] Hunter Water requested that we consider these expenditure adjustments at the next determination in 2017.[137]

[134] Hunter Water submission, 12 April 2013, p 16.
[135] Hunter Water submission, 12 April 2013, pp 17-18.
[136] Hunter Water submission, 12 April 2013, p 19.
[137] Hunter Water submission, 12 April 2013, p 19.

Hunter Water's actual expenditures over the current period are close to that which we allowed in the 2009 Determination. However, there are large variances within the individual business areas. In particular, sewerage capital expenditure is significantly larger than allowed ($23.7 million higher), while there's an offsetting reduction in capital expenditure for water and corporate (together $23.2 million lower). Hunter Water reported that the variances in expenditures at business area level are mainly due to:[138]

- reallocating the high-voltage electricity supply upgrade project from corporate to water and sewerage
- higher than expected costs to deliver the sewerage treatment works upgrade programs
- reclassifying recycled water schemes to sewerage
- deprioritising water projects to accommodate the increase in sewerage treatment costs.

[138] Hunter Water submission, 14 September 2012, p 60.

Table 6.3 Hunter Water's actual capital expenditure vs 2009 Determination allowances ($millions, $2012/13)

	2009/10	2010/11	2011/12	2012/13 (projected)	Total
2009 Determination allowance ($million, 2012/13)					
Water	50.6	55.1	54.4	48.5	**208.6**
Sewerage	118.3	95.2	87.7	86.6	**387.8**
Stormwater drainage	0.9	0.9	0.9	0.9	**3.5**
Corporate	15.4	15.1	14.1	13.4	**58.0**
Total Determination allowance	**185.2**	**166.3**	**157.1**	**149.3**	**657.9**
Hunter Water's actual (projected) capital expenditure ($million, 2012/13)					
Water	49.8	46.9	41.0	59.5	**197.1**
Sewerage	115.3	141.9	82.1	72.2	**411.5**
Stormwater drainage	0.4	1.0	1.4	1.1	**4.0**
Corporate	11.4	12.6	12.5	9.7	**46.1**
Total actual capital expenditure	**176.9**	**202.4**	**137.0**	**142.5**	**658.9**
Actual (projected) expenditure vs Determination allowances ($million, 2012/13)					
Water	-0.8	-8.2	-13.4	11.0	**-11.4**
Sewerage	-3.0	46.7	-5.6	-14.3	**23.7**
Stormwater drainage	-0.5	0.2	0.5	0.3	**0.5**
Corporate	-4.0	-2.6	-1.6	-3.7	**-11.8**
Total	**-8.3**	**36.1**	**-20.1**	**-6.8**	**1.0**
Actual (projected) expenditure vs Determination allowances (%)					
Water	-1.7%	-14.9%	-24.6%	22.6%	**-5.5%**
Sewerage	-2.5%	49.0 %	-6.4%	-16.5%	**6.1%**
Stormwater drainage	-53.6%	17.8%	62.3%	30.5%	**13.8%**
Corporate	-25.9%	-17.0%	-11.5%	-27.5%	**-20.4%**
Total	**-4.5%**	**21.7 %**	**-12.8%**	**-4.5%**	**0.2%**

Note: We have converted Hunter Water's reported expenditure from nominal dollars to $2012/13 dollars. Numbers may not add due to rounding.

Source: Hunter Water submission, 14 September 2012, pp 60-61; and IPART's analysis.

6.2.2 Atkins/Cardno's review

Atkins/Cardno found that Hunter Water's capital expenditure in the current period is largely prudent and efficient.[139] Atkins/Cardno also found that Hunter Water has met most of its output targets, with valid reasons for the deviations reported.

[139] Atkins/Cardno, *Review of Hunter Water Corporation's Operating and Capital Expenditure – Final Report,* December 2012, p 137.

Atkins/Cardno recommends minor adjustments to Hunter Water's expenditure for the current period (see Table 6.4).[140] Explanations for these adjustments can be found in Chapter 7 of Atkins/Cardno's Final Report, which is posted on our website.

Table 6.4 Atkins/Cardno's recommended adjustments to Hunter Water's capital expenditure in the current determination period ($millions, $2012/13)

	Total
Hunter Water's proposal	**658.9**
Atkins/Cardno's recommended adjustments	
MARS project inefficiency	**-0.9**
ERP adjustment	**+2.4**
Inefficient expenditure	**-0.3**
Atkins/Cardno's total recommended adjustments	**+1.2**
Atkins/Cardno's total recommended expenditure	**660.1**

Note: Numbers may not add due to rounding.

Source: Atkins/Cardno, *Review of Hunter Water Corporation's Operating and Capital Expenditure – Final Report*, December 2012, pp 136-137.

6.2.3 Stakeholder comments

We received very little comment from stakeholders on Hunter Water's capital expenditure over the current period.

One stakeholder questioned Hunter Water's approach to maintenance of Lower Throsby Creek, stating that Hunter Water has neglected to carry out the required maintenance dredging.[141]

Hunter Water noted that it deferred expenditure on soil dredging of Lower Throsby Creek due to competing cost pressures, and in doing so, accepted the operational risk of increased flooding.[142] Hunter Water advised Atkins/Cardno that it will reconsider the priority of this project for the 2017 determination period.[143]

[140] Atkins/Cardno, *Review of Hunter Water Corporation's Operating and Capital Expenditure – Final Report,* December 2012, pp 136-137.
[141] R. Banyard submission, 12 October 2012, pp 7-8.
[142] Atkins/Cardno, *Review of Hunter Water Corporation's Operating and Capital Expenditure – Final Report*, December 2012, p 86.
[142] Atkins/Cardno, *Review of Hunter Water Corporation's Operating and Capital Expenditure – Final Report*, December 2012, p 128.
[143] Atkins/Cardno, *Review of Hunter Water Corporation's Operating and Capital Expenditure – Final Report*, December 2012, pp 127-128.

6.2.4 IPART's findings and decision on Hunter Water's capital expenditure in the current determination period

We have decided to adopt Hunter Water's reported actual and projected capital expenditure in the current period as provided in Hunter Water's original submission. At a total of $658.9 million, this is $1.0 million higher than the 2009 Determination allowance, although the variation is much larger at the business area level.

We accept Atkins/Cardno's finding that the expenditure in the current period was largely prudent and efficient, and that a key reason for the over-expenditure in sewerage was due to costs initially having been under-estimated.[144] We acknowledge the need for Hunter Water to be able to re-prioritise expenditure during a price path.

We also accept Hunter Water's actual capital expenditure in 2008/09 of $151.9 million, as prudent and efficient. This is $6.3 million higher than we allowed in the opening RAB for the 2009 determination period. Hunter Water attributes the over-expenditure to water projects proceeding ahead of schedule.[145]

Our decision to accept Hunter Water's submitted expenditure figures reflects our view that Hunter Water has provided a well-justified submission with a moderate forward expenditure proposal, and that a proportionate treatment is appropriate. Hunter Water has also performed well against the physical output measures that we required Hunter Water to report on during the current determination period (reviewed in section 3.5).

Finally, we note that actual expenditure in 2012/13 will be assessed at the next pricing review for Hunter Water, and the RAB may be re-adjusted at that time to reflect our finding. We note that Hunter Water's newly reported under-expenditure of $28.5 million for this 2009 determination period leads to an over-recovery in revenue for Hunter Water, equivalent to the return on and of the under-spend. However, the over–recovery of revenue is offset by an under-recovery in the 2013 determination period, as we have not increased the allowance in 2013/14 to account for when much of the delayed expenditure is expected to occur.

144 Atkins/Cardno, *Review of Hunter Water Corporation's Operating and Capital Expenditure – Final Report,* December 2012, pp 136-137.

145 Correspondence from Hunter Water to Atkins/Cardno, 16 November 2012.

6.3 Hunter Water's capital expenditure in the upcoming determination period

6.3.1 Hunter Water's submission

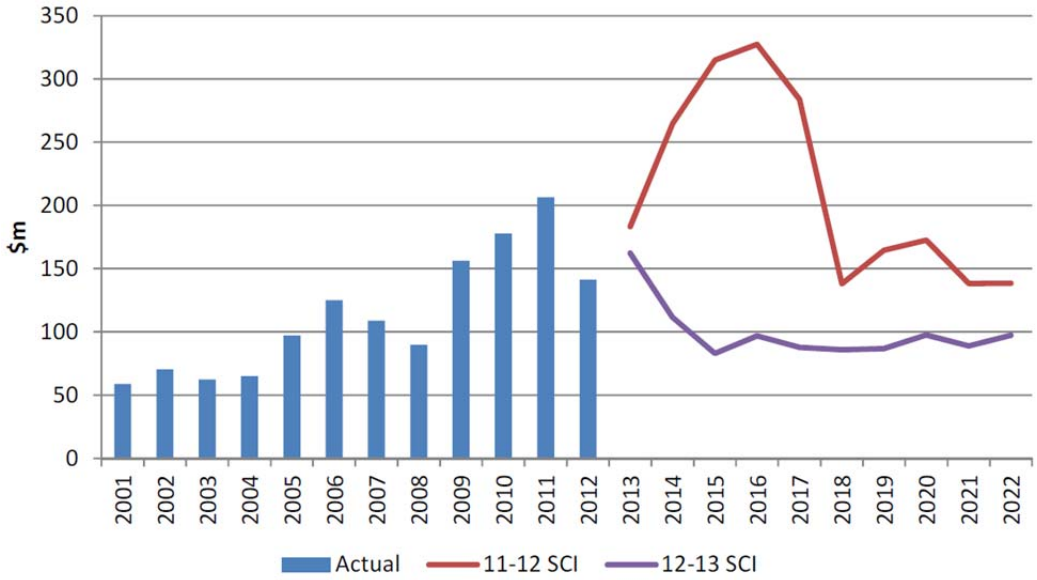
Hunter Water proposed a capital expenditure program of $299.3 million for the 2013 determination period.[146] This amounts to 45.4% of the total capital expenditure of $658.9 million that we accept as prudent and efficient for the current period. Hunter Water cites customer affordability, combined with the need to maintain or improve its financial position, as the key factors putting downward pressure on the forward capital program.[147]

Hunter Water arrived at the proposed capital program by deferring or eliminating projects, while considering the risk presented by not proceeding with these projects. It considered that the resulting program will meet regulatory requirements and maintain stable system performance, assuming no performance improvement will be required from regulators, and that growth in connections will remain at or below 1.4% per year and occur in areas with spare asset capacity.[148]

Hunter Water's originally included approximately $1.1 billion of capital expenditure over the 4 years of the upcoming determination period in its 2011/12 Statement of Corporate Intent (SCI) (Figure 6.1).[149] It subsequently reprioritised projects in its 2012/13 SCI to arrive at a portfolio that aligns broadly with the capital program proposed in its pricing submission to IPART.[150] This management restraint, combined with Hunter Water's customer consultation on its price proposals, allowed us to adopt a proportionate approach to regulation.

[146] This excludes $26 million for Kooragang Island recycled water project related costs. Hunter Water submission, 14 September 2012, pp 70-73.
[147] Hunter Water submission, 14 September 2012, p i (executive summary).
[148] Hunter Water submission, 14 September 2012, pp 65-66.
[149] Hunter Water submission, 14 September 2012, p 64.
[150] Note that this also includes the $26.1 million in KIWS related costs in 2013/14, as per Hunter Water's submission.

Figure 6.1 Hunter Water's past versus proposed capital expenditure program ($2012/13)



Source: Atkins/Cardno, *Review of Hunter Water Corporation's Operating and Capital Expenditure – Final Report*, December 2012, p 34.

6.3.2 Atkins/Cardno's review

Atkins/Cardno recommends $300.2 million[151] as Hunter Water's prudent and efficient capital expenditure in the upcoming price path (Table 6.5). This is $0.9 million higher than what Hunter Water is seeking in its submission.[152] Detailed explanations for the adjustments can be found in Chapter 7 of Atkins/Cardno's Final Report, which is posted on our website.

Atkins/Cardno considered that Hunter Water proposed a challenging target, but that it should be achievable. Atkins/Cardno noted that Hunter Water's forecast capital program is returning to pre-2009 levels, as shown in Figure 6.1.[153]

Atkins/Cardno is of the view that the challenging targets set by Hunter Water may result in over-expenditure in 2013/14 and 2014/15 due to expenditure already committed. However, Atkins/Cardno considered that Hunter Water will be able to achieve greater than proposed efficiencies in 2015/16 and 2016/17, allowing it to meet the overall capital expenditure target for the period.[154]

151 Excluding KIWS related costs. See section 3.3 and section 12.3 of this report.
152 Excluding KIWS related costs. See section 3.3 and section 12.3 of this report.
153 Atkins/Cardno, *Review of Hunter Water Corporation's Operating and Capital Expenditure – Final Report*, December 2012, p 146.
154 Atkins/Cardno, *Review of Hunter Water Corporation's Operating and Capital Expenditure – Final Report*, December 2012, p 139.

Table 6.5 Atkins/Cardno's recommended adjustments to Hunter Water's proposed capital expenditure for the upcoming determination period ($millions, $2012/13)

	Total
Hunter Water's proposal[a]	**299.3**
Atkins/Cardno's recommended adjustments	
Re-phase Hunter River Tunnel Replacement (Water)	0.0
Additional High-Voltage expenditure (Water)	+2.2
Re-phase backlog sewer scheme (Sewerage)	-1.8
Additional High-Voltage expenditure (Sewerage)	+0.2
Re-phase Muninbung Scheme (Stormwater)	+0.9
Re-phase ERP expenditure (Corporate)	-0.6
Atkins/Cardno's total recommended adjustments	**+0.9**
Atkins/Cardno's total recommended expenditure	**300.2**

a Excluding KIWS related costs. See section 3.3 and section 12.3 of this report.

Source: Atkins/Cardno, *Review of Hunter Water Corporation's Operating and Capital Expenditure – Final Report*, December 2012, pp 142-147.

6.3.3 Stakeholder comments

Several stakeholders welcome Hunter Water's proposed capital expenditure on development of recycled water infrastructure and continued upgrades to sewerage treatment facilities, while noting the need for sustainable approaches to the management of sewage sludge.[155]

The Total Environment Centre (TEC) expressed concern that Hunter Water would continue the practice of discharging sewage sludge into the ocean.[156] On the other hand, the TEC welcomes Hunter Water's investigation of Lower Throsby Creek rehabilitation requirements and the potential for channel naturalisation.[157]

We note that Hunter Water has undertaken significant upgrades of sewerage treatment works, including ocean outfall works, in the current period, and further upgrades are planned.[158] Hunter Water is required to meet EPA standards, and where these standards are not currently being met, Hunter Water is already undertaking improvements to rectify this. In the case of Burwood Beach Sewerage Treatment Works, Atkins/Cardno noted that alternatives to ocean disposal would be very costly.[159]

155 Total Environment Centre submission, 9 October 2012, p 3; No Tillegra Dam Group submission, 12 October, p 5.

156 Total Environment Centre submission, October 2012, p 3; Total Environment Centre submission, 12 April 2013, p 3.

157 Total Environment Centre submission, October 2012, p 3.

158 Hunter Water's submission, 14 September 2012, pp 63 and 69.

159 Atkins/Cardno, *Review of Hunter Water Corporation's Operating and Capital Expenditure – Final Report*, December 2012, p 176 (commercial-in-confidence Appendix B).

6.3.4 IPART's findings and decision on Hunter Water's capital expenditure in the upcoming determination period

We have decided to adopt Hunter Water's proposed capital expenditure for the upcoming determination period (Table 6.2). This is a significantly smaller capital expenditure program than that in the preceding 2 determination periods. However, Hunter Water considered that it should be able to mitigate risks to performance that may result from the moderate proposal.[160]

While we consider most of Atkins/Cardno's findings and recommendations to be sound and appropriate, we have not adopted the recommended adjustments, as they are very small. Nevertheless, as for operating expenditure, we expect Hunter Water to carefully consider Atkins/Cardno's findings and recommendations when planning for and incurring capital expenditure in the upcoming and subsequent determination periods.

Hunter Water made no allowance in the proposed capital program to deliver capital works, including design and construction, for outcomes of the Lower Hunter Water Plan (LHWP), which is expected to be completed by the end of 2013.[161] If capital costs are incurred as a result of the LHWP within the 2013 determination period, we will consider the efficiency of this expenditure in the roll-forward of the RAB in the next determination period. We also note that any major capital investment required is likely to occur only after scoping and investigation works are complete and therefore towards the end of the 2013 determination period.

In the Draft Determination, we made some adjustments to smooth Hunter Water's corporate allocations across the product lines: water, sewerage and stormwater. Hunter Water believes that these adjustments are minor and essentially reflect the corporate allocations for the regulated product lines that are presented in its price submission.[162]

[160] IPART, Public Hearing transcript, 13 November 2012, pp 18, 19 and 22.
[161] Hunter Water submission, 14 September 2012, p 67.
[162] Hunter Water submission, 12 April 2013, p 14.

7 Revenue requirement for capital investment

The revenue required for capital investment comprises two cost blocks: an allowance for a return on assets and an allowance for regulatory depreciation. Together, these allowances make up around 50% of Hunter Water's notional revenue requirement for the 2013 determination period and so have a significant impact on prices. We determine a value for each of these allowances by taking 4 steps:

- establishing the opening value of Hunter Water's regulatory asset base (RAB) at the start of the 2013 determination period (1 July 2013)
- calculating the annual value of the RAB over the 2013 determination period by rolling the opening value forward to the end of this period (30 June 2017)
- deciding on an appropriate rate of return on assets for Hunter Water, and multiplying the annual value of the RAB by this rate (to give the allowance for a return on assets)
- deciding on the appropriate depreciation method and asset lives for Hunter Water's existing and new assets; then calculating the allowance for regulatory depreciation by dividing the RAB by the weighted average asset lives.

The section below summarises IPART's decisions on the allowances for a return on assets and regulatory depreciation (section 7.1). The subsequent sections explain how we reached these decisions by discussing each of the above steps (sections 7.2 to 7.5).

7.1 Summary of decisions on the allowances for a return on assets and regulatory depreciation

Decision

11 IPART's decision is that the allowance for a return on assets and the allowance for regulatory depreciation is as shown in Table 7.1.

Our final decision is to apply a real post-tax WACC of 4.6% to calculate the allowance for a return on assets for Hunter Water over the 2013 determination period. The WACC has increased from the draft determination by 0.4 percentage points due to the:

- adoption by IPART of an interim methodology
- updated market parameters as of 16 April 2013.

We came to this position after considering Hunter Water's proposals, the views of stakeholders, the views of finance experts and our own analysis. The final value for the real post-tax WACC has been determined by taking the midpoint of 2 WACC estimates, which are derived from current market data and long term averages.

Our final allowance for regulatory depreciation is based on asset lives of 70 years for existing assets and 100 years for new assets. We used these asset lives in the Draft Report and in the 2009 determination. As for that determination, we chose to use a straight-line depreciation method to calculate the regulatory depreciation allowance.

Table 7.1 IPART's decision on the allowance for a return on assets and for regulatory depreciation ($million, $2012/13)

	2013/14	2014/15	2015/16	2016/17	Total
Allowance for return on assets (based on WACC of 4.6%)	98.8	99.9	101.4	103.3	403.3
Allowance for depreciation	30.5	31.1	31.7	32.5	125.8

Note: Numbers may not add due to rounding.

7.2 Establishing the opening value of the RAB for the 2013 determination period

To establish the opening value of Hunter Water's RAB (as at 1 July 2013), we have rolled forward the 1 July 2009 RAB to 30 June 2013 using the same approach as in previous determinations by:

- Including the efficient capital expenditure[163] of Hunter Water over the 2009 determination period (discussed in Chapter 6).
- Deducting any actual capital contributions.
- Deducting regulatory depreciation as allowed for in the 2009 determination.[164]
- Deducting any asset disposals for 2009/10 to 2011/12 and estimated disposals for 2012/13.

[163] Given that actual capital expenditure for 2012/13 was not fully known at the time of the 2012 determination, IPART has used a forecast which was provided by Hunter Water. The opening RAB will be adjusted to reflect any difference between Hunter Water's forecast capex and actual capex for 2012/13.

[164] We use regulatory depreciation, rather than actual depreciation because the impact of any over expenditure on capital during the determination period is limited to the return on capital allowance.

- Indexing the annual closing RAB by applying actual inflation, along with a forecast for inflation in the final year of the 2009 determination period. We used the Bloomberg consensus forecast for (June2013/June2012) inflation of 2.8%.[165] In making this calculation, we assumed that half the capital expenditure and disposals occur at the beginning of the year (receive a full year of indexation), while the other half occurs at the end of the period (is not indexed).

The annual values of Hunter Water's RAB for the 2009 determination period are shown in Table 7.2 below.

Table 7.2 Closing RAB from 2009 Determination ($millions, $nominal)

	2009/10	2010/11	2011/12	2012/13
Opening RAB	**1,450.4**	**1,634.2**	**1,858.2**	**1,980.8**
Plus: Actual Capex	164.7	195.1	133.7	142.5
Less: Cash Capital Contributions	6.2	6.0	6.7	6.5
Less: Asset Disposals	0.0	2.7	1.0	0.0
Less: Allowed Depreciation	22.1	24.5	26.4	28.6
Plus: Indexation	47.4	62.2	23.1	57.4
Plus: KIWS subsidy & avoided cost	0	0	0	19.5
Closing RAB	**1,634.2**	**1,858.2**	**1,980.8**	**2,165.1**

Note: Numbers may not add due to rounding.

7.3 Calculating annual values of the RAB over the 2013 determination period

To roll forward Hunter Water's RAB to the end of the 2013 determination period (30 June 2017), we have added the forecast capital expenditure we found to be prudent and efficient to the opening value of the RAB in each year of the determination (discussed in Chapter 6).

We have also made the following adjustments to calculate the RAB during each year:

- deductions for capital contributions
- deductions for disposal of assets
- deductions for regulatory depreciation
- removal of capital expenditures associated with Tillegra Dam
- the capitalisation of avoided costs and a Section 16A Direction subsidy for Kooragang Industrial Water Scheme.

[165] Our policy is to estimate the opening RAB for a price determination using the Bloomberg mean forecast for the last year of the current determination period. This is updated using actual inflation in the next price review.

Each of these adjustments is outlined below in detail.

7.3.1 Adjustments for capital contributions

For water utilities, 'capital contributions' generally refer to revenue received from property developers, government grants and environmental levies. Cash capital contributions need to be deducted from the RAB because they represent capital expenditure that is not funded by Hunter Water and therefore should not be recovered from water customers through periodic prices.

We deducted $25.5 million from the RAB over the period 2009/10 to 2012/13 relating to cash capital contributions. For the 2013 Determination, Hunter Water forecast total cash capital contributions of $35.9 million, which has been removed from the RAB.

In 2008, the NSW Government announced its decision to set all Hunter Water developer charges related to water and sewerage services at zero, with the exception of charges related to recycled water schemes and out-of-sequence developments.

Hunter Water collected approximately $10 million ($2012/13) per year from developer charges in the years prior to 2009/10. The revenue Hunter Water received from developer charges over one determination period was subtracted from the value of its regulatory asset base before rolling it forward to the start of the subsequent determination for price setting purposes. This ensured Hunter Water only earned a return on the funds that it had invested in infrastructure, and not on the developer charges it had raised.

The Government's decision to set developer charges to zero for some developments has contributed to increases in the bills to Hunter Water's customers, because infrastructure for new developments is now funded by Hunter Water. We estimate that the decision to set some developer charges to zero adds about $12 or 1.1% to a typical residential customers' annual water bill in 2013/14. We discuss the impact of the Government's 2008 decision in further detail in Appendix G.

7.3.2 Adjustments for regulatory depreciation

The regulatory depreciation amounts deducted from the RAB are shown in Table 7.3 below. To calculate regulatory depreciation we use the straight-line depreciation method and apply asset lives of 70 years for existing assets and 100 years for new assets.

As discussed in Chapter 3, an allowance for depreciation (return of assets) is made within the revenue required for capital investment. Our considerations in calculating this allowance for the 2013 determination period are discussed in section 7.5 below.

Table 7.3 Regulatory depreciation deducted from the RAB over the 2013 determination period ($millions, $2012/13)

	2013/14	2014/15	2015/16	2016/17
Corporate assets depreciation	0.7	0.8	0.9	1.0
Water depreciation	13.9	14.2	14.5	14.8
Sewerage depreciation	16.1	16.3	16.6	16.8
Stormwater depreciation	0.5	0.5	0.5	0.5
Total depreciation	**31.2**	**31.8**	**32.4**	**33.2**

Note: Numbers may not add due to rounding.

7.3.3 Adjustments for disposal of assets

We deducted $3.8 million from Hunter Water's RAB for regulated asset sales during the 2009 determination, consistent with Hunter Water's submission.

Hunter Water forecasted no sale of regulated assets during the 2013 determination.[166] We have adopted Hunter Water's proposal.

We note that Hunter Water's information return included a forecast asset sale of $13.6 million, which Hunter Water advised was related to the sales of land associated with the Tillegra Dam project.[167] Since the cancellation of the Tillegra Dam project, all Tillegra-related assets were removed from the RAB and treated as unregulated assets.

We applied this treatment consistently to Tillegra revenues and operating costs by removing them from Hunter Water's regulated activities.[168]

166 Hunter Water, Annual Information Return, 14 September 2012.
167 Hunter Water, Annual Information Return, 14 September 2012.
168 IPART analysis, we removed corporate operating costs for Tillegra asset management along with the removal of Tillegra land rental income from Hunter Water's regulated activities.

7.3.4 Adjustments for Tillegra Dam

We have modelled for this review on the basis that Tillegra Dam costs are not to be included in prices (see Chapter 3). Therefore, we made the following deductions to Hunter Water's RAB to ensure Tillegra Dam assets are completely removed:

- $90.1 million ($2008/09) of Tillegra Dam assets over 2005/06 to 2008/09.
- $244.9 million for the planning and construction of Tillegra Dam over the 2009 price path.[169]
- An additional $5.9 million ($2008/09) in 2008/09, in line with the revisions that Hunter Water made to its historical capital expenditure on Tillegra Dam. That is, Tillegra Dam capital expenditure in 2008/09 was $26.6 million ($2008/09), which exceeded the forecast of $20.7 million.

7.3.5 Adjustments to capitalise avoided costs and the subsidy for the Kooragang Industrial Water Scheme

We made an adjustment to the closing RAB as at 30 June 2013 to ensure the opening RAB for the 2013 determination period included items that we agreed should be capitalised and included in water prices, including:

- a $10.0 million subsidy for Kooragang Industrial Water Scheme, based on a Section 16A Direction from the NSW Government
- $9.5 million of avoided cost associated with the deferral of capital expenditure on water assets due to the uptake of recycled water from Kooragang Industrial Water Scheme.

For further information on these decisions refer to Chapters 3.

7.3.6 Resulting annual values for the RAB

The annual values of Hunter Water's RAB for the 2013 determination period are shown in Table 7.4 below. Hunter Water's closing RAB increases steadily over the period due largely to capital expenditure outstripping depreciation. We note that this results in a higher return on assets for a given level of the WACC.

[169] However, only 40% was included in the RAB in 2009/10 to reflect the drought security value of Tillegra Dam. The value in the RAB increased to about 42.4% of proposed expenditure by 2012/13 reflecting growth in connections during the determination period. Residual capital expenditure and holding costs are held as a Deferred Asset - they would have been recovered over subsequent determinations. IPART, *Review of prices for water, sewerage, stormwater and other services for Hunter Water Corporation - Final Report*, July 2009, pp 97 and 100.

Table 7.4 IPART's decision on annual value of Hunter Water's RAB for the 2013 determination period ($millions, $2012/13)

	2013/14	2014/15	2015/16	2016/17
Opening RAB	**2,165.1**[a]	**2,195.3**	**2,213.1**	**2,262.1**
Capital expenditure	75.8	56.6	88.5	78.3
Cash capital contributions	14.4	7.0	7.2	7.4
Disposals	-	-	-	-
Depreciation	31.2	31.8	32.4	33.2
Closing RAB	2,195.3	2,213.1	2,262.1	2,299.7

a Includes a $19.5 million adjustment to capitalise avoided costs ($9.5 million) and a Section 16A Direction subsidy ($10 million) associated with the Kooragang Industrial Water Scheme.

7.4 Calculating the allowance for a return on assets

Decision

12 IPART's decision is that for the purposes of calculating the allowance for a return on assets, a real post-tax WACC of 4.6% is appropriate.

One of our most important steps in determining the allowance for a return on assets to be included in Hunter Water's notional revenue requirement is deciding on the appropriate rate of return. We calculate the allowance for a return on assets by multiplying the rate of return by the value of the RAB in each year of the determination period.

There are several approaches for deciding on an appropriate rate of return. As for previous reviews, we used the WACC approach. However, this time we adopted a post-tax real WACC estimate. In the 2009 reviews, we used a pre-tax WACC.

In December 2011, we decided to move to the use of a real post-tax WACC because we consider it provides a superior estimate of the tax liability that a similar well-managed, privately owned business would pay. The previous real pre-tax WACC methodology overestimated Hunter Water's tax liabilities and hence over-compensated them (primarily for capital gains tax that was not being incurred as a result of indexing the RAB). The decision to adopt a post-tax WACC methodology was subject to a public process.[170]

Hunter Water proposed a real post-tax WACC of 5.6%. It stated that it has specifically considered recent IPART determinations to select an appropriate WACC that is in-line with that used for Sydney Water Corporation and Sydney Catchment Authority.[171]

[170] IPART, *The incorporation of company tax in pricing determinations – Final Decision*, December 2011.
[171] Hunter Water submission, 14 September 2012, p 86.

For our draft decision, we estimated an appropriate range for the water industry WACC of between 2.9% and 4.2%, with a midpoint of 3.5%. We also considered two other methods of estimating the WACC, current market data and long term averages methods. The midpoints of the current market data and long term averages ranges were 4.1% and 5.4%, respectively. On account of these other methods leading to higher estimates of the WACC, we decided an appropriate point estimate for the WACC was 4.2%, the upper bound of our range.

Hunter Water's submission in response to the draft decision expressed concern at the practice of using current parameters to estimate the WACC. Hunter Water asked us to consider the real post-tax WACC of 4.2% as a placeholder only and to apply a revised methodology based more around the use of long-term averages in making the Determination.[172]

Our final decision is that the allowance for a return on assets will apply a real post-tax WACC of 4.6%. We consider that the industry WACC is in the range of 3.8% to 5.3%. The parameters we used to calculate this WACC range are shown in Table 7.5. The WACC has increased from the draft determination by 0.4 percentage points due to the:

- adoption by IPART of an interim methodology
- updated market parameters as of 16 April 2013.

We came to this position after considering Hunter Water's proposals, the views of stakeholders, the views of finance experts and our own analysis. The final value for the real post-tax WACC has been determined by taking the midpoint of 2 WACC estimates, which are derived from current market data and long term averages.

Our interim methodology represents a change in methodology from the previous approach, as it gives greater weight to the WACC estimated using the long-term averages.[173] Hunter Water considers our interim methodology provides a more realistic rate of return for the coming determination period to June 2017.[174]

We are currently reviewing our WACC methodology to address concerns that the use of current market data to estimate the expected cost of debt and long-term average data to estimate the expected cost of equity may be problematic in more uncertain and changeable market conditions.[175] The purpose of our WACC methodology review is to determine how we can improve the way we calculate the WACC to ensure it enables us to meet our regulatory objectives in a range of financial market conditions and industry circumstances.

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172 Hunter Water submission, 12 April 2013, p 5.

173 The methodology used to determine the WACC in our Draft Determination had regard to the WACC estimated using long-term averages, but constrained the WACC to be no more than the upper-bound of the WACC range derived from our existing WACC methodology.

174 Hunter water submission, 12 April 2013, p ii (executive summary).

175 IPART, *Review of method for determining the WACC - Discussion Paper*, December 2012.

We are releasing an interim report on the WACC methodology after this Determination. We invite stakeholders to comment on the interim WACC methodology, and the further work we plan to undertake before making a final decision on the WACC methodology.

A detailed discussion of our findings on WACC and Hunter Water's proposed rates of return is presented in Appendix E.

Table 7.5 IPART's decision on Hunter Water's WACC estimate and parameters for the 2013 determination period

WACC parameters	IPART Draft decision	IPART final decision		
		Midpoint	Current market data	Long-term averages
Nominal risk free rate	2.8%		3.0%	5.0%
Inflation adjustment	2.6%		2.7%	2.7%
Market risk premium	5.5% to 6.5%		7.6%	5.5% to 6.5%
Debt margin	2.5% to 3.3%		2.3% to 2.9%	2.4%
Debt to total assets	60%		60%	60%
Equity beta	0.6 to 0.8		0.6 to 0.8	0.6 to 0.8
Cost of equity	6.1% to 8.0%		7.6% to 9.1%	8.3% to 10.2%
Cost of debt range	5.3% to 6.1%		5.4% to 6.0%	7.4%
WACC range (post-tax real)	2.9% to **4.2%**	3.8% to 5.3%[a]	3.4% to 4.4%	5.0% to 5.7%
WACC midpoint (post-tax real)	3.5%	**4.6%**	3.8%	5.3%

[a] We select a point estimate of the WACC within the range established by the midpoints of the 2 WACC ranges based on current market data and long-term averages.

Source: Bloomberg accessed 16 April 2013.

7.5 Calculating the allowance for regulatory depreciation

Decision

13 IPART's decision is to calculate regulatory depreciation using a straight line depreciation method, and to adopt asset lives shown in Table 7.6.

Consistent with the deductions we made to the RAB in section 6.12, the calculation of the allowance for regulatory depreciation is based on the asset lives shown in Table 7.6 below.

As for previous determinations, we chose to use the straight-line depreciation method. Under this method, the assets in the RAB are depreciated by an equal value in each year of their economic life, so that their real written down value follows a straight line over time, from the initial value of the asset to zero at the end of the asset's useful life. We consider that this method is appropriate compared to alternatives in terms of its simplicity, consistency and transparency.

Unlike the regulatory depreciation deducted from the RAB, to calculate the allowance for regulatory depreciation, we assume that half the capital expenditure and disposals occur at the beginning of the year (and therefore receive a full year of indexation), while the other half occurred at the end of the period (and therefore is not indexed). This explains the difference in values between Table 7.1 and Table 7.3.

7.5.1 Asset lives

The asset lives used for new and existing assets dictate the depreciation allowance and contribute to the overall price paid by consumers. Asset lives should be realistic, and step changes should be avoided, so that the costs passed-on to customers are equitable and reflect the use of assets over time. We believe our decision does this.

Our decision is to set an asset life for new assets of 100 years and a remaining life for existing assets (as at 1 July 2013) of 70 years. This is the same across all asset categories including water, wastewater and stormwater and is consistent with the asset lives we applied in Hunter Water's 2009 determination.

Our decision on asset lives is shown in Table 7.6. We did not receive any submissions on this matter.

Table 7.6 IPART's decision on asset lives[a]

	New Assets	Remaining Life of Existing Assets
Corporate	100	70
Water	100	70
Wastewater	100	70
Stormwater	100	70
Combined Average	**100**	**70**

[a] Calculated as a weighted average of new and existing assets.

8 Forecast water sales and customer numbers

Our decisions on Hunter Water's forecast metered water sales and customer numbers are an important part of the price review. Prices for individual services are set to recover Hunter Water's target revenue. Thus, the level of prices depends on how much water Hunter Water is expected to sell and how many customers it is expected to have.

It is important that the forecast water sales and customer numbers are reasonable. The less accurate they are, the higher the risk that prices will lead to Hunter Water over-recovering or under-recovering its target revenue.

Hunter Water has adopted a new demand forecasting model for the 2013 determination period. Hunter Water changed its modelling approach from that used in the 2009 determination period in response to assessments made by consultants that its demand forecasting methodology could be improved.

The section below summarises our decisions on the forecast metered water sales and customer numbers over the 2013 determination period (section 8.1). The subsequent sections provide background on metered water sales during the 2009 determination period and discuss Hunter Water's submission, stakeholder submissions, and IPART's analysis in more detail (sections 8.2 to 8.7).

8.1 Summary of IPART's decisions

Decision

14 IPART's decision is to adopt Hunter Water's forecast metered water sales and forecast sales to Gosford Council and Wyong Council as shown in Table 8.1.

Table 8.1 IPART's decision on forecast metered water sales and sales to Gosford and Wyong Councils (ML)

	2012/13[a]	2013/14	2014/15	2015/16	2016/17
Total Forecast metered water sales	58,125	58,454	57,203	56,321	56,943
Residential water sales	37,607	37,671	37,743	37,823	37,913
Non-residential water sales	20,518	20,784	19,459	18,498	19,030
Water sales to Gosford and Wyong Councils	0	0	0	0	0

a 2012/13 is a forecast year and is shown for comparison purposes; it is not part of our final decision.
Note: Numbers may not add due to rounding.
Source: Hunter Water submission, 14 September 2012, p 30, except for sales to Gosford and Wyong.

8.2 Metered water sales over the 2009 determination period

Hunter Water's actual metered water sales over the 2009 determination period averaged about 58,027 ML per year (Table 8.2). We estimate this to be about 5% lower than forecast sales in the 2009 Determination, which has led to about a $25 million ($2012/13) under-recovery in revenue over the current determination.

Hunter Water attributes much of the decrease in water sales to a reduction in residential outdoor water usage and increased water efficiency awareness.[176] Average residential water sales are about 15% lower than originally forecast over the current determination period - about 36,756 ML per year compared to a forecast average of about 43,457 ML per year.

Non-residential water sales were, on average, 21,271 ML per year over the 2009 determination period, which is about 21% higher than forecast in IPART's 2009 Determination of about 17,510 ML per year. Hunter Water has not provided a reason for the higher than expected demand from these customers.

Table 8.2 Hunter Water's metered water sales compared to IPART's 2009 Determination and Hunter Water's 2009 submission (ML)

	2009/10	2010/11	2011/12	2012/13[a]
Hunter Water 2009 Submission	63,313	61,353	59,000	60,202
IPART 2009 Determination	63,313	61,353	59,000	60,202
Hunter Water Actual	60,979	57,227	55,779	58,125
Difference between IPART's 2009 decision and Actual water sales	-2,334	-4,126	-3,221	-2,077

a 2012/13 is a forecast provided by Hunter Water.

Source: IPART, *Review of prices for water, sewerage, stormwater and other services for Hunter Water Corporation – Final Report*, July 2009, p 110; Hunter Water Annual Information Return 2012.

8.3 Forecast water sales over the 2013 determination period

8.3.1 Hunter Water's proposal

Hunter Water is forecasting water sales of about 57,230 ML per year on average over the 2013 determination period (Table 8.1). Both its residential and non-residential water sales forecasts are in line with actual water sales over the 2009 determination period.

[176] Hunter Water submission, 14 September 2012, pp 27-28.

Residential water sales currently comprise a larger proportion of Hunter Water's total water sales (about 65%).[177] Hunter Water has forecast annual residential water sales to increase marginally from 37,607 ML to 37,913 ML (about 0.8%) over the 2013 determination period. Residential water sales forecasts are in line with actual average sales of about 36,756 ML per year over the 2009 determination period.

Hunter Water sets its forecasts for non-residential water sales in consultation with its water intensive customers. This is to incorporate any scheduled or proposed changes to the business operations of these customers, and hence water use, over the determination period.

Hunter Water is forecasting non-residential sales of about 19,443 ML per year over the 2013 determination period. This represents a 9% decrease from average actual water sales over the current determination.[178] In part, this is due to Hunter Water's expectation of lower water sales due to an expected increase in the up-take of recycled water from the Kooragang Industrial Water Scheme from 2014/15.[179]

Hunter Water's demand forecasting model

Hunter Water has adopted a new demand forecasting model for the 2013 determination period called the Integrated Supply–Demand Planning (iSDP) model. The iSDP model 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 was developed for Australian water utilities, with funding from the National Water Commission. Hunter Water advises that the development of the model was led by the Institute for Sustainable Futures (ISF)[180] and involved collaboration with the Water Services Association of Australia, the CSIRO and several councils.

Hunter Water changed its modelling approach in response to assessments made by consultants that its demand forecasting methodology could be improved (including the consultants, Sinclair Knight Merz, used by IPART in the 2009 Determination**).**[181]

[177] Calculated as 37,607ML/58,125ML in 2012/13. Hunter Water submission, 14 September 2012, p 30 (Table 4.1).
[178] Over the 2013 determination period, Hunter Water expects non-residential water demand to decrease by 7% (from 20,518ML in 2012/13 to 19,030 ML in 2016/17).
[179] Hunter Water Annual Information Return 2012.
[180] A research institute at the University of Technology, Sydney.
[181] Hunter Water submission, 14 September 2012, p 29.

Hunter Water previously forecast residential consumption at a property level. End-use modelling differs in that it breaks individual customer categories down into individual end uses. 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).

Hunter Water considered the new approach to be more transparent and useful as a predictive tool to assess the impacts of water efficiency programs.[182] The new model forecasts non-residential consumption in a similar way to the previous model, as a compilation of disaggregated sectors (rather than end uses).

8.4 IPART's Analysis

We have made a final decision to adopt Hunter Water's metered water sales forecasts as presented in Table 8.1 for modelling Hunter Water's final prices. Our view is that Hunter Water's demand forecasts are reasonable given that:

- they are in line with actual water sales over the 2009 determination
- Hunter Water has used a method supported by the National Water Commission that involved collaboration with the ISF, Water Services Association of Australia and the CSIRO
- the ISF has reviewed Hunter Water's demand modelling and is satisfied that Hunter Water has successfully applied the iSDP model
- separate documentation provided by Hunter Water to IPART on the methodology and input assumptions appears to be robust.

In the sections below we outline our separate analysis of Hunter Water's residential and non-residential water demand forecasts.

8.4.1 Residential water sales forecasts

We note that it is difficult to accurately forecast residential water demand. However, on balance, we consider Hunter Water's residential demand forecasts are reasonable. Hunter Water's more sophisticated model to forecast its residential water sales should reduce future forecast errors, all else being equal.

Hunter Water has provided us with detailed documentation on the assumptions underpinning its demand forecasts. It also reported that the ISF has reviewed its demand forecast model and found that it had successfully applied the iSDP model.[183]

[182] Hunter Water submission, 14 September 2012, p 29.
[183] Hunter Water submission, 14 September 2012, p 29.

Hunter Water is projecting growth in residential water sales of 0.8% over the 2013 determination period in conjunction with population growth of about 4% and residential connections growth of about 6%.[184] We note that this is less than Sydney Water's growth forecast of about 2% over a similar period (2011/12 to 2015/16).[185] At the Public Hearing, Hunter Water suggested that the difference between its forecast growth rates and Sydney Water's might be due to:

- Hunter Water using an end-use model compared to Sydney Water's econometric model, and so differences in the models themselves are likely to result in different forecasts
- the different demographic make-up of Sydney compared with the Hunter region
- Sydney Water coming out of a long period of restrictions, so there is the potential that Sydney Water might see some increase in water usage going forward[186].

In its submission to our Issues Paper, the Public Interest Advocacy Centre noted that the Lower Hunter Water Plan (LHWP) is likely to contain provisions regarding water efficiency and promoting water saving by consumers and that such savings could have a significant impact on water consumption.[187] The Total Environment Centre also noted that forecast water sales are lower than the 2009 determination, but questions whether this level of demand going forward is appropriate and gives adequate consideration to demand management measures.[188] The No Tillegra Dam Group share similar views to the Total Environment Centre.[189]

As in our Draft Report, we note that Hunter Water's demand estimates do not factor in potential demand management outcomes from the LHWP, including possible water restrictions or water wise rules. Hunter Water has also not yet subjected its demand estimates to any sensitivity analysis. To address these and other uncertainties around Hunter Water's water sales forecasts, we have decided to apply a consumption adjustment mechanism, which is outlined in section 8.5 below.

184 Hunter Water submission, 14 September 2012, pp 28, 30.
185 IPART, *Review of prices for Sydney Water Corporation's water, sewerage, stormwater drainage and other services – Final Report*, June 2012, p 95.
186 IPART, Public Hearing transcript, 13 November 2012, pp 20-21.
187 Public Interest Advocacy Centre submission, 12 October 2012, p 5.
188 Total Environment Centre submission, 9 April 2013, p 3.
189 No Tillegra Dam Group submission, 11 April 2013, p 3.

8.4.2 Non-residential water demand

We consider Hunter Water's approach to forecasting its non-residential water demand to be reasonable given that:

- it has examined historic trends in consumption
- it has spoken to its water-intensive customers about their likely changes to business processes over the 2013 determination period and expected water demand
- the forecasts incorporate an offset from recycled water uptake from the Kooragang Industrial Water Scheme.

Both the Total Environment Centre and the No Tillegra Dam Group question the incentives for large users to develop water savings plans.[190] We note that these types of demand management measures would be considerations for the NSW Government in developing the Lower Hunter Water Plan. We received no other stakeholder submissions regarding Hunter Water's non-residential demand forecasts.

8.5 Approach for addressing the risk of material variation between actual and forecast water sales

Decision

15 IPART's decision is to provide for a mechanism to adjust Hunter Water's revenue to address the impact of a material variation between the net level of actual water demand over the 2013 determination period and the forecast demand used in making the determination, and to:

- define material variation as more than 10% (+ or -) over the whole determination period
- indicate that only the impact of variation outside of this 10% variation level will be adjusted for
- decide how best to make the revenue adjustment in our next price review, if a material variation eventuates.

In the 2005 Determination, we decided to include an option for adjusting Hunter Water's revenue requirements in subsequent determination periods where variations between forecast and actual water sales were outside a 'deadband' of +/-10%.[191] A similar consumption adjustment mechanism was introduced in the recent 2012 Sydney Water review.[192]

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[190] Total Environment Centre submission, 9 April 2013, p 3; No Tillegra Dam Group submission, 11 April 2013, p 3.

[191] IPART, *Sydney Water Corporation, Hunter Water Corporation, Sydney Catchment Authority, Prices of Water supply, wastewater and stormwater services – Final Report*, June 2005, p 22.

[192] IPART, *Review of prices for Sydney Water Corporation's water, sewerage, and stormwater drainage and other services – Final Report, June 2012*, p 38.

We note that a potential source of revenue risk for Hunter Water over the 2013 determination period relates to variations between forecast and actual water sales. In particular, Hunter Water reported that its expenditure forecasts are based on modest connections growth, stable water sales and average weather conditions.[193]

Although Hunter Water's demand estimates are in line with historic levels and therefore seem to be reasonable, we note that there could be some uncertainty as to whether demand will continue at its current level (as noted by some stakeholders[194]). Therefore, we have made a final decision to apply a consumption adjustment mechanism to deal with any significant variation between Hunter Water's actual and forecast water sales that may occur over the 2013 determination period.

Specifically, we have introduced a consumption adjustment mechanism similar in design to that used in the 2012 Determination for Sydney Water. That is, that we will consider adjusting either Hunter Water's revenue requirement or its Regulatory Asset Base for the 2017 Determination, if the level of actual demand over the 2013 Determination diverges by more than 10% from forecast demand. Only the level of over/under recovery that exceeds the 10% dead-band level would be considered for adjustment.

We consider that this mechanism allows us discretion in the 2017 Determination as to whether and how the adjustment should be made. We considered that a deadband lower than 10% transfers too much business risk to customers, and that adjusting for only the over/under recovery that exceeds the 10% dead-band level addresses PIAC's concerns about sharp price increases from demand variations at the start of the next determination period.[195]

8.6 Bulk water sales to the Central Coast

Hunter Water has a water trading arrangement with Gosford and Wyong Councils, under which either party can supply potable drinking water to the other under a water supply contract.

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 the Central Coast was augmented to be able to supply up to 27 ML per day. It was further augmented in January 2008 to supply up to 35 ML per day.[196]

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193 Hunter Water submission, 14 September 2012, p 33.

194 Public Interest Advocacy Centre submission, 12 October 2012, p 5; Total Environment Centre submission, 9 April 2013, p 3; No Tillegra Dam Group submission, 11 April 2013, p 3.

195 Public Interest Advocacy Centre submission, 12 October 2012, p 5.

196 Hunter Water submission, 14 September 2012, p 33.

Hunter Water proposed that no bulk supply transfers will be made to the Central Coast during the 2013 determination period, based on the most likely outcome from a combined source model developed by Gosford and Wyong Councils.[197] In contrast, Gosford and Wyong Councils submit that there will be some water purchases from Hunter Water over the next 4 years.[198] Although the most likely outcome is for zero transfers in all years, we note that on a weighted average basis the results of the source model show that there is a chance of some water purchases from Hunter Water over the next 4 years.

However, for the purposes of pricing we do not need to forecast inter-regional water sales over the 2013 determination period, because we have made a final decision to set the interchange price at around the short-run marginal cost of these transfers (see section 10.8). This departs from the average cost pricing approach we used in the 2009 Determination. Therefore, any increase in revenue for Hunter Water for any volume of sales is likely to be largely offset by an increase in operating costs, and thus we do not need to make an offset to notional revenue for these revenues. Wyong Shire Council in its submission to our Draft Determination considered this to be a reasonable approach to treating water sales to the Central Coast over the period.[199]

8.7 Customer numbers

Just as it is necessary to know the quantity of water that is expected to be sold to determine the revenue that will be generated by the water usage price, it is also necessary to know customer numbers and their connection sizes to calculate revenue from water and sewerage service charges. That is to say, customer numbers are the quantity component of service charge revenue.

Hunter Water supplies us with customer numbers each year in its annual information return (AIR). For this Determination, we asked Hunter Water to complete a more detailed information request to cross check its reported customer numbers with the revenue that these customers would expect to generate in Hunter Water's billing system. We have used this information in our modelling of price structure changes.

This means that if all other things remain equal, Hunter Water will neither under-recover or over-recover the expected revenue from water and sewerage service charges.

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197 Hunter Water submission, 14 September 2012, p 33.

198 Wyong Shire Council's submission to IPART's Review of Prices for Water, Sewerage and Stormwater Services for Wyong Shire Council – Price Path from 1 July 2013 – 30 June 2017, September 2012, p 29 and Pricing submission to IPART 2012, Gosford City Council's submission to IPART's Review of prices for water, sewerage and stormwater services for Gosford City Council and Wyong Shire Council, September 2012, p 35.

199 Wyong Shire Council submission, 11 April 2013, p 2.

9 Outcomes from our review of price structures

In March 2012, we reported on the outcomes of a separate review of the price structures[200] of water and sewerage charges for the 4 metropolitan water utilities. As part of this review, we developed a range of principles on the fixed and usage charges for the water and sewerage services for residential and non-residential customers.

As part of our program of work following the 2005 and 2008 Determinations, we have also reviewed the structure of stormwater drainage charges.

This chapter outlines our decisions on the price structures review and on stormwater drainage, explains how these decisions have been applied to our decision for Hunter Water, and identifies the key impacts on different customer groups.

9.1 Price structures review for the 4 water utilities

Over 18 months we conducted a detailed review of the price structures for Sydney Water, Hunter Water Corporation, Gosford City Council and Wyong Shire Council. We released an Issues Paper in June 2011 and held a public workshop on 29 August 2011. Following the public workshop we continued to receive submissions from stakeholders and held further meetings to clarify the issues raised. A final report was released in March 2012.[201]

In the review, we found that there was a lack of consistency and cost-reflectivity in the structure of water and sewerage charges across the 4 water utilities. This has resulted in a number of inequities in the pricing arrangements for different customers. Firstly, customers located in the 4 water utilities' service areas that create similar costs within the networks pay significantly different prices. Secondly, there are inconsistencies within each water utility, so that customers that create similar costs within the network can pay considerably different prices.

After we considered submissions to the price structures review and held a public workshop, we adopted the price structure principles, shown in Box 9.1, for water and sewerage services for the 4 water utilities.

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200 A price structure is the relationship between fixed (service) charges and variable (usage) charges, and the proportion of the total fixed and usage charges each customer group pays.

201 IPART, *Review of Price Structures for Metropolitan Water Utilities – Final Report*, March 2012.

Box 9.1 Price structure principles

The price structures principles we have adopted are as follows:

General principles

- Changes to the structure of water and sewerage prices are to be phased in over a transition period where necessary to minimise customer impacts.
- The total revenue collected from residential customers is to reflect the costs incurred in serving those customers. The total revenue collected from non-residential customers is to reflect the costs incurred in serving those customers.
- Customers imposing similar costs on the system should pay similar charges.

Residential and non-residential water usage charges

- The water usage charge is to be a standard variable charge for all customers – residential and non-residential – and be set with reference to the utility's long run marginal cost of supply.

Residential water and sewerage service charges

- The residential water service charge is to be a standard annual charge[a] for all residential dwellings unless there is evidence that there are material differences in the costs of servicing different residential property types.
- The residential sewerage service charge is to be a standard annual charge[a] for all residential dwellings unless there is evidence that there are material differences in the costs of servicing different residential property types.

Non-residential water service charges and sewerage usage and service charges

- The non-residential sewerage usage charge is to be a standard variable charge for all customers set with reference to, but not necessarily equal to, the utility's short run marginal cost of transporting, treating and disposing of domestic-strength effluent.
- The total sewerage revenue (usage and service charges) collected from non-residential customers is to reflect the costs incurred in servicing those customers.
- The total water revenue (usage and service charges) collected from non-residential customers is to reflect the costs incurred in servicing those customers.

a It may be billed on a quarterly or 4-monthly pro-rata basis by the utility.

For stormwater drainage charges, our research confirmed that the area of a property is a key factor - but not the only factor - in driving stormwater costs.[202] Other relevant factors included slope of the ground, the percentage of impervious ground, the percentage of water that drains off the property, on-site retention and storage devices and the nature of the land usage. We also found

[202] We undertook a review of literature, international drainage charging practices, and the price structures of Sydney Water, Hunter Water, Gosford City Council and Wyong Shire Council

that there is a community benefit to stormwater management because people benefit from cleaner waterways, rivers and beaches.

We have made changes to the Final Report that recognise these other cost drivers, whilst preserving an area based approach.

9.2 Price structures for Hunter Water

We have applied the price structure principles in this review, as well as the recent price reviews for the Central Coast, and the 2012 Sydney Water price review. The section below explains our decisions in relation to Hunter Water's water, sewerage and stormwater drainage charges.

9.2.1 Water

Water usage charge

We have decided to maintain the current method for calculating the water usage charge of all the retail water suppliers that we regulate. We usually set the usage price of water for retail customers with reference to the long run marginal cost of the next increment of augmentation (LRMC), to provide a price signal of the incremental costs of consumption. To determine LRMC, we calculate the net present value (NPV) of the capital and operational costs of the augmentation project over its expected life, and divide this by the NPV of the benefits over the same period.

For the 2009 Determination, we estimated Hunter Water's LRMC based on Tillegra Dam. Since that time, the State Government has decided not to proceed with Tillegra Dam. The Lower Hunter Water Plan is currently being developed, which will identify when and what might be the next water augmentation for the Hunter region. Until the Lower Hunter Water Plan is complete, it is not possible to estimate the LRMC.

Further, the lower than expected consumption levels in the Hunter mean that the time to the next augmentation is likely to be longer than previously expected. Therefore, all other things being equal, this may see the estimate for LRMC fall rather than rise. We have therefore decided to keep the water usage price within the previously calculated LRMC range and hold it constant in nominal dollars for the period of the determination.

The size of the usage price has no impact on Hunter Water's revenue. After the annual revenue requirement for water is determined the usage price and demand forecast will determine the expected usage revenue. The fixed service charges will be set to recover the residual revenue requirement. Once the water revenue requirement is calculated, a higher usage price will result in a lower service charge. Conversely, a lower usage price will result in a higher service charge.

For this determination period only, IPART has allowed Hunter Water to deviate from this principle for some very large customers for pragmatic reasons. These are discussed in Section 10.3.4.

Water service charge

For residential customers, we have introduced a standard water service charge for all residential dwellings (such as houses, townhouses, flats and units). Currently, the charges paid by houses are subsidising the services received by flats and units.

Costs of making water available to residential customers vary more by location than property type, and even across property types there is significant overlap in the cost imposed. We have decided that all residential premises should pay the same price for this availability. It is the simplest price structure to understand and has the lowest administration cost. Hunter Water proposed this price structure in its submission in September 2012.

Given the low level of Hunter Water's water service charges compared to the other metropolitan water utilities, we will implement this change in 2013/14. We consider that the customer impacts of this reform do not require transitional implementation.

For non-residential customers, all properties that have an individual 20mm water meter connection will pay the same service charge as residential dwellings. We consider that these properties (eg, small non-residential premises, such as doctors, dentists and accountants) impose similar costs to houses and therefore should pay similar prices.

All other non-residential customers will pay a water service charge based on the size of their water meter connection. This charge is levied in full on individually metered customers and is shared between all customers on a shared meter. This ensures that all non-residential customers that impose similar costs on Hunter Water pay the same price for that service.

In setting the water service charge, we have maintained the current proportion of the revenue collected from residential and non-residential customers.[203] This is to prevent new inequities and cross subsidies being introduced between the different customer groups.

Together with the water utilities, we will undertake a detailed analysis to assess whether the water revenue ratios between the 2 groups should be amended in the future to better reflect the costs incurred in providing services to each of the customer groups.

[203] The current ratio of water revenue from residential and non-residential customers is 85.4% to 14.6%.

9.2.2 Sewerage

Sewerage service charge

Our price structure principle for the residential sewerage service charge is a standard annual charge for all residential dwellings, unless there is evidence that material differences in the costs of servicing different residential property types exist. We applied this price structure in Sydney and the Central Coast.

Currently, Hunter Water customers in flats and units pay 65% of the sewerage service charge paid by houses. Similar to water, we found that costs imposed by customers varied more by location than property type, and even across property types there is significant overlap in the cost imposed. We were persuaded by Sydney Water's evidence that sewerage costs are driven more by wet weather sewerage overflow licence conditions than by any other factor.[204]

We also noted that from 1995/96 until 2008 developer charges were levied to recover the cost of new connections to the network. These charges were set to recover the cost of extending the existing network to the development and a contribution towards major assets including sewerage treatment plants. The developer charge for houses was 154% of the charge for flats and units.

Hunter Water proposed increasing the sewerage service charge for flats and units from 65% to 75% of that paid by houses over the 2013 determination period.[205] We consider this a reasonable balance between progress towards cost reflectivity and managing bill impacts for owners of flats and units for this determination period. Along with the 4 water utilities, we will review again the total costs of servicing different property types before 2016.

For non-residential customers, we have decided to charge all 20mm individually metered properties the same standard service charge as the residential house sewerage customers.[206] We have also decided to charge all other non-residential customers a meter based charge, whether they have a stand-alone meter or are serviced by a common meter or multiple common meters.

This decision for non-residential properties reflects our analysis for the water service charge. This represents a significant reduction in charges for 20mm individually metered properties that have a discharge factor of more than 60%.

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204 IPART, Transcript of Proceedings, Review of Price Structures for Metropolitan Water Agencies (Public Round Table), 29 August 2011, p 19.

205 Hunter Water submission, 14 September 2012, p iv.

206 Non-residential 20mm stand-alone customers will not receive a discharge factor for their service charge. They will however receive a discharge factor and a discharge factor for the sewerage usage charge they will continue to pay.

Sewerage usage charge

Hunter Water levies sewerage usage charges on its non-residential customers. In setting the sewerage charge for residential customers we have assumed an average residential sewerage discharge of 150 kL per year and included this in the single service charge.

Our price structure review revealed that the sewerage usage charges across the 4 utilities were too high and encouraged customers to implement on-site recycling schemes where they are not efficient. We consider that the sewerage usage charge should reflect the short run marginal cost (SRMC) of transporting, treating and disposing of sewerage instead. A usage charge set on this basis will improve cost-reflectivity and send appropriate price signals to the market.

We estimate Hunter Water's SRMC to be about \$0.30/kL.[207] However, because Hunter Water's current usage charge is at \$0.67/kL and lower than other utilities, we have decided to keep Hunter Water's sewerage service charge for non-residential customers at \$0.67/kL in each year of the determination. We will consider in subsequent determinations whether Hunter Water's sewerage usage charge should be further reduced towards SRMC and at what rate.

Hunter Water does not currently have a discharge allowance for non-residential customers - ie, a level customers are permitted to discharge before paying a sewerage usage charge. We have decided to introduce a discharge allowance progressively increasing it from 0 to 75 kL/pa over the course of this determination with the intention of eventually aligning it with the deemed discharge of 150 kL per year for residential customers. The non-residential discharge allowance will be zero in the first year of this determination and cumulatively increase by 25 kL/pa in the next 3 years.

In setting the sewerage service and usage charges, we have maintained the proportion of current revenue collected from residential and non-residential customers to prevent new inequities and cross-subsidies being introduced between the different customer groups.[208]

Together with the water utilities, we will undertake a cost of service analysis to assess whether the sewerage revenue ratios between the 2 customer groups should be amended in the future to better reflect the costs incurred in providing services to each of these groups.

[207] Reported by Hunter Water to the Inter-Agency Working group meeting of 7 April 2010.

[208] The current ratio of sewerage revenue from residential and non-residential customers is 84% to 16%.

9.2.3 Stormwater Drainage

Hunter Water supplies stormwater drainage services to a small proportion of its customers. All residential customers currently pay a fixed charge. Non-residential customers pay an area based charge that is divided into 4 categories.

Stormwater Drainage Service charge

For residential properties our decision sets a fixed charge for single dwelling customers, primarily houses, and a lower fixed charge for multi-premise dwellings, such as flats, units and townhouses. The multiple premise charge is lower than the house charge to reflect the average smaller area per dwelling in multi-premise dwellings.

For non-residential customers, we have maintained the 4 area based bands of properties: properties in the 0m^2--1,000m^2, 1,001m^2–10,000m^2 10,001m^2- 45,000m^2 and >45,000m^2 bands will have a single fixed charge for each band. Larger properties that meet Hunter Water's criteria may be deemed 'low impact' stormwater customers. Low impact stormwater customers will be charged the same as properties in the 0m^2-1,000m^2 band.

The next section of the report explains, at a high level, the impacts on different customer groups from implementing these pricing reforms.

9.3 Impacts on Hunter Water's customers from proposed price reform

The implementation of these pricing reforms for Hunter Water will benefit certain customer groups, whilst others who have not paid enough in the past will need to pay more in the future. Our price restructuring does not increase the total revenue received by Hunter Water for services. Rather, it removes the inequities and improves that balance between fixed service charges and variable usage charges, so that customers in all groups pay bills that represent the costs they impose on Hunter Water and prices send efficient price signals.

All residential multi-premise properties (flats, units, townhouses, etc) will pay the same residential water service charge as houses. By the end of this determination period, multi-premise properties will pay 75% of the sewerage service charge for houses.

Some customer groups, such as unmetered supply customers, have essentially been getting free water. This is not fair to the rest of the customer base, who have been paying for unmetered customers' consumption. We are including a deemed water consumption component of 180 kL/pa into the unmetered water service charge. We are phasing this in over 2 years so unmetered customers can decide whether it is of benefit to them to install a meter. Hunter Water will supply these

meters free of charge, however the customer is responsible for the installation costs (ie, engaging a contractor to do this).

Small business owners with a 20mm stand-alone meter, such as doctors, dentists, accountants and the like, will generally see a substantial decrease in their charges. Other non-residential customers will pay a meter-based charge that will see moderate increases in their bill in nominal dollars.

Our decisions improve the equity and cost-reflectivity of Hunter Water's prices for all customers. That is, the new price structure will mean that all customers will be paying a fairer share of the costs they impose on Hunter Water's system.

We are committed to implementing fairer prices. We note that with the general level of prices remaining constant in real terms, this is a good time to make changes to price structures as some of the inevitable customer impacts of reform will be moderated. Where there are significant impacts on certain groups of customers, we have tried to minimise these impacts by transitioning prices over a period of time. The section below describes the major impacts on Hunter Water's customers for water and sewerage services.

9.3.1 Impact of price structure changes on residential customers

Residential customers living in houses (or other individually metered properties) will gain from a modest lowering of the water service charge. For example, in 2012/13 the service charge for a house is $18.92 per year, which will be reduced to $16.60 per year and held at that level in real terms for 4 years.

Residential customers living in flats and units that have a common water meter will generally pay more for their water service charge. The size of the increase will depend on the number of dwellings in the property that share the common meter. In 2012/13, these customers pay on average $11.37 per year. This will increase to $16.60 per year in 2013/14, and then hold constant in real dollars. However, there will be customers above and below this average so the individual impacts will vary.

Residential customers in flats, units and townhouses will see their sewerage service charge increase from 65% to 75% of the sewerage service charge for houses over the period of this determination. However, they will see a significant decrease in their stormwater drainage service charge. This is because the service charge is now based on the land area of a property. For example, in 2012/13 the stormwater service charge for a unit is $86.42 per year, which will be reduced by 77% to $20.00 per year by 2016/17.

Residential customers in houses will see a more modest decrease in their stormwater drainage charge of 38%. The price will fall from its current level of $86.42 to $54 ($2012/13) by 2017.

9.3.2 Impact of price structure changes on non-residential customers

Non-residential customers will see a modest fall in their water service charges and most will see a modest decrease in their sewerage service charges. Non-residential 20mm meter stand-alone customers will, as a general rule, see the largest fall in the sewerage service charges.

The changes in the price structures for Hunter Water non-residential customers are much smaller in magnitude than they were for Sydney Water customers. This is predominately because Hunter Water's existing price structure for non-residential customers was closest to IPART's price structure principles.

With the introduction of a sewerage usage threshold by the end of the determination period, there will be an increasing number of small commercial premises that will not be paying sewerage usage charges.

All non-residential customers will see a 30% decrease in their stormwater drainage charges.

Chapter 13 of this report provides a more detailed analysis of the impacts on different types of customers. Chapter 10 explains the prices for all the services provided by Hunter Water.

10 Pricing decisions for water and sewerage services

For this review, we have introduced reforms to pricing structures to improve the equity and cost reflectivity of charges. These reforms address current disparities in charges between houses and multi-residential premises, differences in charging across multi-residential premises, drainage charges, and sewerage usage charges for non-residential customers. These reforms and their impacts are outlined in Chapter 9. Implementation of these reforms means that some customers will benefit more than others from the price changes over the next 4 years. The changes to price structures are necessary to ensure that all customers pay their fair share.

Prices in real dollars

Our pricing decisions in this chapter have been made in real dollars for all water and sewerage charges, with the exception of non-residential sewerage usage charges. Non-residential sewerage usage charges have been held constant in nominal dollars to transition them closer to the short run marginal cost of service supply over the determination period.

10.1 Water charges

10.1.1 Summary of pricing decisions

Decision

16 IPART's decision is to determine the maximum water charges for Hunter Water as set out in Table 10.1.

Table 10.1 IPART's decision on water charges ($2012/13)

Financial year ending 30 June	2012/13	2013/14	2014/15	2015/16	2016/17
Water service charge (house)	18.92	16.60	16.60	16.60	16.60
Water service charge (flats, units, townhouses)	11.37	16.60	16.60	16.60	16.60
Non-residential (20mm individually metered property) service charge	18.92	16.60	16.60	16.60	16.60
Non-residential meter based service charge (25mm equivalent)[a]	29.56	27.10	27.10	27.10	27.10
Usage charge ($/kL)	2.08	2.08	2.08	2.08	2.08

[a] Meter based charge is based on a 25mm meter. Applicable meter charge is set using the following formula: (Meter size)^2 x meter based charge/625. A more extensive list of meter based prices is provided in Table 10.7.

The modest fall in the water service charge for residential houses and non-residential properties shown in Table 10.1 is due in part to our decision:

- to set a standard water service charge for all residential dwellings
- to use a lower WACC than in the previous determination
- to move from a pre-tax to a post-tax WACC, which results in a lower and more accurate estimate of tax.

Charges for flats, units and townhouses increase in the first year of the period. These customers will pay the same service charges as houses from 1 July 2013. This is a result of our decision to transition water service charges for all residential properties to the same level.

The water usage charge will be held constant in real terms at $2.08/kL over the next 4 years.

10.1.2 Hunter Water's submission

Residential water service charges

Hunter Water proposed to charge all residential dwellings (houses, flats and units) a standard residential service charge. Hunter Water proposed to transition to this charge in the first year (see Table 10.2 and Table 10.3).

Hunter Water proposed to increase water service and water usage charges in line with inflation.

Table 10.2 Hunter Water's proposed water service charges for houses ($ per annum, $2012/13)

	2012/13	2013/14	2014/15	2015/16	2016/17	Total Increase
Annual charge	18.92	16.69	16.69	16.69	16.69	-2.23
Annual change		-11.8%	0.0%	0.0%	0.0%	-11.8%

Source: Hunter Water submission, 14 September 2012, p 94.

Table 10.3 Hunter Water's proposed water service charges for residential flats, units and townhouses ($ per annum, $2012/13)

	2012/13	2013/14	2014/15	2015/16	2016/17	Total Increase
Annual Charge	11.37[a]	16.69	16.69	16.69	16.69	5.32
Annual change		46.8%	0.0%	0.0%	0.0%	46.8%

a Average service charge paid by common-metered multi-tenancies across the Hunter Water network.

Source: Hunter Water submission, 14 September 2012, p 94.

Non-Residential water service charges

Hunter Water's proposed non-residential water service charges are shown below in Table 10.4. Hunter Water proposed to charge all non-residential multi-premise strata tenancies a standard water service charge set at the same level as houses and apartments.

Table 10.4 Hunter Water's proposed non-residential water service charges ($ per annum, $2012/13)

	2012/13	2013/14	2014/15	2015/16	2016/17	Total Increase
Annual charge – 25mm Eq	29.56	28.69	28.72	28.78	28.58	-0.98
Annual change		-2.9%	0.1%	0.2%	-0.7%	-3.3%

Note: For all non-residential connections that have a meter size other than 25mm the service charge in Table 10.4 is to be multiplied by the square of the meter size divided by 625.

Source: Hunter Water Corporation submission to IPART on prices to apply from 1 July 2013, September 2012, p 95.

Charges for all the different meter sizes are listed in Table 10.7 below.

Water usage charges

Hunter Water currently charges all water usage (both residential and non-residential customers) at the rate of $2.08/kL. Hunter Water proposed to increase the water usage charge to $2.26/kL ($2012/13) by 2016/17.[209]

[209] Hunter Water submission, 14 September 2012, p 94.

Table 10.5 Hunter Water's proposed water usage charges ($/kL, $2012/13)

	2012/13	2013/14	2014/15	2015/16	2016/17
Usage ($/kL)	2.08	2.12	2.17	2.21	2.26
Annual change		1.9%	2.4%	1.8%	2.3%

Source: Hunter Water submission, 14 September 2012, p 94.

10.1.3 Submissions from other stakeholders

Stakeholder submissions about water prices and water price structures reviews primarily argued:

- Customers wanted more control over their water bills. That is to say they wanted higher usage charges and lower service charges.
- Higher usage charges would impact on lower income renters and pensioners.
- A number of stakeholders were concerned about the conservation signal of setting the water usage charge in nominal dollars in the draft report.

We have taken these comments into account in our review of price structures that is discussed in Chapter 9. We consider that the changes we have made to price structures will result in charges that are more cost-reflective and remove existing cross-subsidies. In relation to setting water usage prices in nominal terms in the Draft Report, our reassessment of the rate of return and a number of the smaller operational expenditure adjustments has allowed us to return to our normal practice of setting water usage charges in real dollars.

10.1.4 IPART's analysis

Residential water service charge

Decision

17 IPART's decision is that all residential dwellings (including houses, flats and units) will pay the standard residential water service charge.

IPART, Hunter Water and the other metropolitan water utilities have together conducted a review of water and sewerage price structures. Our review of price structures is covered in detail in Chapter 9.

Many properties changing from a common meter charge to a standard residential water service charge will face a small increase in their water bills. The amount of this increase averages less than $6.00 and therefore our decision is to make the change in the first year of the determination period. From 1 July 2013, all residential customers will be paying the same residential water service charge. Table 10.6 presents the residential water service charge for residential customers in houses and for residential customers in flats, units and townhouses (previously levied a share of a meter based charge).

Table 10.6 IPART's decision for residential water service charge ($per annum, $2012/13)

	2012/13	2013/14	2014/15	2015/16	2016/17	% change 2013 to 2017
Individually metered	18.92	16.60	16.60	16.60	16.60	-12.3%
Common meter	11.37[a]	16.60	16.60	16.60	16.60	(avg) 46.0%

[a] This is the average charge for a flat, unit and townhouse across Hunter Water's network.

Note: The price impact for a property with a common meter will vary with the property's different circumstances.

Non-residential water service charge

Decision

18 IPART's decision is that non-residential properties will pay the service charges set out in Table 10.7.

In an effort to maintain equity amongst similar customers, IPART's decision is to charge all 20mm individually metered non-residential customers the residential water service charge. Non-residential customers in a mixed multi-development that are only served by a common meter will also pay the residential water service charge.

All other non-residential customers will be levied a meter based charge, which is either:

- paid by the individual customer or
- shared by the number of customers on that meter.

We have maintained the previous proportions between revenue received from residential and non-residential water service charges. The non-residential water service charges are presented in Table 10.7 below.

Table 10.7 IPART's decision for non-residential water service charge ($per annum, $2012/13)

	2012/13	2013/14	2014/15	2015/16	2016/17	% change 2013 to 2017
20mm individually metered property	18.92	16.60	16.60	16.60	16.60	-12.3%
25mm connection	29.56	27.10	27.10	27.10	27.10	-8.3%
32mm connection	48.43	44.40	44.40	44.40	44.40	-8.3%
40mm connection	75.67	69.38	69.38	69.38	69.38	-8.3%
50mm connection	118.24	108.40	108.40	108.40	108.40	-8.3%
80mm connection	302.69	277.50	277.50	277.50	277.50	-8.3%
100mm connection	472.96	433.60	433.60	433.60	433.60	-8.3%
150mm connection	1,064.16	975.60	975.60	975.60	975.60	-8.3%
200mm connection	1,891.84	1,734.40	1,734.40	1,734.40	1,734.40	-8.3%
300mm connection	4,256.64	3,902.40	3,902.40	3,902.40	3,902.40	-8.3%

Note: For all non-residential connections that have a meter size other than listed above, the 25mm service charge is to be multiplied by the square of the meter size divided by 625.

Where a meter is shared in a non-residential strata development, individual strata owners pay a share of that charge determined by Hunter Water.

Water usage charge

Decision

19 IPART's decision is to determine the maximum water usage charges for Hunter Water as set out in Table 10.8.

In past reviews, we set water usage charges with reference to long-run marginal cost (LRMC) of supply, derived on an average incremental cost basis. At the 2009 Determination, we used the then proposed Tillegra Dam as the next augmentation to determine the LRMC. Since that time, the NSW Government has decided not to proceed with Tillegra Dam. The Lower Hunter Water Plan is currently being developed and it will determine what the next water supply augmentation or augmentations will be for the Lower Hunter region will be.

In the absence of the next augmentation being known and, given the forecast reduction in consumption, and therefore the likelihood that the augmentation may be delayed for some years, we have decided to keep the water usage price[210] at its current level in real terms over the next 4 years.

[210] For all consumption up to and including 50,000 kL/pa.

Table 10.8 IPART's decision for water usage charges ($/kL, $2012/13)

	2012/13	2013/14	2014/15	2015/16	2016/17	% change 2013 to 2017
Water usage charge	2.08	2.08	2.08	2.08	2.08	0.0%

10.2 Unfiltered water usage charges

10.2.1 Summary of pricing decision

Decision

20 IPART's decision is to set the unfiltered water charge equal to the standard water usage charge less the avoided costs of filtration. The avoided cost of filtration is deemed to be $0.30/kL. We will transition the unfiltered water price to its new level over 4 years.

Unfiltered water is water that has been subject to chemical treatment, but not treated at a water filtration plant. Currently Hunter Water's only unfiltered water customers are serviced by the Upper Chichester pipeline. They number about 60 and are primarily rural properties using the water for domestic use or dairy farm wash downs.

There is a cost difference between unfiltered and drinking water, primarily in the cost of treating the water. Unfiltered water does not postpone investment in water supply augmentation, because it is dam water that would otherwise be treated and sold as drinking water. There may, however, be a very small amount of avoided costs of deferred investment in new treatment plants.

In the 2008 Sydney Water determination, IPART considered that the cost differential between supplying unfiltered and drinking water should be reflected in the usage charge rather than the fixed service charge. This is because unfiltered water is water that would have otherwise been treated and sold as drinking water. Therefore, the usage charge for unfiltered water was set at $0.30 less than the usage charge for drinking water.

We maintained this price structure for Sydney Water customers in the 2012 Sydney Water Determination, where we decided to maintain the unfiltered water discount so that it is $0.30 less than the usage charge for drinking water, based on analysis of Sydney Water's avoided cost of filtration. We are extending this approach to Hunter Water for the 2013 Determination.

10.2.2 Hunter Water's submission

Hunter Water proposed setting the unfiltered water price at $1.60/kL ($2012/13) for the first 3 years of the determination and then $1.61/kL for the final year of the determination. All these prices were to be adjusted for inflation. Hunter Water proposed using a locational based pricing model to derive this cost.

10.2.3 IPART's analysis

We have accepted Hunter Water's locational based pricing approach for customers' consumption in excess of 50,000 kL/pa. However, we consider that postage stamp pricing is appropriate for smaller customers, with the water usage price set with reference to the best estimate of the LRMC of water supply.

This maintains the water conservation price signal by reflecting the cost of the next augmentation, and encourages people to reduce their consumption if they do not value the extra water as highly as the cost of augmenting supply. Unlike very large customers, there is no financially viable option for these customers to source their own water. Therefore, a discount beyond the avoided costs of filtration is of no advantage to the rest of the customer base.

Unfiltered water is a lower standard product than standard potable water. Our decision is to reduce the unfiltered water price by the avoided filtration costs. The unfiltered water price is shown in Table 10.9 below.

Table 10.9 IPART's decision for unfiltered water usage charges ($/kL, $2012/13)

	2012/13	2013/14	2014/15	2015/16	2016/17	% change 2013 to 2017
Unfiltered water usage charge	1.60	1.65	1.70	1.74	1.78	11.3%

10.3 Locational based prices for consumption in excess of 50,000 kL

10.3.1 Summary of pricing decision

Decision

21 IPART's decision is to continue with a discounted water usage price for customers' consumption that is in excess of 50,000 kL/pa. These prices are shown in Table 10.10.

Table 10.10 IPART's decision for water usage prices for that portion of consumption in excess of 50,000 kL/pa ($/kL, $2012/13)

	2012/13	2013/14	2014/15	2015/16	2016/17
Base Usage	2.08	2.08	2.08	2.08	2.08
Dungog	1.56	1.56	1.56	1.56	1.56
Kurri Kurri	2.06	2.06	2.06	2.06	2.06
Lookout	1.90	1.90	1.90	1.90	1.90
Newcastle	1.85	1.85	1.85	1.85	1.85
Seaham-Hexham	1.61	1.61	1.61	1.61	1.61
South Wallsend	1.94	1.94	1.94	1.94	1.94
Tomago-Kooragang	1.56	1.56	1.56	1.56	1.56
All Other Areas	2.08	2.08	2.08	2.08	2.08

10.3.2 Hunter Water's submission

Hunter Water proposed maintaining the discounts for large users at their current relativity to the standard (base usage) water usage price for certain locations. Hunter Water proposed that the standard usage price increase to $2.26 ($2012/13) by 2016/17.[211]

10.3.3 Other Stakeholder submissions

The TEC and NTDG argued that having a discount for large users diminishes the water conservation signal and discourages effluent re-use.[212]

10.3.4 IPART's analysis

We set a standard water service charge for all customers in the other 3 metropolitan water utilities that we regulate. Stakeholders are correct in saying that applying large customer discounts is a departure from the price structure principles. However, it is the specific circumstances that exist at this time for Hunter Water that have been the deciding factor for us to accept Hunter Water's proposal to continue with a locational based discount for consumption in excess of 50,000 kL/pa.

- We note that large customers will pay the same water usage charge as all other customers for the first 50,000 kL/pa that they use. That is, they get the same price signal as everyone else for what is the equivalent of the consumption of over 250 average houses.

[211] Hunter Water submission, 14 September 2012, pp 94-95.

[212] No Tillegra Dam Group submission, April 2013, p 2; Total Environment Centre submission, April 2013, p 4.

- For many of these large customers, it is feasible to obtain water from alternative sources such as artesian bores. If Hunter Water were near a capacity constraint, it could be a good thing that large customers pursue these sources and free up water for other customers. This would delay the next augmentation and would be a justification for not having a locational based volume discount.
- However, with the revised consumption forecasts provided by Hunter Water it would appear that supply will exceed demand for at least the next 20 years.
- The cost of supplying water services is approximately 84% fixed and only 16% variable. However, over 95% of water revenue is recovered from variable (usage charges). Any decrease in consumption by these large customers when Hunter Water is not facing a capacity constraint would see only a small decline in Hunter Water's costs, but a large fall in its revenue. This gap would need to be recovered from all other customers in the form of higher prices.
- On balance, it therefore makes sense when a capacity constraint is some way off to keep large customers within the customer base and contributing towards the fixed cost of the network. This minimises the costs to be recovered from residential and the other non-residential customers.
- We will re-examine this issue at the next determination in the light of any new information about system capacity, customer demand and alternative supply sources for large customers.

10.4 Unmetered water supply charges

10.4.1 Summary of pricing decision

Decision

22 IPART's decision is to determine the maximum unmetered water supply charge for Hunter Water as set out in Table 10.11. We have set the unmetered water supply charge as the sum of the residential water service charge and deemed water usage of 180 kL/pa charged at the standard water usage charge. We will transition to this level by the second year of the Determination.

Table 10.11 IPART's decision for unmetered supply service charge ($ per annum, $2012/13)

	2012/13	2013/14	2014/15	2015/16	2016/17
Unmetered supply	18.92	204.96	391.00	391.00	391.00

10.4.2 Hunter Water's submission

Hunter Water proposed increasing the unmetered supply service charge to the sum of the residential water service charge and the deemed water usage of 180 kL.[213]

10.4.3 IPART's analysis

The unmetered properties in Hunter Water's network tend to be in the older inner city of Newcastle. The current practice of only charging a water service charge means that unmetered customers are getting their water for less than the cost of service provision and the costs are being paid for by the rest of the customer base.

Hunter Water's proposal and our decision are both consistent with our decision in the 2012 Sydney Water Price Determination and our decisions for the 2013 Gosford Council and the 2013 Wyong Council Price Determinations.

We have decided to transition the price rise to give unmetered customers who consider they use less than 180 kL of water each year an opportunity to investigate having a meter installed.

Hunter Water will supply the meter free of charge. Customers are responsible for the costs of engaging a licensed plumber to install the meter.

[213] Hunter Water submission, 14 September 2012, p 99.

10.5 Sewerage charges

10.5.1 Summary of pricing decisions

Decision

23 IPART's decision is to determine the maximum sewerage charges for Hunter Water as set out in Table 10.12 and Table 10.13.

Table 10.12 IPART's decision on sewerage charges ($ per annum, $2012/13)

	2012/13	2013/14	2014/15	2015/16	2016/17
Residential sewerage service charge ($2012/13)	555.23	555.23	555.23	555.23	555.23
Residential multi-premises service charge ($2012/13)	363.20	374.78	388.66	402.54	416.42
Non-residential (20mm individually metered property) service charge ($2012/13)	1,110.46	555.23	555.23	555.23	555.23
Non-residential meter based service charge[a] ($2012/13)	1,735.10	1,724.00	1,724.00	1,724.00	1,724.00

[a] Meter based charge is based on a 25mm meter. Applicable meter charge is set using the following formula: $(\text{Meter size})^2$ x 25mm service charge/625.

Note: All prices are real ($2012/13). That is to say, they will rise each year with changes in inflation.

Note: Charges for all possible meter sizes are listed in detail in Table 10.20.

Table 10.13 IPART's decision on sewerage usage charges ($/kL, $nominal)

	2012/13	2013/14	2014/15	2015/16	2016/17
Sewerage usage charge	0.67	0.67	0.67	0.67	0.67

Note: These prices are in nominal dollars. They will stay the same regardless of changes in CPI.

Table 10.12 shows that sewerage service charges for residential and 20mm individually metered non-residential customers remain at the current residential charge of $555.23 in real terms All the sewerage service charges are to be adjusted for inflation in each year of the determination. Whilst ensuring that Hunter Water gets sufficient revenue to fund its operations, we have slightly lowered the rate of return in sewerage and slightly increased it in water. This was done to minimise the transitional impacts for flats and units, as flats and units sewerage service charges increases from 65% to 75% of the service charge for houses over this determination.

Non-residential sewerage usage charges have been held constant at its current level of $0.67/kL in nominal terms in order to transition towards the short run marginal cost of transporting, treating and disposing of effluent.

10.5.2 Hunter Water's submission

Residential sewerage service charges

Hunter Water's price submission for sewerage closely followed the price structure principles we determined in March 2012 and the implementation of these principles in the 2012 Sydney Water Price Review. The one notable exception is sewerage service charges for flats, units and townhouses. Our price structure principles and our decision in the 2012 Sydney Water Price Review set a standard sewerage service charge for all residential properties, including houses flats and units. Hunter Water currently charges flats, units and townhouses 65% of the sewerage service charge levied on houses. Hunter Water's submission proposed increasing this charge to 75% of the sewerage service charge for houses over the period of the Determination.

Table 10.14 Hunter Water's proposed residential sewerage service charges (houses) ($2012/13)

	2012/13	2013/14	2014/15	2015/16	2016/17
Service ($/year)	**555.23**	573.82	584.74	595.85	607.11
Increase (%)		3.35%	1.90%	1.90%	1.89%

Source: Hunter Water submission, 14 September 2012, p 112.

Table 10.15 Hunter Water's proposed residential sewerage service charges (flats and units) ($2012/13)

	2012/13	2013/14	2014/15	2015/16	2016/17
Service ($/year)	**363.20**	387.33	409.32	431.99	455.33
Increase (%)		6.64%	5.68%	5.54%	5.40%

Source: Hunter Water submission, 14 September 2012, p 112.

Non-residential sewerage service charges

Hunter Water currently charges 20mm stand-alone non-residential properties double the sewerage service charge applicable to houses, albeit with a discharge factor adjustment applied to the base service charge.

In line with our price structure principles and our application of these principles in the 2012 Sydney Water Price Review, Hunter Water proposed charging 20mm non-residential stand-alone properties the same sewerage service charge as houses, with no discharge factor to be applied to this service charge.

Table 10.16 Hunter Water proposed non-residential 20mm stand-alone sewerage service charges ($2012/13)

	2012/13	2013/14	2014/15	2015/16	2016/17
20mm Stand-alone properties	**1,110.46**	573.82	584.74	595.85	607.11
Annual change		-48.33%	1.90%	1.90%	1.89%

Source: Hunter Water submission, 14 September 2012, p 112.

For all other non-residential sewerage customers, Hunter Water proposed a meter based charge. These charges are presented in Table 10.17 below.

Table 10.17 Hunter Water proposed other non-residential sewerage service charges ($2012/13)

	2012/13	2013/14	2014/15	2015/16	2016/17
> 25mm Stand-alone properties and multi-tenancy	**1,735.10**	1,773.78	1,833.17	1,907.79	1,971.45
Annual change		2.23%	3.35%	4.07%	3.34%

Note: For all other meter sizes the charge is calculated by squaring the applicable meter size, dividing it by 625 and multiplying by the 25mm charge in this table.

Source: Hunter Water submission, 14 September 2012, p 112.

Non-residential sewerage usage charges

Hunter Water currently charges all non-residential sewerage customers $0.67/kL for all domestic strength effluent discharges. Hunter Water proposed to maintain the sewerage usage charge at $0.67/kL in nominal terms (Table 10.18).

Table 10.18 Hunter Water proposed sewerage usage charges ($nominal)

	2012/13	2013/14	2014/15	2015/16	2016/17
Usage ($/kL)	**0.67**	0.67	0.67	0.67	0.67
Annual Change		0.0%	0.0%	0.0%	0.0%

Source: Hunter Water submission, 14 September 2012, p 111.

10.5.3 Submissions from other stakeholders

Many stakeholders noted that the sewer service charge was a very large proportion of a total typical Hunter Water bill and perhaps set too high.

TEC saw no reason why sewerage usage charges should not be applied to both residential and non-residential customers and proposed the reintroduction of a residential sewerage usage charge – with the previous 50% discharge factor for houses and a higher discharge factor for flats and units.

10.5.4 IPART's analysis

Residential sewerage service charge

Decision

24 IPART's decision is to determine the maximum residential sewerage service charges for Hunter Water as set out in Table 10.19.

Table 10.19 IPART's decision for residential sewerage service charges ($ per annum, $2012/13)

	2012/13	2013/14	2014/15	2015/16	2016/17	% change 2013 to 2017
House	**555.23**	555.23	555.23	555.23	555.23	0%
Flats, Units, Townhouses	**363.20**	374.78	388.66	402.54	416.42	14.7%

Why some customers have relatively low water bills and relatively high sewerage bills.

A number of stakeholders have asked for more control over their bills and questioned why their sewerage charge is so much more than their water charges.

Over the short to medium term, the costs in water are predominately fixed costs associated with dams, pipelines, water treatment plants and distribution mains. These make up approximately 84% of the total cost of Hunter Water supplying water to its customers each year. Only 16%[214] of costs are associated with extraction, treatment and pumping.

We set the water usage price with reference to LRMC to signal the cost of the next water supply augmentation to customers. LRMC pricing therefore incorporates the long term costs that customers impose on the water supply system through their current consumption. LRMC pricing is a common regulatory practice across Australia.

With Hunter Water's usage charge set with reference to the LRMC of water supply, more than 95% of the costs of water services are recovered through usage (variable) charges. This can cause some concern amongst customers who use relatively small volumes of water, because the water component of their bill is relatively small compared to the sewerage component. However, setting the water usage price with reference to the LRMC of water supply is efficient in that it encourages continued improvements in household water efficiency.

214 This is based on a marginal cost of $0.30/kL ($2012/13) and is calculated from IPART's estimate of Hunter Water's efficient revenue requirement.

Why we do not levy sewerage usage charges for residential customers

Sewerage systems are infrastructure intensive, with large amounts being spent on large transportation networks, pumping stations and sewerage treatment plants. Most sewerage systems are sized at around 6 times[215] the size necessary to cope with sewerage discharges from customers. This is done to cope with wet weather inundation of the sewerage system.

The marginal (variable) cost of processing the average sewage discharge from a house of 150 kL/pa is less than $45.[216] That is, over 90% of the costs are fixed costs. Sewerage systems necessarily must be sized to cater for average occupation rates. Once that infrastructure is in place, the costs do not vary much with sewerage volumes over the years.[217] In other words, with the sewerage service charge set at $555 pa, even if a customer did not discharge any sewage in a year, they would still be imposing $510 in costs to pay for and maintain all the infrastructure built to service that house.

It is not economically feasible to meter residential sewage discharges. Even if it was, residential sewage volume is not the key driver of variable costs, it is load.[218] For example, depending on the composition of discharges, a household that discharges 50 kL of effluent can discharge the same load as a household discharges 200 kL. Applying a standard sewerage discharge factor for houses also does not take in account that customers with pools, large gardens and lawns would be paying for discharges that they are simply not making.

[215] NSW Public Works Department Sewerage Investigation Manual 1986 and various WICA application submissions to IPART.

[216] At the interagency working group meeting 7 April 2010, Sydney Water reported a marginal cost of $0.23/kL, Hunter Water reported a marginal cost of $0.29/kL and Gosford and Wyong Councils reported a marginal cost of $0.28/kL.

[217] Occupancy rates for houses change – for example, because a house may only have one person in it at the present, does not mean that it cannot have a family of 5 or more in it next year.

[218] Toilet solids, kitchen waste and grease and laundry soil.

Given the above points, any sewerage usage charge for residential customers would purely be a de-facto water service charge. With the sewerage usage price set at the SRMC[219] of treating, transporting and disposing of effluent ($0.30/kL)[220], then even with a house with no water consumption and no sewerage discharges, the cost-reflective sewerage bill would still be $510. For these reasons, we will continue to set a standard residential sewerage charge that has an impounded deemed sewerage discharge of 150 kL/pa.

Sewerage service charges for flats, units and townhouses

Our price structure principles are to have a standard sewerage charge for all residential customers, unless there is evidence that the costs of servicing houses and units varies significantly. This structure has been put in place in Sydney and the Central Coast. Currently, Hunter Water customers in flats and units pay 65% of the sewerage service charge paid by houses. Based on evidence included in its submission, Hunter Water proposed increasing the sewerage service charge for flats and units from 65% to 75% of the sewerage service charge paid by houses. We consider this a reasonable balance between progress towards cost reflectivity and managing bill impacts for owners of flats and units for this determination period. IPART, along with the 4 water utilities, will again review the total costs of servicing different property types before 2016.

Non-Residential sewerage service charge

Decision

25 IPART's decision is to determine the maximum non-residential sewerage service charges for Hunter Water set out in Table 10.20.

Consistent with the pricing decisions made for water, we have set the charge for a 20mm individually metered non-residential property to be equal to the residential sewerage service charge. Non-residential customers in mixed multi-premises that are only served by a common water meter will also pay the residential sewerage service charge.

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219 SRMC is more applicable for sewerage usage pricing since the current sewerage systems are based around individual sewerage plants that are not interconnected Hunter Water has 18 sewerage treatment catchments. In the case of sewerage someone reacting to LRMC in one part of the area of operation that is not capacity constrained does not delay augmentation in another sewerage catchment that is capacity constrained. Unlike water this means that if someone in one part of the utilities area of operation reduces sewerage discharges it has no effect on the amount that may be discharged in another part of the network which is serviced by a different sewerage treatment plant.

220 Reported by Hunter Water to the Inter-Agency Working group meeting of 7 April 2010.

All other non-residential customers will be levied a meter based charge, which is either paid by the individual customer or shared by the number of customers on that meter. Also, customers who share a meter will no longer be individually subject to a minimum sewerage charge, which was the 20mm service charge. The sewerage service charges are presented in Table 10.20 below.

Table 10.20 IPART's decision for non-residential sewerage service charges ($ per annum, $2012/13)

Meter Size	2012/13	2013/14	2014/15	2015/16	2016/17
Non-residential 20mm individually metered property	**1,110.46**	555.23	555.23	555.23	555.23
Individual water service charge based on meter size of:					
25mm	**1,735.10**	1,724.00	1,724.00	1,724.00	1,724.00
32mm	**2,842.78**	2,824.60	2,824.60	2,824.60	2,824.60
40mm	**4,441.85**	4,413.44	4,413.44	4,413.44	4,413.44
50mm	**6,940.38**	6,896.00	6,896.00	6,896.00	6,896.00
80mm	**17,767.38**	17,653.76	17,653.76	17,653.76	17,653.76
100mm	**27,761.53**	27,584.00	27,584.00	27,584.00	27,584.00
150mm	**62,463.44**	62,064.00	62,064.00	62,064.00	62,064.00
200mm	**111,046.12**	110,336.00	110,336.00	110,336.00	110,336.00

Notes: All figures in this table are expressed in real $2012/13 and are intended to be adjusted for inflation.

For meter sizes not displayed the service charge is equal to the relevant 25mm charge x the square of the meter size divided by 625.

Non-residential sewerage service charges in this table are subject to a Discharge Factor adjustment.

This decision is consistent with our price structure principles and Hunter Water's submission. This represents a significant decrease for most 20mm stand-alone customers. For example, those 20mm standalone customers with a discharge factor of 85% will see a 41% real decrease in their sewerage service charge.

Non-Residential sewerage usage charge

Decisions

26 IPART's decision is to maintain the maximum non-residential sewerage usage charges for Hunter Water at its current level of $0.67/kL in nominal terms for the length of this determination period.

27 IPART's decision is to phase-in a free sewerage discharge allowance set at zero for 2013/14, 25 kL/pa for 2014/15, 50 kL/pa for 2015/16 and 75 kL/pa for 2016/17.

Our decision is to maintain the sewerage usage charge at $0.67/kL in nominal terms throughout the determination period. This is because we estimate that the short run marginal cost of collecting, transporting, treating and disposing of sewage is less than $0.30/kL.

We have phased reductions in the sewerage usage charge for the other metropolitan utilities, but Hunter Water's usage price was significantly lower than the others. Our intention is to maintain Hunter Water's usage charge constant in nominal terms until the other utilities charges approach Hunter Water's sewerage usage charge. We have decided to set the usage charge having regard to the SRMC rather than LRMC, because the disaggregated nature of sewerage catchments makes it difficult to calculate a single LRMC and applying the LRMC of one catchment across the whole network would be distortionary. This is consistent with our price structure principles and with Hunter Water's submission.

We have also decided to introduce a free allowance threshold in this Determination. This is because we estimate that the average discharge volume from residential properties is about 150 kL per year and this is embodied in their service charge. Therefore, the service charge for non-residential properties should embody a similar amount.

We intend to examine in detail the discharge factors applied by all the metropolitan water utilities after July 2013. With the help of the utilities and other stakeholders, our aim is to get a consistent approach to discharge factors for all common non-residential customer classes before the next round of determinations. Until this is completed, it is our judgement that the discharge allowance should be phased in for Hunter Water customers. Table 10.21 shows our decisions for the usage charge and the free allowance threshold.

Table 10.21 IPART's decision for non-residential sewerage usage charges and free allowance threshold ($nominal)

	2012/13	2013/14	2014/15	2015/16	2016/17	Change 2012/13 to 2016/17
Non-residential sewerage usage charge ($/kL)	**0.67**	0.67	0.67	0.67	0.67	0.0
% change		0%	0%	0%	0%	0%
Free allowance threshold (kL/pa)	**0**	0	25	50	75	75

The service charge for sewerage is calculated as a residual after the sewerage usage charge revenue has been deducted from the total sewerage revenue to be collected from non-residential customers.

Customers will continue to be able to request to have their discharge factor individually assessed if they think their current discharge factor is not accurate.

10.6 Environmental improvement charge

Hunter Water levies an Environmental Improvement Charge (EIC) on all its customers to recover the costs of providing sewerage services to priority sewerage program townships and Clarence Town in Hunter Water's operational area. These costs are partly funded through State Government Community Service Obligation payments.

Hunter Water proposed that the EIC be continued at its current levy of $35.89 ($2012/13) until it is proposed to be abolished in 2019. Hunter Water proposed that the EIC not apply to pensioner concession card holders.

Decision

28 IPART's decision is to determine the maximum Environmental Improvement Charge for Hunter Water as shown in Table 10.22, and in line with Hunter Water's proposal.

Table 10.22 IPART's decision for the Environmental Improvement Charge ($ per annum, $2012/13)

	2012/13	2013/14	2014/15	2015/16	2016/17
Environmental Improvement Charge	**35.89**	35.89	35.89	35.89	35.89

Source: Hunter Water submission, 14 September 2012, p 118.

10.7 Clarence Town sewerage levy

Hunter Water became responsible for providing sewerage services to the then unsewered township of Clarence Town from 1 July 2008, when Dungog Shire Council's water and sewer businesses were transferred to Hunter Water.[221] Currently, there are around 450 properties with water connections in this township. In its submission, Hunter Water noted:

> One of the main reasons for the transfer of the [Dungog] Council's water and sewer businesses to Hunter Water was the increasing cost of providing the proposed sewerage scheme to Clarence Town.[222]

Hunter Water proposed to recover the additional costs of providing the proposed Clarence Town sewer scheme by charging customers with properties in Clarence Town a special levy (in addition to standard sewerage charges).

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221 IPART, *Review of prices for water, sewerage, stormwater and other services for Hunter Water Corporation - Final Report*, July 2009 p 144.

222 Hunter Water submission, 14 September 2012, p 117.

Prior to July 2008, Dungog Council collected a preconstruction levy of $260 per property per year.[223] At the 2009 Price Review, Hunter Water proposed to continue to collect this levy at a reduced rate of $200 ($2008/09) until the sewer scheme was commissioned (which was expected to be in 2010). After that date, Hunter Water proposed to reduce the levy to a rate equivalent to $100 ($2007/08) until 30 June 2019. The levy was to only apply to Clarence Town properties which have sewer services provided.

The Clarence Town Sewerage Scheme was completed in March 2012. The Clarence Town sewerage levy was set at $116.02 ($2012/13) in 2012/13.

Hunter Water advises that the contributions through the EIC and the Clarence Town levy are on track to recover the outstanding capital for the scheme by 30 June 2019, but with a small surplus.

10.7.1 Hunter Water's submission

Hunter Water proposed reducing the Clarence Town Levy from $116.02 in 2012/13 to $73.20 ($2012/13) from 1 July 2013 until June 2019 when the levy is proposed to be abolished.

Table 10.23 presents Hunter Water's proposed special levy for Clarence Town.

Table 10.23 Hunter Water's proposed Clarence Town Sewerage Levy ($ per annum, $2012/13)

	2012/13	2013/14	2014/15	2015/16	2016/17
Clarence Town Sewerage Levy	**116.02**	73.20	73.20	73.20	73.20

Source: Hunter Water submission, 14 September 2012, p 117.

10.7.2 IPART's analysis

IPART supports the use of cost-reflective charges and levies to ensure that prices signal the efficient costs associated with the provision of a good or service. Since the Clarence Town area was transferred to Hunter Water in a condition which required a substantial investment in infrastructure, IPART considers that it is appropriate that Clarence Town customers should contribute to the cost of upgrading their infrastructure. Therefore, IPART supports Hunter Water's proposal.

Decision

29 IPART's decision is to determine the maximum Clarence Town Sewerage Levy for Hunter Water as shown in Table 10.24.

[223] The levy has been collected by Dungog Council since 1998/99 at a rate of $260 ($2008/09).

Table 10.24 IPART's decision for the Clarence Town Sewerage Levy ($ per annum, $2012/13)

	2012/13	2013/14	2014/15	2015/16	2016/17
Clarence Town Sewerage Levy	**116.02**	73.20	73.20	73.20	73.20

10.8 Approach to addressing the costs of bulk water purchased from the Central Coast Councils

Decision

30 IPART's decision is to determine the maximum interchange charge/transfer price for water sales between Hunter Water Corporation and the Councils at the higher of Hunter Water's and the Councils' (Joint Water Supply) short run marginal cost of supplying water as set out in Table 10.25.

Table 10.25 IPART's decision for the maximum usage charge for Central Coast transfers ($/kL, $2012/13)

Financial year ending 30 June	2013/14	2014/15	2015/16	2016/17
Usage charge for transfers to Hunter Water	0.60	0.60	0.60	0.60

10.8.1 IPART's 2009 Determination

The Central Coast Councils have a water trading arrangement with Hunter Water under which either party can supply potable drinking water to the other under a water supply contract. This water agreement will remain in place until 2026.

For the 2009 Determination, we calculated Hunter Water's average cost to supply water to the Councils, by dividing Hunter Water's total annual cost of water supply by an estimate of its total annual consumption over the period of the determination. We determined the interchange charge for transfers between Hunter Water and the Councils by taking the average of the average cost for each of the 4 years and adding a 10% premium to reflect the fact that the Councils were likely to be an irregular and intermittent user of water from the Hunter Water network. The water transfer price was set at $1.37 per kL.

10.8.2 Hunter Water's proposal

Hunter Water proposed that the price be set on an annual basis for the determination period rather than the averaging of annual prices and the addition of a premium.[224] The Central Coast Councils supported Hunter Water's proposed prices, which are shown in Table 10.26 below.

Table 10.26 Hunter Water's proposed maximum usage charge for Central Coast transfers ($2012/13)

Financial year ending 30 June	2013/14	2014/15	2015/16	2016/17
Proposed usage charge for transfers to Hunter Water ($/kL)	1.15	1.26	1.26	1.28

Source: Hunter Water submission, 14 September 2012, Table 8.7.

10.8.3 Stakeholder submissions

The Total Environment Centre (TEC) was the only stakeholder that commented on the transfer price and it did not object to the current price.[225]

10.8.4 IPART's analysis

The method used in the 2009 Determination meant that the Councils contributed to the fixed capital costs of this supply when they purchased water from Hunter Water. With the completion of the Mardi to Mangrove link, the most likely scenario is that no water will be purchased in this determination period.

We consider that since the Councils and Hunter Water contributed to the capital costs of the Hunter Link and there is significant uncertainty around the volumes transferred, this pipeline acts as an insurance policy. As such, the capital costs[226] of the scheme should be capitalised and these costs should be borne by each party,[227] regardless of the water consumed.

[224] Hunter Water submission, 14 September 2012, pp 102-104.

[225] Total Environment Centre, *Review of prices for water, sewerage and stormwater services to Gosford City Council and Wyong Shire Council*, October 2012, p 8.

[226] That is, the return on and depreciation of capital.

[227] Hunter Water's customers pay for Hunter Water's investment and the Councils customers pay for the Joint Water Supply (Councils) investment.

The interchange price should recover only the marginal or incremental cost of water supply for each utility. For simplicity, we decided that setting a single usage price at the higher of the 2 utilities' short run marginal cost of water supply is appropriate. This ensures that the interchange price covers both Hunter Water's and the Central Coast Council's marginal costs. The interchange price will be based on the Councils' short run marginal cost (which is estimated to be $0.60/kL).[228]

An advantage of setting the price at the short run marginal cost is that it encourages a regional approach to water resource management and encourages the use of existing infrastructure.

Under this approach, we will no longer need to consider the transfer volumes to determine the Councils or Hunter Water's notional revenue requirement because:

- any increase in revenue from sales will be matched by an increase in costs for the selling region
- any decrease in production costs by the buying utility, will be matched by an increase in purchase costs.

[228] It covers (1) water extraction charges paid to the Government (2) pumping costs from the Wyong River to Mardi holding Dam (3) pumping costs from Mardi Dam to Mangrove Creek Dam (4) energy and chemical costs at the Mardi Water Treatment Plant (5) evaporation (Mardi and Mangrove Creek dams) and losses estimated at 10%.
Note 1: All water that flows through the interbasin pipeline in both directions is treated potable water.
Note 2: We have utilised our working from 2009 in estimating the LRMC of the Mardi to Mangrove link.

11 Pricing decisions for stormwater drainage, trade waste, and miscellaneous and ancillary charges

We have made final pricing decisions for Hunter Water's:

- stormwater drainage service charges
- trade waste charges
- miscellaneous and ancillary service charges.

In setting the final prices, we considered Hunter Water's pricing proposal and stakeholder submissions to Hunter Water's proposal. We note that we received no submissions regarding our draft decision to accept Hunter Water's pricing proposal for these particular services.

The section below summarises our final pricing decisions. The subsequent sections discuss the decisions in more detail, including IPART's considerations and analysis.

11.1 Summary of pricing decisions

Our decision is to adopt Hunter Water's proposal for stormwater drainage, trade waste, and miscellaneous and ancillary charges. We consider this to be a proportionate approach to regulation. This is possible where businesses demonstrate sound governance and management, and make their price proposals based on efficient operating and capital expenditures supported by their customers.

Stormwater drainage service charges will decrease substantially over the 2013 period (Table 11.1). For residential houses and non-residential properties, charges will decrease by around 30% due to reduced expenditure on stormwater services. For residential apartments, charges will decrease by around 74% reflecting the costs that Hunter Water incurs in servicing these customers. The larger 74% decrease for apartments is also due to the change in price structure.

In adopting Hunter Water's proposal, stormwater charges could be reduced even further, as they over-recover costs by about $3.7 million over the 4 years (or $3.4 million in NPV terms).[229] However, we consider a 30% reduction in stormwater charges to already be a substantial decrease to customers.

All **trade waste charges** will be set in line with Hunter Water's proposal and increase by the change in CPI in each year of the determination period. **Ancillary and miscellaneous** services will also be set in line with Hunter Water's proposal, and increase by the change in CPI in each year of the determination period, subject to the appropriate rounding.

11.2 Stormwater drainage charges

Decision

31 IPART's decision is to adopt Hunter Water's proposed stormwater charges as shown in Table 11.1, including the introduction of a separate lower residential charge for apartments compared to houses.

Stormwater drainage services are largely the responsibility of local councils in Hunter Water's area of operations. Hunter Water owns and operates some stormwater drainage assets in the Newcastle, Lake Macquarie and Cessnock local government areas.[230]

Hunter Water only applies stormwater drainage charges to customers whose properties are in areas serviced by its stormwater channels – about 25% of its customer base.[231] Revenue from stormwater charges comprises about 2% of Hunter Water's total regulated revenue.[232]

Hunter Water's current stormwater pricing structure comprises:

- a single standard residential service charge applicable to all residential connections
- a land-area based charge for non-residential connections.

There are 4 area-based categories for non-residential charges to reflect the relationship between land area and stormwater runoff:

- Small (<1,000m^2) or low impact
- Medium (1,001 to 10,000m^2)
- Large (10,001 to 45,000m^2)
- Very large (>45,0000m^2).

[229] We have balanced this with an under-recovery in sewerage prices to help moderate the price increase for residential flats and units.
[230] Hunter Water submission, 14 September 2012, p 119.
[231] Hunter Water submission, 14 September 2012, p v and 120.
[232] Hunter Water, Annual Information Return, 14 September 2012.

11.2.1 Hunter Water's proposal

Hunter Water proposed to retain the current stormwater charging structure, with the addition of a new residential category for strata title home units. It noted that this change in price structure would make its stormwater charges consistent with Sydney Water's stormwater charges.[233]

Hunter Water considers that there is good equity and cost reflectivity reasons for adopting separate charges for houses and apartments, namely:

> 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.[234]

Hunter Water is proposing to reduce stormwater prices for houses and non-residential customers by 30% by the end of the determination period (Table 11.1). Stormwater charges for apartments are proposed to decrease by about 74% over 4 years, from $86.42 in 2012/13 to $22.08 in 2016/17. Hunter Water's 15,698 apartment customers out of its total 64,050 residential stormwater customers would be affected by this change.[235]

Hunter Water reported that the reduction in stormwater charges is due to a proposed reduction in the revenue requirement for stormwater services.[236] This is mainly driven by lower proposed expenditures.[237]

Table 11.1 Hunter Water's proposed stormwater prices ($ per annum, $2012/13)

	Current (2012/13)	2013/14	2014/15	2015/16	2016/17	Total change
Residential						
Houses	**86.42**	83.58	74.95	67.22	60.32	-30%
Apartments	**86.42**	30.92	27.73	24.87	22.08	-74%
Non-residential						
Small (<1000m^2) or low impact	**86.42**	83.58	74.95	67.22	60.32	-30%
Medium (1,001-10,000m^2)	**156.2**	151.06	135.48	121.5	109.03	-30%
Large (10,001-45,000m^2)	**993.59**	960.89	861.74	772.83	693.53	-30%
Very large (>45,000m^2)	**3,156.84**	3,052.97	2,737.94	2,455.46	2,203.49	-30%

Source: Hunter Water submission, 14 September, p 121.

233 Hunter Water submission, 14 September 2012, p 120.
234 Hunter Water submission, 14 September 2012, p 120.
235 Hunter Water, *Annual Information Return*, 14 September 2012.
236 Hunter Water submission, 14 September 2012, p 121.
237 Hunter Water submission, 14 September 2012, pp 46-48, 61, 70. We note that the larger 74% decrease proposed for apartments is also due to the change in price structure, and not just the reduction in expenditure.

11.2.2 Stakeholder comments

We received 1 submission regarding Hunter Water's proposed stormwater charges. The Total Environment Centre (TEC):

- advocated a 2-part tariff, with a fixed service charge and a sliding scale of area based charges to reflect that all customers benefit from drainage works, whether or not their property is directly affected, while still providing strong polluter pays signal
- considered that rebates should be provided for customers who install on-site stormwater management facilities[238].

We received no submissions on our draft decision to adopt Hunter Water's stormwater prices.

11.2.3 IPART's analysis

Our final decision is to adopt Hunter Water's proposed stormwater charges as shown in Table 11.1, including the introduction of a separate lower residential charge for apartments compared to houses.

We consider Hunter Water's proposal to introduce a separate lower stormwater charge for apartments to be reasonable. In particular, we note that this price structure aligns with IPART's pricing principles that the revenue collected from residential customers is to reflect the costs incurred in serving those customers.[239]

Hunter Water's proposed price structure is also consistent with IPART's recent decision for Sydney Water, where a new stormwater charge for apartments was introduced. We introduced a separate lower charge for apartments based on apartments occupying a smaller average area compared to houses - ie, the charges were made more cost-reflective.[240]

In response to the TEC's submission, we note that while our final stormwater charges do not follow a 2-part tariff structure, they capture some of the principles underlying the TEC's submission. For residential properties, the lower apartment charge could be viewed as a base charge reflecting both a smaller contribution to stormwater run-off and other benefits from drainage works that all customers receive. The charge for houses could then be viewed as a higher charge to reflect an additional polluter pays signal. The same concept of polluter pays applies to the non-residential property charges, given they are area-based.

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238 Total Environment Centre submission, 9 October 2012, p 7.

239 IPART, *Review of price structures for metropolitan water utilities – Final Report*, March 2012, p 3.

240 IPART, *Review of prices for Sydney Water Corporation's water, sewerage, stormwater drainage and other services – Final Report*, June 2012, pp 121-123.

In adopting Hunter Water's proposal, we note that stormwater charges could be reduced even further. This is because Hunter Water's stormwater charges are based on[241]:

- A proposed post-tax WACC of 5.6%. We set Hunter Water's notional revenue requirement (ie, which includes the cost of providing stormwater services) on a post-tax WACC of 4.6% (see Chapter 6). This contributes $1.4 million towards over-recovery of costs.
- Downward gliding prices that over-recover stormwater costs (or notional revenue). This contributes $2.3 million towards over-recovery.

Therefore, adopting Hunter Water's stormwater charges leads to an over-recovery of revenue of about $3.7 million over the 4 years.[242]

However, we consider that Hunter Water's stormwater charges already represent a substantial decrease to customers. In this Determination, we have adopted a proportionate approach to regulation. This is possible where businesses demonstrate sound governance and management, and make their price proposals based on efficient operating and capital expenditures supported by their customers.

11.3 Trade waste charges

Decision

32 IPART's decision is to adopt Hunter Water's proposed trade waste charges for 2013/14 as presented in its submission to IPART, and for these charges to be indexed annually in line with changes in the CPI.

Hunter Water levies the following trade waste charges to reflect the higher costs and risks associated with treating trade waste discharges compared to domestic strength sewage:[243]

- trade waste agreement and inspection fees
- trade waste high strength charges
- trade waste service charges
- tankering service charges (effluent delivered by truck to treatment plants).

241 Hunter Water submission, 14 September 2012, p 89.
242 We have balanced this with an under-recovery in sewerage prices to help moderate the price increase for residential flats and units.
243 Hunter Water submission, 14 September 2012, p 149.

Hunter Water has about 2,344 trade waste customers comprising:

- 2,143 minor trade waste agreement customers
- 63 moderate trade waste agreement customers
- 138 major trade waste agreement customers.[244]

The agreement renewal fees for minor and moderate customers include a high strength charge based on the average discharge quality for these customers. Major trade waste customers can be charged additional high strength and heavy metals charges to reflect higher treatment costs.[245]

11.3.1 Hunter Water's proposal

Hunter Water is proposing:

- minor modifications to its trade waste price structures
- some significant changes to price levels in 2013/14.

Under Hunter Water's proposal, total revenue from trade waste charges is expected to increase by about 9% (in real terms) from $1.78 million in 2012/13 to about $1.93 million ($2012/13) in 2013/14.[246] Hunter Water then proposed revenue to increase in line with CPI, as it proposed to increase all trade waste charges by CPI for the remainder of the determination period.

Hunter Water advised that the 9% increase in revenue incorporates the impact of increases that have been absorbed by Hunter Water in the current period, and future expected cost increases.[247]

The following sections outline Hunter Water's proposal in detail.

Trade waste agreement and inspection fees

Hunter Water proposed to maintain the existing structure of its trade wastewater agreement and inspection fees, with the addition of a new fee called 'variation to agreement fee' (see Table 11.2).[248]

[244] Hunter Water submission, 14 September 2012, p 148.
[245] Hunter Water submission, 14 September 2012, p 149.
[246] Hunter Water, Annual Information Return, 14 September 2012.
[247] Hunter Water Correspondence (Email), 4 December 2012, p 1.
[248] Hunter Water submission, 14 September 2012, p 148.

The new fee would be charged instead of the higher agreement establishment fee for minor alterations to an existing agreement (such as a change in ownership which does not involve a change in the amount of effluent discharged). Hunter Water indicates that the proposed charge of $100.42 more accurately reflects the time required to make minor alterations to an existing agreement.[249]

Hunter Water has also proposed to decrease 11 out of the 12 existing fees as a result of assessing the administration and inspection costs involved.

Table 11.2 Hunter Water's proposed trade waste agreement and inspection fees for 2013/14 ($2012/13)

	2012/13	2013/14	% change
Minor agreement fees (2,143 customers)			
New minor agreement establishment fee	127.49	127.62	0%
Existing minor agreement holders:			
Annual agreement fee	121.37	104.35	-14%
Inspection fee	117.61	110.91	-6%
Existing renew/reissue	105.76	94.25	-11%
Variation to agreement fee	-	100.42	-
Moderate agreement fees (63 customers)			
New moderate agreement establishment fee	667.25	453.36	-32%
Existing moderate agreement holders:			
Annual agreement fee	949.76	762.84	-20%
Inspection fee	117.61	110.91	-6%
Existing renew/reissue	482.3	255.4	-47%
Variation to agreement fee	-	100.42	-
Major agreement fees (138 customers)			
New major agreement establishment fee	667.25	513.35	-23%
Existing major agreement holders:			
Annual agreement fee	488.15	424.84	-13%
Inspection fee	117.61	110.91	-6%
Existing renew/reissue	482.3	363.08	-25%
Variation to agreement fee	-	100.42	-

Source: Hunter Water submission, 14 September 2012, p 150.

[249] Hunter Water submission, 14 September 2012, pp 148 and 150.

High strength charges

Biochemical oxygen demand (BOD) and non-filterable residue (NFR) high-strength charges are designed to recover the additional costs associated with treating the component of a trade waste customer's load that exceeds the equivalent domestic load strength.

Hunter Water has differential BOD/NFR charges for each of its catchment areas (about 19 charges in total). These charges apply to major trade waste agreement customers and tankering service customers. They are variable charges which depend on the load of the effluent discharged.

In addition to the base high strength charge, Hunter Water has an incentive charge to encourage customers to maintain compliance with the load limits specified in trade waste agreements. The incentive charge is set at 3 times the base charge and only applies to the proportion of the load exceeding the agreed limit.[250]

Hunter Water is proposing to increase base charges at 9 treatment plants and decrease base charges at 10 of its treatment plants for 2013/14 (see Table 11.3). It advises that the changes reflect the changing capacities and operating costs of the respective treatment plants.[251] For example, Hunter Water advises that the large decrease proposed for the Dungog Plant is due to significant improvements in processes, and the large decrease at the Paxton Plant is due to previous upgrades leading to an increase in its overall capacity and reduction in the proportion of costs attributable to handling trade waste loads.[252]

[250] Hunter Water submission, 14 September 2012, p 151.
[251] Hunter Water submission, 14 September 2012, pp 150- 151.
[252] Hunter Water correspondence (Email), 4 December 2012, p 2.

Table 11.3 Hunter Water's proposed high-strength charges for BOD/NFR for 2013/14 ($/kg, $2012/13)

Wastewater Treatment Area	Base charge 2012/13	Base charge 2013/14	% change	Incentive charge 2012/13	Incentive charge 2013/14	% change
Belmont	1.18	1.25	6%	3.53	3.74	6%
Boulder Bay	1.65	1.69	2%	4.95	5.06	2%
Branxton	4.29	4.66	9%	12.86	13.98	9%
Burwood Beach	0.78	0.7	-10%	2.32	2.1	-9%
Cessnock	1.81	1.57	-13%	5.45	4.72	-13%
Clarence Town	15.91	13.33	-16%	47.74	39.98	-16%
Dora Creek	1.1	1.85	68%	3.29	5.56	69%
Dungog	10.42	2.93	-72%	31.28	8.8	-72%
Edgeworth	0.83	1.23	48%	2.49	3.7	49%
Farley	1.06	1.2	13%	3.16	3.61	14%
Karuah	32.09	13.36	-58%	96.25	40.07	-58%
Kearsley	14.84	2.52	-83%	44.51	7.56	-83%
Kurri Kurri	2.57	2.69	5%	7.71	8.06	5%
Morpeth	1.18	0.93	-21%	3.53	2.78	-21%
Paxton	19.25	7.39	-62%	57.74	22.16	-62%
Raymond Terrace	1.8	1.83	2%	5.42	5.49	1%
Shortland	2.39	1.41	-41%	7.17	4.23	-41%
Tanilba Bay	3.28	2.87	-13%	9.86	8.61	-13%
Toronto	1.5	1.51	1%	4.51	4.54	1%

Source: Hunter Water submission, 14 September 2012, p 152.

Trade waste services charges

Hunter Water has 3 trade waste service charges relating to the disposal of:

- Heavy metals
- Phosphorous
- Sulphate.

Hunter Water's current heavy metals charges are based on the costs associated with environmental monitoring, sludge and effluent/influent heavy metal monitoring, a portion of load-based licensing fees, and the administration costs of treating and accepting heavy metals.[253] The charges are currently calculated using the original methodology adopted by IPART in 1994.

[253] Hunter Water submission, 14 September 2012, p 151.

Hunter Water proposed to retain the current price structure of 2 heavy metal charges, 1 for the Burwood Beach treatment plant and another for all other wastewater catchments.[254] Hunter Water reported that the charge relating to the Burwood Beach catchment is lower because it uses a different treatment process, which results in lower load-based licensing fees imposed by the EPA.[255]

Hunter Water proposed to increase its phosphorous charge in 2013/14 to $2.51/kg[256] due to increasing costs of treating and removing phosphorous as a result of:

- continuing growth in inland catchments
- EPA requirements to reduce phosphorous levels discharged from inland wastewater treatment works.[257]

Hunter Water proposed to maintain the existing incentive-based sulphate charge, based on the IPART-approved Sydney Water charge rate adopted in 2003.[258] This charge applies to trade waste customers who discharge higher sulphate concentrations than domestic customers. The cost methodology incorporates the nominal minimum price with the sulphate (SO4) 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.

Hunter Water is proposing that all its trade waste service charges be increased annually in line with the CPI.

Table 11.4 Hunter Water's proposed trade waste services charges for 2013/14 ($/kg, $2012/13)

	2012/13	2013/14	% change
Heavy metals:			
Burwood Beach WWTW catchment ($/kg)	18.04	21.89	21%
All other catchments ($/kg)	20.8	36.1	74%
Phosphorous >11mg/L ($kg)	1.99	2.51	26%
Sulphate formula ($/kg)	0.15 x (SO_4/2000)	0.15 x (SO_4/2000)	0%

Source: Hunter Water submission, 14 September 2012, p 154.

254 Hunter Water submission, 14 September 2012, p 152.
255 Hunter Water submission, 14 September 2012, p 152.
256 Hunter Water submission, 14 September 2012, p 154.
257 Correspondence with Hunter Water (Email), 4 December, p 3.
258 Hunter Water submission, 14 September 2012, p 153.

Tankering services charges

Hunter Water currently accepts and treats waste transported to its sites by tanker customers. This waste includes septic waste, portable toilet waste, ship waste and industrial waste. Fees for tankered waste currently include the capital cost of the dedicated equipment installed to accept tankered waste, administration costs associated with managing tankered waste and treatment plant operating costs.[259]

Hunter Water's tankering charges comprise fixed charges to cover administrative costs and volume-based charges that depend on the amount of effluent offloaded by tankers. Over the 2013 determination period, Hunter Water is proposing to (see Table 11.5):

- Decrease 5 of its 6 proposed tankering charges due to a reduction in return on/of capital costs for the installation of automated tankering receival facilities. This is because only 1 of 2 expected automated tanker receival facilities were installed in the current price period.[260]
- Increase the septic waste charge to reflect increases in operating and maintenance costs.[261]
- Discontinue the ship waste charge and charge the 1 company that uses this service a 'high strength waste' charge instead. Hunter Water estimates that the impact to the company will be an increase in cost of about 2%.[262]

Table 11.5 Hunter Water's proposed tankering services charges for 2013/14 ($2012/13)

	2012/13	2013/14	% change
Establish tankering agreement ($/per year)	213.65	195.91	-8%
Renew agreement ($/per year)	136.35	125.03	-8%
Delivery processing fee ($)	4.21	3.86	-8%
Portable toilet effluent ($/kL)	13.54	12.8	-5%
Septic waste ($/kL)	4.06	5.04	24%
Ship waste ($/kL)	7.55	-	-
High-strength waste:			
Volume charge ($/kL)	3.75	3.26	-13%
Load charge ($/kg)	As per Table 11.3	As per Table 11.3	

Source: Hunter Water submission, 14 September 2012, p 155.

[259] Hunter Water submission, 14 September 2012, p 154.
[260] Hunter Water submission, 14 September 2012, p 154.
[261] Correspondence with Hunter Water (Email), 4 December 2012, pp 3-4.
[262] Correspondence with Hunter Water (Email), 4 December 2012, p 3.

11.3.2 IPART's analysis

Total revenue from trade waste charges is a small proportion of Hunter Water's total regulated revenue – less than 1%.[263] Hunter Water's proposal of a real increase of 9%in trade waste revenue over the 2013 determination period equates to an increase of about $157,000.[264]

In the context of the real increases expected in wastewater costs over the 2013 determination period, Hunter Water's proposal to increase trade waste charges such that revenues increase by 9% (in real terms) is reasonable.

Hunter Water reported that the cost pressures affecting trade waste operating costs are similar to the cost pressures affecting its sewerage operating costs.[265] In accepting Hunter Water's operating costs (see Chapter 5), we have allowed a real increase in sewerage operating expenditure of about 3.8% over the 2013 determination period.[266]

Hunter Water is also seeking to incorporate increases in operating costs that were not reflected in charges set at the 2009 Determination. As a guide, we allowed for a real increase in sewerage costs of about 16% over the 2009 determination period, whereas Hunter Water's actual costs increased by about 30% over the same period.[267] Atkins/Cardno has reviewed Hunter Water's operating costs in the current price path and has advised that it is prudent and efficient.[268]

We also consider that Hunter Water's proposal for trade waste charges reflect our trade waste pricing principles (see Box 11.1). The proposed charges are largely reflective of the extra costs incurred by Hunter Water in providing trade waste services.

We received no submissions or stakeholder comments at the Public Hearing concerning Hunter Water's proposed trade waste charges. We also did not receive any submissions on our draft decision to adopt Hunter Water's proposed trade waste charges.

The following section outlines our analysis on each of Hunter Water's proposed trade waste changes.

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263 Hunter Water, Annual Information Return, 14 September 2012.
264 Hunter Water, Annual Information Return, 14 September 2012.
265 Correspondence with Hunter Water (Email), 4 December 2012, p 2.
266 Our operating cost allowance for sewerage is $48.3m ($2012/13) for 2016/17. Hunter Water's operating expenditure for sewerage for 2012/13 is about $46.5m. These values exclude corporate allocations.
267 IPART allowed $35.4 million ($2012/13) in 2008/09 and $41.2 million ($2012/13) for 2012/13. Hunter Water's actual expenditure increased from $35.8 million ($2012/13) in 2008/09 to $46.5 million ($2012/13) by 2012/13.
268 Atkins/Cardno, *Review of Hunter Water Corporation's Operating and Capital expenditure*, December 2012, p 5.

Box 11.1 IPART's trade waste pricing principles

We defined a set of trade waste pricing principles as part of our 2003 review of trade waste pricing.

- Standards for acceptance of trade waste should be set on the basis of the capacity of current systems to treat wastes.
- Trade waste charges should cover the costs to the water supplier of handling these wastes.
- Charges should vary to reflect differences in the cost of treating waste to the required standards at particular locations.
- Water suppliers should set charges and standards in a manner that is transparent and accurate, and the basis for setting charges should reflect costs incurred as far as possible.

Trade waste agreement and inspection fees

Trade waste agreements are currently categorised as minor, moderate, or major depending on the customer's risk profile, assessed in terms of quality and volume of discharge. Trade waste agreement fees cover administrative costs. For customers on minor and moderate agreements the fixed fee also covers treatment costs.

Our final decision is to adopt Hunter Water's proposed trade waste agreement and inspection fees for 2013/14 as outlined in Table 11.2 and for these fees to increase in line with changes in the CPI for the remainder of the 2013 determination period.

We consider the proposed reduction in agreement and inspection fees across the different customer categories for 2013/14 to be reasonable. Hunter Water has reduced these charges based on a revision of the required administration and inspection costs.

We also consider the introduction of a new lower fee for variations to existing agreements to be reasonable and agree with Hunter Water's proposal that customers should not be charged a completely new agreement fee for only minor amendments to an existing agreement that imposes relatively small marginal administrative costs on Hunter Water.

High strength charges

Our final decision is to adopt Hunter Water's proposed high strength charges for 2013/14 as outlined in Table 11.3, and for these charges to increase in line with changes in the CPI for the remainder of the 2013 determination period.

Hunter Water proposed changes in its various high strength charges to reflect the different capacities and operating costs at each of its treatment plants. We consider Hunter Water's approach to be reasonable as the changes in charges are cost-reflective and ensure that trade waste customers are not paying more than an equitable share of treatment works capital costs.

We reviewed the structure of Hunter Water's high strength charges in the 2009 Determination.[269] We accept Hunter Water's proposal therefore to maintain the price structure for these charges for the 2013 determination period. Hunter Water also advises that it expects to receive no material level of additional revenue from the incentive charges.[270]

Trade waste services charges

Our final decision is to adopt Hunter Water's proposed trade waste service charges for 2013/14 as outlined in Table 11.4 and for these charges to increase in line with changes in the CPI for the remainder of the 2013 determination period.

We support Hunter Water's proposal to maintain the existing price structure for each of its trade waste services charges, given that they were reviewed as a part of the 2009 Determination.[271] We also consider the price levels to be reasonable as they are set to be cost-reflective.

We note that Hunter Water's sulphate charge is an incentive-based charge rather than a cost-reflective charge. Hunter Water reported that it is difficult to develop an accurate cost-reflective charging methodology as sulphate levels vary with pH, flows and temperature.[272]

Sydney Water recently removed its sulphate charge and introduced a temperature and pH charge for customers discharging trade waste to systems it has declared to be 'corrosion impacted' and who are not committed to or complying with an effluent improvement program.[273] We note that while this price structure suited Sydney Water, there are different views on the appropriateness of a sulphate charge. In particular, our consultants suggested that Sydney Water may wish to reconsider removing the sulphate charge given that sulphate is a primary source of corrosive conditions.[274]

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269 IPART, *Review of prices for water, sewerage, stormwater and other services for Hunter Water Corporation - Final Report,* July 2009, p 153.
270 Hunter Water submission, 14 September 2012, p 151.
271 IPART, *Review of prices for water, sewerage, stormwater and other services for Hunter Water Corporation – Final Report*, July 2009, p 148.
272 Hunter Water submission, 14 September 2012, p 153.
273 IPART, *Review of prices for Sydney Water Corporation's water, sewerage and stormwater drainage and other services – Final Report*, June 2012, p 139.
274 Deloitte, *Review of Sydney Water Trade Waste Costs and Charges*, December 2011, p 29.

We encourage Hunter Water to continue exploring the option of introducing a temperature and pH charge. However, on balance, our final decision is to allow Hunter Water to maintain its existing sulphate charge.

Tankering service charges

Our final decision is to adopt Hunter Water's proposed tankering service charges for 2013/14 as outlined in Table 11.5, and for these charges to increase in line with changes in the CPI for the remainder of the 2013 determination period.

We consider reducing 5 of the 6 tankering services charges to be reasonable, as it is a result of removing part of the return on/of capital for an automated tankering receival facility that was not installed.[275]

We also consider that the removal of the ship waste category reasonable on the basis that the effluent of the 1 customer that fits into this category is better classified as 'higher strength waste'. Hunter Water undertook consultation with the affected customer, noting that the customer also indicated that the 'ship waste' category did not fit the type of waste it discharged.[276]

11.4 Miscellaneous and ancillary charges

Decision:

33 IPART's decision is to adopt Hunter Water's proposed miscellaneous and ancillary charges for 2013/14 as presented in its submission to IPART, and for these charges to be indexed annually in line with changes in the CPI.

34 IPART's decision is to adopt Hunter Water's proposal to round miscellaneous charges each year after indexation to the nearest dollar for charges equal to or greater than $100, and to the nearest 5 cents for charges less than $100.

Miscellaneous and ancillary charges are a number of non-contestable, one-off charges levied on a small number of customers. Water utilities are required to calculate these charges in accordance with our miscellaneous charges methodology, which requires the recovery of:

- direct labour costs (hourly), including on-costs
- business unit overheads
- material costs where incurred.

[275] Hunter Water submission, 14 September 2012, p 154.
[276] Correspondence with Hunter Water (Email), 4 December, p 3.

11.4.1 Hunter Water's proposal

Hunter Water proposed to increase its revenue from miscellaneous and ancillary charges in 2013/14 by about 17% (in real terms).[277] The total revenue expected from miscellaneous charges is approximately $3.8 million (in real terms) for 2013/14 (or 1.4% of its total revenue).[278]

Hunter Water divides its miscellaneous and ancillary charges into 2 categories:

- **customer services charges -** for mainly administrative services, such as special meter readings or provisions of sewer location diagrams
- **development application charges –** to cover administrative and application processing costs associated with managing potential new developments, such as advice on servicing requirements, statements of available pressure, etc.[279]

Hunter Water proposed charges for 75 different miscellaneous and ancillary services over the 2013 determination period.[280] This represents a reduction of 2 charges from the current period, and includes:

- discontinuing 3 existing charges, primarily due to reconfiguration of a range of charges brought about by introduction of new legislation for regulation of the plumbing industry
- introducing 1 new charge proposed as a sub-set of Charge 55 (Servicing Strategy Review).[281]

There are a number of increases and decreases to the individual charges proposed by Hunter Water for 2013/14, some of which are significant. For example:

- Meter affixtures/handling fee (for meters up to 50mm light duty) is proposed to increase from $25.75 to $83.25 (in real terms).
- Application to connect/disconnect water and sewer services is proposed to decrease from $113 to $72.20 (in real terms).
- Servicing strategy charge is proposed to increase from $642 to $1075 (in real terms).[282]

277 IPART's calculation based on Hunter Water, Annual Information Return, 14 September 2012.
278 IPART's calculation based on Hunter Water, Annual Information Return, 14 September 2012.
279 Hunter Water submission, 14 September 2012, p 159.
280 Hunter Water submission, 14 September 2012, p 165.
281 Hunter Water submission, 14 September 2012, p 158.
282 Hunter Water submission, 14 September 2012, Appendix N, p 2 & Appendix P, p 4.

Hunter Water proposed that all miscellaneous and ancillary charges increase in line with changes to the CPI for the remainder of the determination period.[283] It also proposed that its charges be rounded at the time of indexation. This is intended to simplify cash handling and ensure customers pay the same charge regardless of the method of payment. Hunter Water proposed:

- where the charge is $100 or more, and is submitted by the agency and set by IPART rounded to the nearest whole dollar, it is indexed each year to the nearest whole dollar
- where the charge is less than $100 and is submitted by the agency and set by IPART rounded to the nearest 5 cents, it is indexed each year to the nearest 5 cents.[284]

A complete list of Hunter Water's proposed miscellaneous and ancillary charges, including existing charges, predicted quantity and predicted income can be found in the Hunter Water submission and in Appendix H of this report. We outline some of Hunter Water's proposed key changes to miscellaneous and ancillary charges for the 2013 Determination below (see Box 11.2).

[283] Hunter Water submission, 14 September 2012, p 159.
[284] Hunter Water submission, 14 September 2012, p 159.

Box 11.2 Hunter Water's proposed key changes to miscellaneous and ancillary charges for the 2013 Determination

For customer service charges, Hunter Water proposed to:

- Increase the price of 14 services and decrease the price of 21. Hunter Water attributes the increases to increasing labour and contract rates and in some instances an additional complexity of processes.
- Discontinue the 'plumbing non-compliance follow up inspection fee' as this service will now be provided by NSW Fair Trading as a result of new plumbing legislation passed in 2012.
- Restructure 3 charges as a result of the new plumbing legislation.

For development application charges, Hunter Water proposed to:

- Introduce a new sub-component charge of the 'service strategy review charge' for any additional reviews required of water, recycled water and sewer service strategies. This extra charge is only imposed if documents need to be resubmitted to Hunter Water because they are poor in quality.
- Increase all charges by a minimum of 14% due to significant under recoveries. Some charges are proposed to increase significantly. For example, servicing strategy reviews are proposed to increase by 67% and major works inspection fee charges are proposed to increase by 24%.
- Hunter Water further reported that its proposed development application fee charges would produce an expected revenue of $2.3 million in 2012/13 which would still leave an annual shortfall of around $375,500. It has advised that rather than imposing a price increase of over 40% in charges so that they are at cost recovery levels, it has elected to operate at a reduced level of under recovery for the upcoming price path and will consider further increases, if necessary, in subsequent price paths.

Source: Hunter Water submission, 14 September 2012, p 160 and 165, Appendix P & Correspondence with Hunter Water (Email), 4 December, p 5.

11.4.2 IPART's analysis

Our decision is to adopt Hunter Water's proposed miscellaneous and ancillary charges for 2013/14 as outlined in Appendix H, and for these charges to increase in line with changes in the CPI for the remainder of the 2013 determination period. This is subject to the appropriate rounding proposed by Hunter Water.

We estimate that of the 17% increase in revenue from miscellaneous and ancillary charges proposed for the 2013 Determination, about 6 percentage points is from increased customer service charges and about 11 percentage points is from increased development application charges.

The proposed increase in revenue from customer service charges is largely attributed to changes in contract rates. Hunter Water reported that its contract rates are set using an open tender process and so reflect current market rates.[285] On balance, we consider this increase to be reasonable, as we have been provided with the contractors' details. We also note that this increase in revenue is similar to increases sought in trade waste revenue.

We are less able to make conclusive comments about the increase in revenue sought from development application charges, and in particular whether these fees are significantly under-recovering costs as reported by Hunter Water.

We have compared 4 of Hunter Water's development application charges, which generate about 52% of total revenue from miscellaneous and ancillary charges, against Gosford Council, Wyong Council and Sydney Water's charges. Of the comparisons that could be made, Hunter Water's charges appear to be within a reasonable range, and there is some pricing parity with the other water agencies' charges.

Hunter Water also reported that it has reviewed its business processes to ensure costs are aligned with service delivery. Hunter Water considered that its proposed charges are consistent with IPART's pricing methodology, and reflect labour and other costs associated with the efficient delivery of the service.[286]

We received no stakeholder submissions or comments at the Public Hearing on Hunter Water's proposed miscellaneous and ancillary charges. In our Draft Report, we asked stakeholders to comment on Hunter Water's development application charges, in particularly, those charges that are material and proposed to increase significantly. We did not receive any submissions on our draft decision to adopt Hunter Water's proposal for miscellaneous charges.

[285] Correspondence with Hunter Water (Email), 4 December, p 5.
[286] Hunter Water submission, 14 September, p 159.

12 Pricing and avoided cost decisions for recycled water schemes

Recycled water is highly treated sewage that is suitable for gardens, toilet flushing, steel making, replacing dam flows into river systems and other non-consumption uses.

As per our 2006 Guidelines,[287] we require water agencies to ring-fence, from the regulated parts of their businesses, the costs and revenues of recycled water schemes. This is to ensure that recycled water costs are not recovered from potable water or sewerage customers.

However, we allow water agencies to apply to recover avoided and deferred costs from recycled water schemes from the broader customer base. This is because recycled water can provide avoided costs elsewhere in the distribution and supply system that benefit the broader customer base. For example, the construction of recycled water systems could delay the need for water supply augmentation and may avoid additional costs to traditional sewerage systems.

Our 2006 Guidelines also provide a basis for reviewing water agencies' recycled water pricing policies. We have established that Hunter Water has followed these guidelines with respect to the prices it has proposed for its mandated recycled water schemes.

The section below summarises our decisions relating to Hunter Water's recycled water schemes. The subsequent sections discuss the decisions in more detail, including our considerations and analysis.

[287] IPART, *Pricing Arrangements for Recycled Water and Sewer Mining – Sydney Water Corporation, Hunter Water Corporation, Gosford City Council, Wyong Shire Council – Final Report,* September 2006, pp 53 and 63.

12.1 Summary of pricing decisions

Decision

35 IPART's decision is to allow Hunter Water to include $9.5 million of avoided costs from the Kooragang Industrial Water Scheme in the RAB and therefore to be recovered through water charges.

36 IPART's decision is that Hunter Water is to set the prices for all mandated recycled water schemes in accordance to IPART's 2006 Guidelines "Pricing arrangements for recycled water and sewer mining – Sydney Water Corporation, Hunter Water Corporation, Gosford City Council, Wyong Shire Council," in future determinations, and we will perform a price monitoring role.

37 IPART's decision is to reassess Hunter Water's recycled water prices by 30 June 2018.

Consistent with the categorisation in our 2006 Guidelines, Hunter Water has the following recycled water schemes:

- 2 mandated reticulated residential recycled water schemes: Gilleston Heights and Thornton North (Chisholm).
- Approximately 15 voluntary recycled water schemes servicing a range of customers including farmers, golf clubs and large industrial users.
- Kooragang Industrial Water Scheme (KIWS) – a voluntary scheme which will service industrial users in the Kooragang Island area. This voluntary scheme is separated from the others because it will be the largest recycled water project in the lower Hunter and supply high quality recycled water which will substitute for potable water currently used in industrial processes.

Our final decisions relating to Hunter Water's recycled water schemes, include:

- Allowing $10 million, being the sum paid by Hunter Water as a subsidy for the Kooragang Industrial Water Scheme, to be recovered through water charges. In March 2013, the NSW Government directed IPART under section 16A of the IPART Act to pay a subsidy of up to $10 million for KIWS. We address the payment of the subsidy in Chapter 3.
- Allowing Hunter Water to recover $9.5 million of avoided costs from KIWS through water charges. Most of the avoided costs proposed by Hunter Water relate to deferred upgrades to Grahamstown water treatment plant resulting from the volume of recycled water sales and consequent reduction in potable water use.
- Adopting a more 'light handed' approach to pricing of mandated recycled water schemes in future determinations. Hunter Water will be required to set prices according to our 2006 Guidelines and we will perform a price monitoring role.

12.2 Ring-fencing recycled water costs

Hunter Water has identified and reported its recycled water costs and revenues for each of its mandated and voluntary schemes as required by our 2006 Guidelines. Our consultant, Atkins/Cardno, is satisfied that Hunter Water has appropriately ring-fenced all recycled water costs and revenues. In particular, Atkins/Cardno concludes that:

- it has not been able to identify any cases where assets should be identified as 'recycled water' where they are not already classified as such
- in many cases recycling by Hunter Water is justified on the grounds of meeting EPA licence conditions rather than specific demand for recycled water.[288]

Hunter Water's mandated recycled water schemes have no ring-fenced capital costs over the 2013 determination period because these schemes (Gillieston Heights and Thornton North) are to be deferred beyond 2017/18 due to slower than expected growth.

With respect to voluntary recycled water schemes, Hunter Water has reclassified most of its expenditure (both operating and capital) from recycled water to wastewater since the 2009 Determination. Therefore, there are little to no recycled water costs to be ring-fenced for these schemes.

Hunter Water noted that the complexity of the inter-relationship between wastewater and recycled water had become more apparent since the 2009 Determination.[289] It found that many of the recycled water costs were essentially driven by EPA wastewater licence requirements and therefore more appropriately classified as wastewater costs.

Atkins/Cardno agreed with this reclassification of costs and accepted Hunter Water's proposal that the primary use of many of the voluntary schemes is to meet wastewater requirements. We are satisfied with Atkins/Cardno's assessment and that Hunter Water has appropriately ring fenced recycled water assets from the regulated parts of its business.

[288] Atkins/Cardno, *Review of Hunter Water Corporation's Operating and Capital Expenditure – Final Report*, December 2012, p 151.
[289] Hunter Water submission, 14 September 2012, p 40.

12.3 Avoided costs resulting from recycled water schemes

Hunter Water is not proposing to recover avoided costs from any of its recycled schemes, except the KIWS. Hunter Water initially proposed that water prices to the broader customer base over the 2013 period recover about $26 million for KIWS.[290] This amount comprises $10 million reallocated to water prices in line with the Government's Section 16A Direction (see Chapter 3) and $16 million in avoided costs.

In accordance with our 2006 Guidelines, Hunter Water submitted a business case setting out its proposed avoided costs based on water and sewerage servicing scenarios with and without KIWS. Details of Hunter Water's business case were supplied to us on a commercial in confidence basis. We note that most of the avoided costs proposed by Hunter Water relate to deferred upgrades to Grahamstown water treatment plant resulting from the volume of recycled water sales and consequent reduction in potable water use.

Following Atkins/Cardno's review of Hunter Water's business case, Hunter Water revised its modelling assumptions to reduce its avoided cost proposal to $9.5 million (from $15.7 million) to account for:

- the later timing of Grahamstown water treatment plant upgrade than was originally assumed
- wider system impacts of the Kooragang scheme on both the water supply and wastewater service, imposing some additional expenditure
- adoption of a longer, 30 year, horizon consistent with our 2006 Guidelines and use of a $2012/13 price base instead of $2011/12.[291]

Atkins/Cardno recommended that the appropriate value of avoided and deferred costs to apply as an adjustment to the RAB for KIWS lie somewhere in the envelope of $5.9 million to $9.5 million, depending on the outturn volume of recycled water sales.

On balance, we consider that it is reasonable to assume the maximum outturn volume of recycled water sales proposed by Hunter Water. Our decision is that Hunter Water can include $9.5 million of avoided costs for KIWS in the RAB and therefore in water charges.

[290] Hunter Water submission, 14 September 2012, p 71.

[291] Atkins/Cardno, *Review of Hunter Water Corporation's Operating and Capital Expenditure – Final Report*, December 2012, p 152. The adjustments to the original avoided and deferred cost claim were made by Atkins/Cardno with Hunter Water as part of the opex/capex structured interview process.

12.4 Our approach for pricing of recycled water schemes

Our 2006 Guidelines do not have the legal standing of a formal price determination, but provide a basis for reviewing water agencies' pricing policies.

- For mandated schemes, we decided to set recycled water prices only where there is sufficient information to do so. For other mandated schemes, we established a detailed set of pricing guidelines for the water agencies to use in calculating prices for recycled water services provided these schemes and set out a monitoring framework.
- For voluntary schemes, we decided not to determine prices, and that these prices should be negotiated directly between the relevant parties. We established a set of high-level principles to guide these price negotiations.

IPART's regulatory role in determining mandated recycled water prices for Hunter Water

We did not set recycled water prices for any of Hunter Water's mandated schemes in the 2009 Determination, since these recycled water schemes were at the inception stage.[292]

Hunter Water reported that the early stages of both mandated schemes are now complete with many residential lots occupied and connected to the dual reticulation systems. Hunter Water reported that it has set prices for its residential recycling schemes for the 2013 price period at Thornton North (also known as Chisholm) and Gillieston Heights in accordance with our guidelines (see Table 12.1).

Table 12.1 Hunter Water's proposed recycled water charges for mandated schemes (Thornton North and Gillieston Heights) ($2012/13)

	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
Service charge (20mm) $/year	23.07	23.58	24.06	24.55	25.05	25.26
Usage charge ($/kL)	1.60	1.63	1.66	1.69	1.73	1.76

Source: Hunter water submission, 14 September 2012, p 107.

We made a decision in the 2012 Sydney Water review that it is our intention not to set prices for mandated recycled water schemes in future determinations, and that Sydney Water is required to do this in accordance with our 2006 Guidelines and we would monitor these prices at least once every 5 years.[293]

[292] IPART, *Review of prices for water, sewerage, stormwater and other services for Hunter Water Corporation – Final Report*, July 2009, p 12.

[293] IPART, *Review of prices for Sydney Water Corporation's water, sewerage, and stormwater drainage and other services – Final Report*, June 2012, pp 130 and 133.

We made this decision on the basis that it represented a more proportionate approach to regulation, which is best practice and ensures that prices are only regulated in proportion to the costs and benefits of regulation. In particular, we noted that:

- the number of recycled water schemes is growing and determining prices for an increasing number of schemes would require more resources, increasing the costs of regulation
- given the detailed information necessary to set prices, the small size of schemes, and that prices are set on a scheme by scheme basis, we consider that Sydney Water may be better placed, than we are, to determine prices for these schemes on an individual basis.[294]

For similar reasons, it is our intention not to set prices for Hunter Water's mandated recycled water schemes in this and future determinations. Rather it is our preference to monitor prices set by Hunter Water in accordance to IPART's 2006 Guidelines.

IPART's review of Hunter Water's mandated recycled water prices (price monitoring)

We have undertaken a high-level review of Hunter Water's recycled water prices for its 2 mandated schemes, based on the information provided by Hunter Water.

Our view is that we are satisfied that Hunter Water's recycled water prices for Thornton North and Gillieston Heights are set in accordance with our guidelines such that:

- Recycled water price includes a usage component which does not exceed the drinking water usage price. Hunter Water's current drinking water usage charge is $2.08/kL.[295]
- Hunter Water reported that its schemes will be designed to need less than 10% potable water top-up, so the usage price of recycled water is not linked to drinking water. [296]
- The service charge does not appear to act as an incentive to disconnect from recycled water, given that the water service charge for potable water is around $18.92. However, Hunter Water is proposing a decrease to the water service charge to $16.69.[297]

294 IPART, *Review of prices for Sydney Water Corporation's water, sewerage, and stormwater drainage and other services – Final Report*, June 2012, p 133.
295 Hunter Water submission, 14 September 2012, p 106.
296 Hunter Water submission, 14 September 2012, p 106.
297 Hunter Water submission, 14 September 2012, p 124.

- Hunter Water reported that its recycled water prices are set at a level that helps to balance supply and demand and discourages inefficient resource use.[298]

In addition to complying with IPART's guidelines, Hunter Water has also decided to apply a fairness test such that customers are not disadvantaged by living in these dual reticulation areas. The fairness test is designed to ensure that the usage charge is set such that an average customer using both recycled and drinking water (40:60 split) has the same total water bill as customers with the same total usage of drinking water only.[299] We consider this additional pricing constraint to be reasonable.

We will reassess Hunter Water's recycled water prices by 30 June 2018.

[298] Hunter Water submission, 14 September 2012, p 106.
[299] Hunter Water submission, 14 September 2012, p 106.

13 Implications of final pricing decisions for Hunter Water's customers

As part of our review, we assessed the implications of our decisions for residential and non-residential customers. In particular, we analysed the impacts of our decisions to restructure some prices (Chapter 9), as well as the impacts of our Determination, on the affordability of Hunter Water's various customer groups, including pensioners and other vulnerable customers.

Our Determination includes changes in the structure of some prices, which will affect customers differently. The changes in price structures do not increase the total revenue Hunter Water recovers from its customer base. Rather, they remove cross-subsidies and improve equity between customer groups.

In this chapter we show the impact on customer bills in nominal dollars. This means we have included the impact of forecast inflation[300] on future prices and bills to make it easier for customers to understand the combined impact of new prices and inflation.

Water and sewerage bills in this chapter have been calculated using the prices set out in Chapter 10. We refer to usage of 200 kL per year as standard water usage for residential customers in houses and 150 kL per year as standard water usage for residential customers in flats and units.

The sections below summarise our findings, then outlines our analysis in detail.

13.1 Implications for residential customers

Impact on water and sewerage bills for houses

Table 13.1 shows indicative annual water and sewerage bills for individually metered residential customers in houses with a range of water usage.

Over the 2013 determination period, water and sewerage bills for all residential customers in houses will increase broadly in line with our forecast inflation of 10.4%. For example, the bill for a customer with typical water usage of 200 kL per year will increase by 10.1% (or $104) over the determination period.

[300] Based on forecast annual inflation of 2.5%.

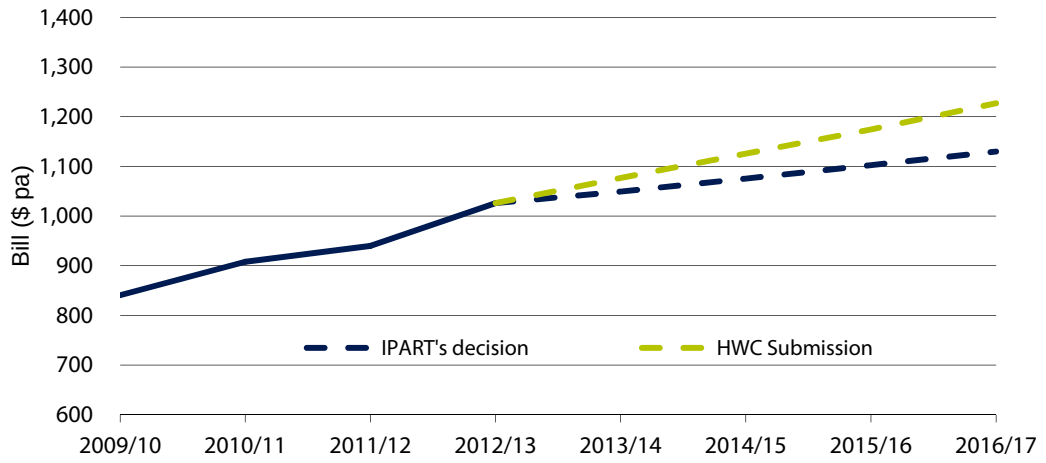
Table 13.1 Annual water and sewerage bills for Hunter Water's residential customers in houses ($nominal)

Financial year ending 30 June	2012/13	2013/14	2014/15	2015/16	2016/17	Change 2013-17
Water use						
50 kL pa	714	730	748	766	786	72
% increase		2.2%	2.5%	2.5%	2.5%	10.0%
100 kL pa	818	836	857	878	900	82
% increase		2.2%	2.5%	2.5%	2.5%	10.1%
150 kL pa	922	943	966	990	1,015	93
% increase		2.2%	2.5%	2.5%	2.5%	10.1%
200 kL pa	1,026	1,049	1,076	1,102	1,130	104
% increase		2.3%	2.5%	2.5%	2.5%	10.1%
300 kL pa	1,234	1,263	1,294	1,326	1,360	126
% increase		2.3%	2.5%	2.5%	2.5%	10.2%
400 kL pa	1,442	1,476	1,513	1,550	1,589	147
% increase		2.3%	2.5%	2.5%	2.5%	10.2%
500 kL pa	1,650	1,689	1,731	1,774	1,819	169
% increase		2.4%	2.5%	2.5%	2.5%	10.2%
1,000 kL pa	2,690	2,755	2,824	2,894	2,967	277
% increase		2.4%	2.5%	2.5%	2.5%	10.3%

Note: Includes our forecast inflation of 2.5% for each year of the determination. Numbers may not add due to rounding.

Figure 13.1 compares annual water and sewerage bills under our Determination with Hunter Water's submission for residential customers living in a house and consuming 200 kL per year. Had we accepted Hunter Water's pricing proposal, these customers' bills would have increased by 19.6% over the determination period.

Figure 13.1 Impact of IPART's decision on annual water and sewerage bills compared to Hunter Water's submission for houses consuming 200 kL per year ($nominal)



Note: Hunter Water's submission of average household consumption of 185 kL per year has been modified to 200 kL per year, to enable a comparison with IPART analysis.

Data source: Hunter Water submission and IPART analysis.

Bills for unmetered residential properties will increase by 2014/15, as we transition the assumed consumption volume from zero to 180 kL per year (see section 10.4). Where these unmetered properties consume more than 180 kL, they will still be paying less each year than if they had meters installed. If an unmetered customer considers that they consume less than 180 kL per year, Hunter Water will provide a meter free of charge to be installed at customer expense.

Impact on water and sewerage bills for residential customers in units and flats

Table 13.2 shows indicative annual water and sewerage bills for residential customers in units and flats.

Over the 2013 determination period, water and sewerage bills for flats and units with typical water usage of 150 kL per year will increase by $140. This is an increase of 19.3%, which is above our forecast inflation of 10.4% over the same period. The bill increase is due to the increase in the sewer service charge paid by flats and units, over the determination period. Hunter Water currently charges flats, units and townhouses (with a common meter) 65% of the sewerage service charge levied on houses. As proposed by Hunter Water and consistent with our price structures principles, the sewerage service charge will increase, over the period of the determination, to 75% of the sewerage service charge for houses.

Table 13.2 Annual water and sewerage bills for residential customers in units and flats ($nominal)

Financial year ending 30 June	2012/13	2013/14	2014/15	2015/16	2016/17	Change 2013-17
Water use						
50 kL pa	514	545	573	602	632	118
% change		5.8%	5.2%	5.1%	5.0%	22.9%
100 kL pa	618	651	682	714	747	129
% change		5.3%	4.7%	4.7%	4.6%	20.8%
150 kL pa	722	758	791	826	862	140
% change		4.9%	4.4%	4.4%	4.4%	19.3%
200 kL pa	826	864	901	938	977	150
% change		4.6%	4.2%	4.2%	4.1%	18.2%
300 kL pa	1,034	1,078	1,119	1,162	1,206	172
% change		4.2%	3.9%	3.8%	3.8%	16.6%
400 kL pa	1,242	1,291	1,338	1,386	1,436	194
% change		3.9%	3.6%	3.6%	3.6%	15.6%
500 kL pa	1,450	1,504	1,556	1,610	1,666	215
% change		3.7%	3.5%	3.5%	3.5%	14.8%
1,000 kL pa	2,490	2,570	2,649	2,730	2,814	323
% change		3.2%	3.1%	3.1%	3.1%	13.0%

Note: Includes our forecast inflation of 2.5% for each year of the determination. Numbers may not add due to rounding.

Impact on pensioners

The NSW Government provides rebates to pensioners who are customers of Hunter Water. Over the 2013 determination period, the average annual water and sewerage bill for a pensioner consuming 100 kL per year is likely to increase by $53 (Table 13.3). This is a 10% increase, which is in line with our forecast inflation of 10.4% over the same period. We note that pensioners do not pay the Environmental Improvement Charge.

Table 13.3 Annual water and sewerage bills for pensioners in the Hunter region ($nominal)

Financial year ending 30 June	2012/13	2013/14	2014/15	2015/16	2016/17	Change 2013-17
Water use						
50 kL pa	421	429	440	451	462	42
% increase		2.1%	2.5%	2.5%	2.5%	9.9%
100 kL pa	525	536	549	563	577	53
% increase		2.2%	2.5%	2.5%	2.5%	10.0%
150 kL pa	629	643	659	675	692	63
% increase		2.2%	2.5%	2.5%	2.5%	10.1%
200 kL pa	733	749	768	787	807	74
% increase		2.3%	2.5%	2.5%	2.5%	10.1%
300 kL pa	941	962	987	1,011	1,036	96
% increase		2.3%	2.5%	2.5%	2.5%	10.2%

Note: The annual bills include a pensioner rebate, which is applied uniformly to all pensioners. The pensioner rebate is calculated as 26% of the annual residential water and sewerage bill for a customer with water usage of 200 kL. Since pensioners do not pay an environmental levy, this is deducted from the bill amount used to calculate the pensioner rebate. (The 26% figure was provided to us by Hunter Water on 16 April 2013.)

Impact on residential water and sewerage bills relative to average earnings

We assessed the impact of the Determination on the affordability of Hunter Water's services by comparing annual water and sewerage bills for customers with an individual water meter and average water usage to actual and forecast average earnings in NSW, over the 2009 and 2013 determination periods (Table 13.4).

We found that water and sewerage bills have been relatively stable as proportion of average after tax earnings over the past few years. Assuming earnings increase at a rate of 3.5% per year in nominal terms,[301] we estimate that average water and sewerage bills should remain at a stable 1.5% of average earnings over the determination period.

[301] NSW Treasury has forecast the wages price index to increase at 3.5% per year until 2015/16 (see NSW Treasury, Half-Yearly Review 2012-13, 20 December 2012, p 26). We have assumed that the wage price index will continue to increase by 3.5% per annum over the period 2014/16 to 2016/17.

Table 13.4 Annual water and sewerage bills for individually metered customers relative to average earnings ($nominal)

Year	Average annual water & sewerage bills	Average annual income (after tax) NSW	Average bill as a proportion of average earnings (%)
2009/10	841	59,382	1.4%
2010/11	908	61,676	1.5%
2011/12	940	63,629	1.5%
2012/13	1,026	65,856	1.6%
2013/14	1,049	68,161	1.5%
2014/15	1,076	70,547	1.5%
2015/16	1,102	73,016	1.5%
2016/17	1,130	75,572	1.5%

Note: Average income (after tax) of full time adults. Average of 4 quarters. Average annual water and sewer bill is based on water usage of 200 kL per year.

Source: Australian Bureau of Statistics. Average weekly earnings. Table 11A. 6302.0. February 2012 and IPART calculations.

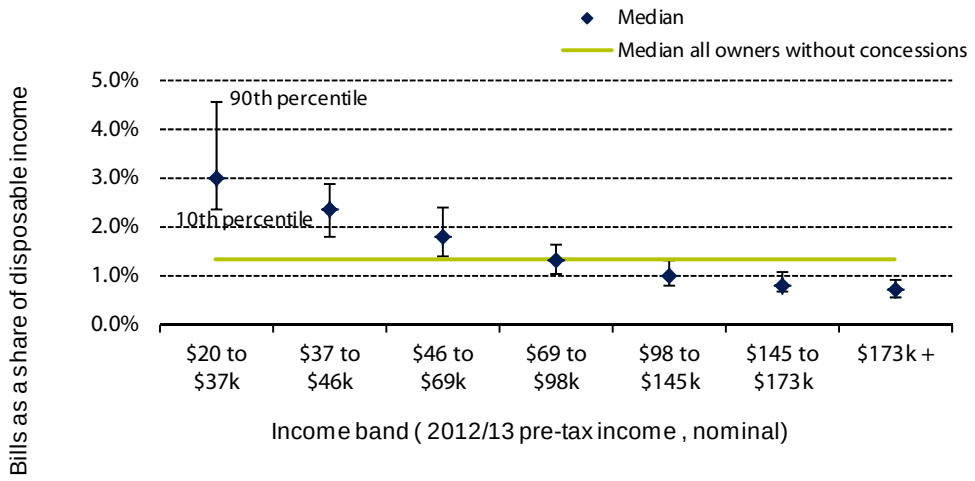
While annual water and sewerage bills for residential customers with a shared meter increase relative to 2012/13 bills over the determination period, these customers will not pay more in water and sewerage charges than customers with an individual meter and the same water usage. Therefore, the bills of these customers as a proportion of average earnings will be no more than that shown above in Table 13.4.

Residential water and sewerage bills relative to customer' forecast disposable income

We also compared our pricing decisions at the end of this determination period with our forecast of disposable income separated into various income bands. We based this analysis on the water usage and income levels collected in our latest household survey (2010).

Figure 13.2 shows water and sewerage bills for customers not eligible for pensioner concessions in 2016/17 as a share of their forecast disposable income. It shows for 80% of customers in the second lowest income band ($37,000 to $46,000), annual water and sewerage bills will comprise 1.8% to 2.9% of their disposable income. The majority of these customers' bills will not exceed 2.4% of their disposable income. For those in the lowest income band, these bills will generally represent a higher percentage of their income, ranging from 2.4% to 4.5% for 80% of customers in this band.

Figure 13.2 Distribution of residential water and sewerage bills relative to customers' forecast 2016/17 average income (after tax) for customers without pensioner concessions ($nominal)



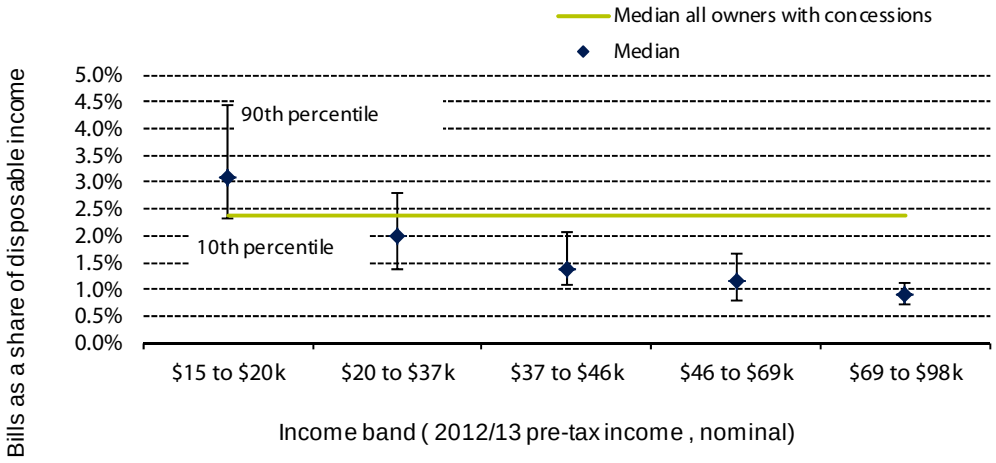
Note: We have increased average income (after tax) by 3.5% per year, based on our analysis of NSW Treasury's wage price index forecast.

Data source: Calculations based on IPART's household survey, 2010.

Our pricing decisions will not adversely affect vulnerable customers without concessions, including those in the lowest income categories. However, our decisions generally result in small increases in customer bills in nominal terms (refer to Tables 13.1 and 13.2).

Figure 13.3 summarizes the results of the analysis for customers that receive a pensioner rebate. It indicates that for 80% of pensioners in the lowest income band ($15,000 to $20,000) their water and sewerage bills will comprise 2.3% to 4.4% of their disposable income in 2016/17. For the majority of pensioners in all the other income bands – water and sewerage bills comprise less than 2.8% of their disposable income.

Figure 13.3 Distribution of residential water and sewerage bills relative to customers' forecast 2016/17 average income (after tax) for customers with pensioner concessions ($nominal)



Note: We have inflated income by 3.5% per year based on our analysis of NSW Treasury's wage price index forecast.

Data source: Calculations based on IPARTs household survey, 2010.

Hunter Water assistance for vulnerable customers

Customers in lower income categories with large families, that consume large amounts of water, may experience some difficulty paying their bills. We note that Hunter Water has a range of social programs aimed at assisting vulnerable customers. These include assistance to concession card holders, water usage bill concessions for customers with health and special needs, and assistance to nursing homes and charitable organisations. At the public hearing, Hunter Water announced that it would introduce Centrepay from 1 July 2013.[302] This will allow Hunter Water customers to have their bills paid by regular instalments from their pensions.

13.2 Impact of water and sewerage bills for non-residential customers

As for residential customers, we assessed the Determination's implications for the affordability of Hunter Water's services for non-residential customers, by analysing its impact on their annual bills. We analysed the impact on water and sewerage bills for customers with varied water usage and metering arrangements.

[302] Hunter Water Public Hearing transcript, 13 November 2012, p 16.

Non-residential 20mm standalone customers

Annual water and sewerage bills for non-residential customers with a single 20mm stand-alone (individual) meter, consuming 200 kL per year will decline by $177 in nominal terms over the 4-year period or 13.1% (using our forecast inflation of 10.4% - see Table 13.5). This is equivalent to a real decline of almost 21.3% over the period.

This is primarily due to the halving of the base sewerage service charge for these customers, so that it now aligns with the charge for residential houses.

Table 13.5 Annual water and sewerage bills for non-residential customer with a 20mm meter ($nominal)

Financial year ending 30 June	2012/13	2013/14	2014/15	2015/16	2016/17	Change 2013-17
50 kL pa	1,005.84	754	756	766	786	-220
% change		-25.0%	0.2%	1.4%	2.5%	-21.9%
100 kL pa	1,098.75	886	890	895	900	-198
% change		-19.4%	0.5%	0.5%	0.7%	-18.1%
150 kL pa	1,227.56	1,017	1,024	1,031	1,039	-188
% change		-17.1%	0.7%	0.7%	0.8%	-15.3%
200 kL pa	1,356.36	1,149	1,158	1,168	1,179	-177
% change		-15.3%	0.8%	0.9%	0.9%	-13.1%
300 kL pa	1,613.97	1,411	1,426	1,442	1,458	-156
% change		-12.6%	1.0%	1.1%	1.1%	-9.7%
400 kL pa	1,871.58	1,674	1,694	1,715	1,737	-134
% change		-10.5%	1.2%	1.2%	1.3%	-7.2%
500 kL pa	2,129.19	1,937	1,962	1,989	2,017	-113
% change		-9.0%	1.3%	1.4%	1.4%	-5.3%

Note: We have applied an average discharge factor of 74%. Includes expected inflation of 2.5% for each year of the determination. Numbers may not add due to rounding.

All other non-residential customers

Bills for non-residential customers with a common meter or a connection of 25mm or greater will rise by less than our forecast inflation of 10.4%. The current meter based sewerage base charge has been maintained.

Table 13.6 shows the indicative impact of the Determination on non-residential water and sewerage bills for customers in various strata properties with individual meters, with different levels of water usage and average sewage discharge volumes. The annual water and sewerage bill for a non-residential customer with a 40mm meter consuming 1,000 kL per year will increase by $489 or 8.2%. This increase is below our forecast inflation rate of 10.4% over the same period.

Table 13.6 Annual water and sewerage bills for individually metered non-residential customers ($nominal)

Financial year ending 30 June	meter size	2012/13	2013/14	2014/15	2015/16	2016/17	Change 2013-17
300 kL pa	25mm	2,123.01	2,161	2,195	2,230	2,266	143
% change			1.8%	1.6%	1.6%	1.6%	6.7%
500 kL pa	32mm	3,441.26	3,540	3,606	3,673	3,743	302
% change			2.9%	1.9%	1.9%	1.9%	8.8%
1,000 kL pa	40mm	5,976.56	6,086	6,209	6,335	6,465	489
% change			1.8%	2.0%	2.0%	2.1%	8.2%
10,000 kL pa	100mm	46,825.43	47,697	48,749	49,827	50,933	4,107
% change			1.9%	2.2%	2.2%	2.2%	8.8%

Note: We have applied an average discharge factor of 74%. Includes expected inflation of 2.5% for each year of the determination. Numbers may not add due to rounding.

14 Implications of pricing decisions for Hunter Water and other matters

In addition to considering the implications of our Determination on customers (see Chapter 13), we have had regard to the other matters listed in the IPART Act (see Appendix A). In particular we consider the implications of our pricing decisions for Hunter Water's service standards, financial viability and shareholders, and for general inflation and the environment. We are satisfied the Determination reaches an appropriate balance between these matters.

14.1 Implications for Hunter Water's service standards

We have essentially accepted the expenditure allowances sought by Hunter Water for the 2013 determination period. Based on information provided by Hunter Water and Atkins/Cardno, we consider this will permit Hunter Water to satisfactorily service its customers and to continue to meet the requirements of its operating licence. We also expect it will allow Hunter Water to continue to meet its environmental standards,[303] or move towards them within the upcoming determination period.

As noted earlier, Hunter Water considered its proposal will permit it to meet regulatory requirements and maintain stable system performance, assuming no performance improvement will be required from regulators, and that growth in connections will remain at or below 1.4% per year and occur in areas with spare asset capacity.[304]

Hunter Water stated that the lower proposed expenditure brings with it a greater level of risk to its performance, and that the next few years will see a reduction in the current headroom that Hunter Water has relative to the System Performance Standards in its operating licence.[305]

[303] As set by the Environment Protection Authority.
[304] Hunter Water submission, 14 September 2012, pp 65-66.
[305] Hunter Water submission, 14 September 2012, p 24.

Atkins/Cardno agreed, but also considered that the existing headroom will allow Hunter Water to develop and test the relationship between expenditure and performance. Atkins/Cardno considered that, despite the reduced mains renewals expenditure, it is unlikely that mains failures will result in breaches of the operating licence standards as there is adequate headroom. However, it noted that, as the headroom is likely to reduce, there is some increase in risk of breach from low frequency and high consequence failures.[306]

In the Public Hearing, Hunter Water stated that it should be able to mitigate risks to performance that may result from its proposed capital expenditure program. It also expressed its view that there is sufficient room in its proposed capital expenditure program to enable it to reprioritise where it would see the need to do so.[307]

14.2 Impact on Hunter Water's financial sustainability and shareholders

We are satisfied that Hunter Water will be financially sustainable over the 2013 determination period based on the prices in this Determination. That is, Hunter Water will be able to:

- fund the provision of its regulated services, and maintain, renew and develop the assets required to provide these services
- service and repay debt
- access debt markets for new borrowing requirements.

Further, we are satisfied that this Determination will enable Hunter Water to earn a reasonable rate of return on its assets.

306 Atkins/Cardno, *Review of Hunter Water Corporation's Operating and Capital Expenditure – Final Report,* December 2012, pp 3-4.

307 IPART, Public Hearing transcript, 13 November 2012, pp 18, 19 and 22.

14.2.1 Rate of return

Our pricing decisions mean that Hunter Water is able to achieve at least the total notional revenue requirement we allowed in making the Determination. We expect that Hunter Water will earn a rate of return on its regulated asset base of at least the target rate over the determination period. This varies from 4.4% to 4.8%, and is an average of 4.6%.[308] This calculation is based on the assumptions we used in our modelling of the financial impacts of our pricing decisions.

14.2.2 Financeability

IPART policy

For most determinations, we base prices on our estimate of the revenue the regulated business will require to meet its efficient costs over the determination period. This building block approach gives the business the opportunity to recover its costs and remain financially sustainable in the long term while creating incentives for future efficiency savings. It is our policy that before we finalise our pricing decisions we apply a financeability assessment to understand how our decisions are likely to affect a business's short-term financial viability.

Our current policy is to use actual gearing and interest expenses in our financeability test. We are in the process of reviewing our financeability test and have consulted with stakeholders on the appropriate benchmarks for the financial ratios.[309] We are doing further work on the possibility of including a financeability test based on the notional capital structure, alongside a test based on the actual capital structure.

Hunter Water's submission

Hunter Water disagreed with IPART's assessment in the Draft Report that "…Hunter Water will maintain a solid financial position over the 2013 determination period".[310] Hunter Water considered that it would maintain an investment grade credit rating over the 2013 determination period at its assumed real post-tax WACC of 5.6%.

Hunter Water made its pricing proposal to achieve customer affordability, meet regulatory standards, and also to make appropriate dividend distributions and maintain an investment grade credit rating.[311] Hunter Water noted how it reduced its originally planned capital portfolio of $1.1 billion in its 2011/12

[308] See Table 4.1.
[309] IPART, *Financeability test in price regulation – Discussion Paper*, September 2012.
[310] Hunter Water submission, 12 April 2013, p 8.
[311] Hunter Water submission, 14 September 2012, pp 135 - 136.

Statement of Corporate Intent ($2012/13) to about $330 million in order to achieve those objectives.[312]

Hunter Water considered that the 4.2% WACC from the draft decision would put pressure on its financial metrics and that this may lead it to reduce its planned investment to maintain its credit rating.[313] Hunter Water is aware that to maintain an investment grade credit rating, not all financial ratios need to meet investment grade criteria each year. However, based on internal modelling, it noted that FFO/net debt, which is a Moody's 'trigger factor' for a down-grade, declines from BB in Hunter Water's 2012 price submission to B under the Draft Determination.[314]

Hunter Water noted that it is currently on a 'negative watch' based on modelling a WACC assumption of 5.6%, and therefore there is a strong indication that Moody's would down-grade Hunter Water at the next review if the WACC assumption in the Draft Determination report remains unchanged.[315] Hunter Water makes this assertion despite its own assessment that its overall credit rating would maintain investment grade of BBB under the Draft Determination WACC of 4.2%.[316]

IPART's analysis and findings

We are satisfied that Hunter Water will be financially sustainable over the 2013 determination period based on prices in this Determination because:

- We have adopted an interim methodology for setting the WACC since the Draft Determination, which addresses concerns that the draft WACC may be too low. As a result, the WACC has increased by 0.4 percentage points from the Draft Determination to 4.6%. Hunter Water's regulated revenue increases from the Draft Determination by about $23.8 million over the 4 years.
- We expect Hunter Water to have sufficient cash available to meet its operating obligations and dividend payments at the standard 70% payout ratio each year.[317] The residual can be used to internally fund approximately 49% to 78% of Hunter Water's capital expenditure program.
- We consider that Hunter Water's financial ratios under the 4.6% WACC are consistent with an investment grade firm and are projected to remain stable from 2016/17, given Hunter Water's long-term capital expenditure plans and constant prices.

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312 Hunter Water submission, 14 September 2012, pp 64-66.
313 Hunter Water submission, 12 April 2013, p 6.
314 Hunter Water submission, 12 April 2013, p 10.
315 Hunter Water submission, 12 April 2013, p 10.
316 Hunter Water submission, 12 April 2013, p 10.
317 We have used NSW Treasury's standard reference point of a dividend payout ratio of 70% of after-tax profit for Government businesses. NSW Treasury, *Financial Distribution Policy for Government Businesses*, November 2009, TPP 09/06, p 2.

- Hunter Water's actual revenue has not varied by more than 7% from IPART's determined revenue over the last 2 determination periods. We have also included a consumption adjustment mechanism to adjust Hunter Water's revenue requirement at the next price review the 2017 determination period to deal with any significant variation between Hunter Water's actual and forecast water sales that may occur over the 2013 determination period (see Chapter 8).

In assessing Hunter Water's financeability, we analysed its forecast financial performance, financial position, and cash flows that result from our Determination. We also forecast a range of financial ratios to assess Hunter Water's financial strength and ability to service and repay debt.

We forecast that Hunter Water will have sufficient cash available to meet its operating obligations and dividend payments (see Table 14.1).[318] Hunter Water can also partially fund its capital expenditure program from revenue rather than borrowing the whole amount.

We note that there is an increase in net borrowing over the determination period, but that this is due mainly to Hunter Water's increasing capital expenditure program. We consider that our regulatory regime (ie, the building block model) provides a stable cash flow over the determination period. Our detailed forecast of Hunter Water's financial statements over the 2013 determination period is presented in Appendix F.

Table 14.1 Hunter Water forecast cash flow analysis ($millions, $2012/13)

	2013	2014	2015	2016	2017
Earnings before interest and tax	118	117	113	112	112
Cash flow before dividends & capex	80	**65**	**64**	**64**	**59**
Dividends paid	-22	-26	-23	-21	-19
Payment for fixed assets (capex)	-142	-76	-57	-89	-78

Source: IPART Analysis.

Our estimates of Hunter Water's key financial ratios indicates that the maximum prices set in the Determination mean that Hunter Water will maintain a solid financial position over the 2013 determination period (Table 14.2)

[318] We have used NSW Treasury's standard reference point of a dividend payout ratio of 70% of after-tax profit for Government businesses. NSW Treasury, *Financial Distribution Policy for Government Businesses,* November 2009, TPP 09/06, p 2.

Our methodology for calculating the financial ratios uses Hunter Water's actual gearing ratios and cost of debt, and forecast cash flows based on our pricing decisions. We have adjusted Hunter Water's actual cost of debt implied in its submission to reflect current market rates which we have found to be lower (Appendix F provides information on this adjustment). We have also made standard adjustments made by Moody's to funds from operations, debt, interest expenses and depreciation expenses for:[319]

- operating lease expenses
- superannuation costs (underfunded defined benefits liability)
- interest expenses (accrued interest).

Table 14.2 Hunter Water's key financial ratios used in assessing financeability

	2012/13[a]	2013/14	2014/15	2015/16	2016/17
Funds from operations interest cover	1.9	2.1	2.0	1.9	1.8
Net debt/regulated asset base	51%	51%	51%	52%	52%
Funds from operations/net debt	5.6%	6.2%	5.9%	5.4%	5.1%
Retained cash flow/capital expenditure	0.3	0.6	0.8	0.5	0.6

a 2012/13 is based on Hunter Water's projected financial results as provided in its submission.

Note: Financial ratios presented are based on the assumption of a 70% dividend payout ratio and Hunter Water meeting its forecasts of efficient operating and capital costs. The definitions used for each of the financial ratios are from Moody's Global Infrastructure Finance, *Global Regulated Water Utilities*, December 2009 and includes adjustments such as recognising the present value of underfunded defined benefit superannuation liabilities as debt. We note that Moody's treats total underfunded defined benefit obligations as a liability in calculating financial ratios, which for Hunter Water is about $93.2million ($2011/12). This was not done for the Draft Report.

Source: Hunter Water submission, 14 September 2012, p 136 and IPART analysis.

We consider that our forecast of Hunter Water's financial ratios is consistent with an investment-grade firm. We also note that a strong rating in the qualitative factors has allowed the entities that we regulate to maintain an investment grade credit rating even where individual ratios lie outside the range.[320] We note that Hunter Water considered that its ratios, combined with its strength on the qualitative criteria used by ratings agencies, allowed it to achieve an investment grade credit rating.[321]

[319] Moody's Investors Service, *Moody's Approach to Global Standard Adjustments in the Analysis of Financial Statements for Non-Financial Corporations*, December 2010, pp 4-5.

[320] IPART, *Financeability test in price regulation – Discussion Paper*, September 2012, p 21.

[321] Hunter Water submission, 14 September 2012, p 135; Hunter Water submission, 12 April 2013, p 10.

We note that that there is a downward trend in the funds from operations interest cover and the funds from operations/net debt. However, this is largely driven by our approach to setting prices. This means that Hunter Water's target revenue is above its notional revenue in the first 2 years. Our modelling of the longer term financial ratios based on Hunter Water's long-term capital expenditure plans indicates that this trend will flatten out. That is, funds from operations interest cover should stabilise at around 1.8 from 2016/17, if customer growth remains at its current level, prices remain constant in real terms, the WACC remains constant at 4.6%, and operating and capital expenditure stays at or near current levels.

We have also included a consumption adjustment mechanism to deal with any significant variation between Hunter Water's actual and forecast water sales that may occur over the 2013 determination period (see Chapter 8). This may aid in strengthening the qualitative aspects of Hunter Water's credit rating.

We would also expect Hunter Water's qualitative ratings to improve once the Lower Hunter Water Plan is released in December 2013, as the plan should address future water resource management needs and any hydrological risk that Hunter Water might be currently exposed to. We note that water banking with the Central Coast is a water supply option being considered as part of the plan[322], which has been facilitated by our efficient cost and pricing decisions in this Determination and that for the Central Coast councils. In particular, we have allowed efficient capital expenditure of $23.7 million for the construction of the Mardi to Warnervale pipeline in Wyong Shire Council's capital expenditure program[323] to increase transfer capacity between the Hunter and Central Coast regions. We have also enabled a commercially negotiated price for water banking between Hunter Water and the Central Coast Councils (see Chapter 3).

14.2.3 Impact on the Consolidated Fund

Under section 16 of the IPART Act, IPART is required to report on the likely impact to the Consolidated Fund if prices are not increased to the maximum levels permitted. If this is the case, then the level of tax equivalent and dividends paid to the Consolidated Fund will fall. The extent of this fall will depend on Treasury's application of its financial distribution policy and how the change affects after-tax profit.

Our financial modelling is based on a tax rate of 30% for pre-tax profit and dividend payments at 70% of after-tax profit. A $1 decrease in pre-tax profit would result in a loss of revenue to the Consolidated Fund of 49 cents in total, which is 70% of the decrease in after-tax profit of 70 cents.

322 http://www.slideshare.net/HaveYourSay/lhwp-information-sheets

323 IPART, *Gosford City Council and Wyong Shire Council prices for water, sewerage and stormwater drainage services from 1 July 2013 to 30 June 2017 – Final Report*, May 2013, p 96.

14.3 Implications for general inflation

Under section 15 of the IPART Act, we are required to consider the effect of our determinations on general price inflation. As the Australian Bureau of Statistics (ABS) does not collect data on Hunter Water's water and sewerage impact on the consumer price index, we have derived an estimate of their impact on general price inflation using the ABS estimate of Sydney Water's impact on the consumer price index (CPI).

Currently, water and sewerage prices in Sydney contribute about 0.24% towards the consumer price index (all groups, 8 capital cities).[324] Using Hunter Water's customer numbers of around 220,000 relative to Sydney Water's of around 1,700,000, we estimate the relative contribution of Hunter Water towards general inflation to be about 0.03%.

Under our final decision, the annual water and sewerage bill for a residential customer consuming 200 kL per year decreases, on average, by 0.1% (in real terms) each year. Therefore, the approximate annual impact on general nation-wide price inflation is -0.00003 percentage points each year.[325]

14.4 Implications for the environment

The NSW Government is responsible for determining any negative environmental impacts associated with Hunter Water's activities, and for imposing standards or requirements on Hunter Water to address these impacts. For example, the Environment Protection Agency (EPA) regulates Hunter Water's discharges from its sewage treatment plants and systems.

Hunter Water is engaged in a range of environment-related projects, including:

- The provision of sewer services to backlog areas not connected to Hunter Water's sewerage system, which will lessen the environmental impact from sewerage in those areas.
- Upgrades to the capacity of wastewater transport systems in Mayfield/Waratah, Whitebridge, Elermore Vale, Belmont North, Rutherford, Bolwarra/Largs and Beresfield to reduce overflow impacts on customers and the environment.[326]

We are satisfied that our Determination will not negatively affect Hunter Water's ability to implement these programs.

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[324] Calculated from Australian Bureau of Statistics, *Consumer Price Index 16th Series Weighting Pattern* (cat. no. 6471.0).

[325] -0.00003% = -0.1%x0.03%

[326] Hunter Water submission, 14 September 2012, pp 14, 69.

Appendices

A Matters to be considered by IPART under section 15 of the IPART Act and their application to this report

In making determinations IPART is required by the IPART Act to have regard to the following matters (in addition to any other matters IPART considers relevant):

a) the cost of providing the services concerned

b) the protection of consumers from abuses of monopoly power in terms of prices, pricing policies and standard of services

c) the appropriate rate of return on public sector assets, including appropriate payment of dividends to the Government for the benefit of the people of New South Wales

d) the effect on general price inflation over the medium term

e) the need for greater efficiency in the supply of services so as to reduce costs for the benefit of consumers and taxpayers

f) the need to maintain ecologically sustainable development (within the meaning of section 6 of the *Protection of the Environment Administration Act 1991*) by appropriate pricing policies that take account of all the feasible options available to protect the environment

g) the impact on pricing policies of borrowing, capital and dividend requirements of the government agency concerned and, in particular, the impact of any need to renew or increase relevant assets

h) the impact on pricing policies of any arrangements that the government agency concerned has entered into for the exercise of its functions by some other person or body

i) the need to promote competition in the supply of the services concerned

j) considerations of demand management (including levels of demand) and least cost planning

k) the social impact of the determinations and recommendations

l) standards of quality, reliability and safety of the services concerned (whether those standards are specified by legislation, agreement or otherwise).

Table A.1 outlines the sections of the report that address each matter.

Table A.1 Consideration of section 15 matters by IPART

Section 15(1)	Report Reference
a) the cost of providing the services	Chapters 3, 4, 5 and 6
b) the protection of consumers from abuses of monopoly power	Whole report
c) the appropriate rate of return and dividends	Chapters 3, 5, 7 and 14
d) the effect on general price inflation	Chapter 14
e) the need for greater efficiency in the supply of services	Chapters 3, 4, 5 and 6
f) ecologically sustainable development	Chapter 14
g) the impact on borrowing, capital and dividend requirements	Chapter 14
h) impact on pricing policies of any arrangements that the government agency concerned has entered into for the exercise of its functions by some other person or body	Chapter 3, 5 and 6
i) need to promote competition	Whole report
j) considerations of demand management and least cost planning	Chapters 3, 8 and 9
k) the social impact	Chapter 13
l) standards of quality, reliability and safety	Chapters 2, 3, 6 and 14

B Section 16A Direction from the Government to IPART and underpinning State Owned Corporations Act direction from the Government to Hunter Water

The Hon. Greg Pearce MLC
Minister for Finance and Services
Minister for the Illawarra

Mr Peter J Boxall AO
Chairman
Independent Pricing and Regulatory Tribunal
PO Box Q290
QVB POST OFFICE NSW 1230

Dear Mr Boxall

I am writing to you regarding the pricing determination to apply to Hunter Water Corporation (Hunter Water) from 1 July 2013.

As you will be aware, Hunter Water have been directed under section 20P of the *State Owned Corporations Act 1989,* to provide a subsidy of up to $10 million for the Kooragang Island recycling project.

The previous Direction relating to this matter issued in 2008 is deemed to have applied to IPART's 2009 determination of Hunter Water's prices, and is therefore no longer applicable.

Accordingly, I enclose a direction to the Independent Pricing and Regulatory Tribunal (the Tribunal) under section 16A of the *Independent Pricing and Regulatory Tribunal Act 1992* in relation to the requirements imposed on Hunter Water regarding the recycling project under section 20P of the *State Owned Corporations Act 1989*. This direction is to apply to the Tribunal's consideration of the maximum prices to be charged by Hunter Water from 1 July 2013.

If your staff have any questions in relation to this matter, they may contact Catherine Rolston, Policy Advisor in my Office on 9228 3026.

Yours sincerely

Greg Pearce MLC
Minister for Finance and Services
Minister for the Illawarra
27 March 2013

Level 36, Governor Macquarie Tower, 1 Farrer Place, Sydney NSW 2000
Phone: (61 2) 9228 5287 Fax: (61 2) 9228 5899 Email: office@pearce.minister.nsw.gov.au

B Section 16A Direction from the Government to IPART and underpinning State Owned Corporations Act direction from the Government to Hunter Water

INDEPENDENT PRICING AND REGULATORY TRIBUNAL ACT 1992 (IPART ACT)

Direction as to efficient cost of Hunter Water

I, GREG PEARCE, Minister for Finance and Services for the Hunter Water Corporation, pursuant to section 16A of the *Independent Pricing and Regulatory Tribunal Act 1992*, direct the Independent Pricing and Regulatory Tribunal, when it determines the maximum price for government monopoly services provided by Hunter Water from 1 July 2013, to include in the maximum price an amount representing the efficient cost of complying with the requirement imposed on Hunter Water to provide a subsidy of up to $10 million for the Kooragang Island recycling project.

This requirement has been imposed on Hunter Water by Ministerial direction under section 20P of the *State Owned Corporations Act 1989*.

The Hon Greg Pearce MLC
Minister for Finance and Services

27 March 2013

Dated:

STATE OWNED CORPORATIONS ACT 1989

DIRECTION UNDER SECTION 20P

TO: Mr Ron Robson
Chairman of the Board
Hunter Water Corporation

I, NATHAN REES MP, Minister for Water, with the approval of the Treasurer, hereby direct Hunter Water to:

1. Immediately bring forward the construction of a 450 billion litre dam at Tillegra, and
2. Provide a subsidy of up to $10 million for the Kooragang Island recycling project.

Reasons:

Increases in projected population growth in the Hunter and the Central Coast, the current drought, and extremely low water storage levels on the Central Coast mean that the accelerated action is required to deliver secure and sustainable water supplies. The construction of the Tillegra dam and increased recycling will improve the long term drought security of the Lower Hunter and the Central Coast.

The Tillegra dam will require a lead time of up to 10 years to build and fill, including five years to fill completely on the basis of average rainfall estimates. However, water is anticipated to be available from the dam by 2013. Commencement of construction of the Tillegra Dam is called for in the public interest. The Kooragang Island recycling project is expected to take up to four years to deliver. This recycling project will have the capacity to replace up to 3 billion litres of potable water with highly treated effluent for use by major industrial customers.

The payment of the subsidy for the Kooragang Island recycling project will enable the price of recycled water to be set at levels competitive with the price of potable water, which is set by the Independent Pricing and Regulatory Tribunal.

There are public benefits in allowing the Kooragang Island recycling project to proceed. It will increase the supply of potable water that is available for Hunter Water and Central Coast customers in the medium term and its establishment will promote and encourage the use of recycled water generally.

Even without considering the issues facing the Central Coast, these two projects will address the long term interests of the customers of the Hunter Water Corporation by improving drought security, allowing for population growth and meeting any future challenges from climate change in the longer term.

I am satisfied that these are exceptional circumstances that render it necessary to give the direction in the public interest.

Minister for Water

Dated:

C Physical output measure for the 2013 determination period

We require Hunter Water to report annually on progress against the output measures listed in Table C.1.

Table C.1 Physical output measures for the 2013 determination period

Output (or activity) Measure	Target output
Water services	
Renewal/reliability of distribution mains	21 kms
Length of critical trunk mains undergoing condition assessment	67 kms
Critical trunk main replacement	3 kms
Treatment plant upgrades – chemical storage systems	3 systems
High voltage upgrade	28 sites
Sewerage services	
Renew non-critical mains	41 kms
Length of critical trunk mains undergoing condition assessment	82 kms
Length of critical sewerage mains renewed/refurbished – referring to cast iron program	4.2 kms
High voltage upgrade	3 sites
Mechanical & electrical assets	
Telemetry upgrade	138 sites
Pumps replaced	342 pumps
Switchboards replaced	40 sites
Stormwater drainage	
Stormwater drainage channel rehabilitations	0.6 km
Corporate	
Replace customer meters 20mm	13,200 meters
Deferred projects	
Grahamstown Water Treatment Plant Stage 3 upgrade	Investments in water treatment of $11.15 million (major construction works) to commence no earlier than 2018/19.

D Implementation of our new approach to tax

In December 2011, after consultation, we decided to calculate a more accurate and commercially based tax allowance as a discrete building block, and to use a post-tax weighted average cost of capital (WACC).[327] The tax allowance is intended to more accurately reflect the tax liability for a comparable commercial business. Our previous approach used a pre-tax WACC with an assumed statutory tax rate. In most cases, this overstated the tax that would be paid by a comparable commercial business.

This Appendix outlines our calculation of Hunter Water's tax allowance for the 2013 Determination (Table D.1)

Table D.1 Final decision on Hunter Water's tax allowance ($millions, $nominal)

	2013/14	2014/15	2015/16	2016/17
Notional Revenue[a]	254.5	266.7	276.5	290.0
Cash and in-kind contributions	32.9	26.0	27.0	27.9
Tax depreciation	39.7	41.4	44.2	46.1
Interest expense[b]	88.1	91.5	95.3	99.8
Operating expenditure	120.8	127.6	131.4	137.9
Taxable income	38.8	32.2	32.5	34.1
Accumulated tax losses	-	-	-	-
Taxable income after tax losses	38.8	32.2	32.5	34.1
Regulatory tax allowance (adj. for gamma)	11.3	9.3	9.4	9.9
Regulatory tax allowance (adj. for gamma) – real ($2012/13)	**11.1**	**9.0**	**8.8**	**9.0**

a Revenue excludes tax allowance.

b Calculated using the nominal cost of debt (6.5%) in our WACC.

Note: Numbers may not add due to rounding.

[327] IPART, *The incorporation of company tax in pricing determinations – Final Decision*, December 2011.

We calculate tax allowances in each year of the determination period by applying a 30% statutory corporate tax rate adjusted for gamma[328] to Hunter Water's (nominal) taxable income.[329] To calculate its taxable income, we deduct Hunter Water's operating cost allowances, tax depreciation, and interest expenses from the notional revenue requirement (excluding tax allowance).

Operating costs refer to the allowances included in the building block that we determine to be efficient for the determination period (see Chapter 5).

We adopt Hunter Water's forecasts of tax depreciation over the 2013 period. This differs from the regulatory depreciation allowance that we include in Hunter Water's building block and notional revenue.

We base our estimate of Hunter Water's interest expense on the parameters used for the WACC (see Appendix E).

- a 60% notional gearing ratio (ie, borrowings = 0.6 x regulatory asset base)
- a nominal risk free rate of 3.0% to 5.0%
- a debt margin of 2.4% to 2.6%.

We have adopted an interest rate or cost of debt of 6.5% for the purpose of calculating the regulatory tax allowance. This is the sum of the mid-point of our estimates of the range of the nominal risk free rate and the cost of debt. The cost of debt is applied to the average of Hunter Water's opening and closing RAB in each year, along with a notional gearing ratio of 60%, to calculate the interest expense.

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

[329] Expected tax losses start from a zero base as we disregard accumulated losses prior to the transition. Actual tax losses will not be factored into regulatory determinations.

E Weighted Average Cost of Capital

Determining the weighted average cost of capital (WACC) to be included in Hunter Water's notional revenue requirement is an important step in our review process. We are currently reviewing our method of calculating the WACC. As a result, our approach to calculating the WACC for Hunter Water's Final Determination is different to the Draft Determination.

The main purpose of the WACC review is to determine whether we should change our current methodology to improve its robustness under changing market conditions, such as those since the global financial crisis (GFC). The WACC review has not been concluded. Further work is being undertaken on the issues identified, to date. In the interim, we have decided to adopt a new methodology for setting the WACC, which uses the midpoint of current market data and long term averages methods, to calculate the post-tax real WACC.

This appendix provides a summary of our final decision on Hunter Water's WACC and a summary of Hunter Water's submission. We then explain in more detail how we reached our final decision on the WACC in the context of the WACC review that is still underway. Finally, we provide an overview of the matters that we are considering in our review of the WACC methodology, and what further work we plan to undertake before making a final decision on the WACC methodology.

E.1 IPART's decision Hunter Water's WACC

Decision

IPART's decision is that for the purposes of calculating the allowance for a return on assets, a real post-tax WACC of 4.6% is appropriate.

For our draft decision, we estimated an appropriate range for the water industry WACC of between 2.9% and 4.2%, with a midpoint of 3.5% (see Table E.1). We also considered two other methods of estimating the WACC, current market data and long term averages methods. The midpoints of the current market data and long term averages ranges were 4.1% and 5.4% respectively. On account of these other methods leading to higher estimates of the WACC, we decided an appropriate point estimate for the WACC was 4.2%, the upper bound of our range.

We have set a real post-tax WACC of 4.6% for this Determination. The WACC has increased from the Draft Determination by 0.4 percentage points due to the:

- adoption by IPART of an interim methodology
- updated market parameters as of 16 April 2013.

We came to this position after considering Hunter Water's proposals, the views of stakeholders, the views of finance experts and our own analysis. The final value for the real post-tax WACC has been determined by taking the midpoint of 2 WACC estimates, which are derived from current market data and long term averages (see Table E.1 for the parameters used to determine the real post-tax WACC).

Table E.1 IPART's decision on Hunter Water's WACC estimate and parameters for the 2013 determination period

		IPART final decision		
WACC parameters	**IPART Draft decision**	**Midpoint**	**Current market data**	**Long-term averages**
Nominal risk free rate	2.8%		3.0%	5.0%
Inflation adjustment	2.6%		2.7%	2.7%
Market risk premium	5.5% to 6.5%		7.6%	5.5% to 6.5%
Debt margin	2.5% to 3.3%		2.3% to 2.9%	2.4%
Debt to total assets	60%		60%	60%
Equity beta	0.6 to 0.8		0.6 to 0.8	0.6 to 0.8
Cost of equity	6.1% to 8.0%		7.6% to 9.1%	8.3% to 10.2%
Cost of debt range	5.3% to 6.1%		5.4% to 6.0%	7.4%
WACC range (post-tax real)	2.9% to **4.2%**	3.8% to 5.3%[a]	3.4% to 4.4%	5.0% to 5.7%
WACC midpoint (post-tax real)	3.5%	**4.6%**	3.8%	5.3%

[a] We select a point estimate of the WACC within the range established by the midpoints of the 2 WACC ranges based on current market data and long-term averages.

Source: Bloomberg, accessed on 16 April 2013.

E.2 Hunter Water's submission

Hunter Water's submission in response to the draft decision expressed concern at the practice of using current parameters to estimate the WACC. Hunter Water states a preference for a long term average WACC of 5.4%.[330]

[330] Hunter Water submission, 12 April 2013, p 5.

We note that Hunter Water proposed a post-tax WACC of 5.6% in its original pricing submission in line with the 2012 Sydney Water Determination and market parameters observed during June 2012.[331]

Hunter Water considered that the WACC from the draft decision would put pressure on its financial metrics and that this may lead it to reduce its planned investment to maintain its credit rating.[332]

In particular, Hunter Water noted that a cost of debt calculated with current parameters is not appropriate for its business, since it is not reflective of its actual cost of debt of 7.55%.[333] Hunter Water considered that a prudent debt manager would not refinance a regulated utility's entire debt portfolio in a very short time period at every regulatory re-set. Hunter Water indicates that the long term average cost of debt estimated by IPART in the draft report of 7.4% is similar to its actual cost of debt.

Hunter Water also questions how the cost of equity in the draft WACC could have fallen from between 9.0 to 11.1% in Hunter Water's 2009 Determination to between 6.1 to 8.0% in the 2013 Draft Determination. It noted that the decrease in the cost of equity implies that the underlying level of risk that Hunter Water faces has changed substantially in the past three and a half years and that, accordingly, investors would be prepared to accept a considerably lower return on their investment.[334]

Hunter Water acknowledges that we are currently reviewing the method for calculating the WACC and, with this in mind, encourages IPART to consider the real post-tax WACC of 4.2% as a placeholder only and to apply a revised methodology based more around the use of long-term averages in making our Determination.[335] Hunter Water considered IPART's interim approach (proposed as part of the WACC methodology review) to be an essential step to provide a more realistic rate of return for the coming determination period to June 2017.[336]

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331 Hunter Water submission 14 September 2012, pp 85 and I.4.

332 Hunter Water submission, 12 April 2013, p 6.

333 Hunter Water submission, 12 April 2013, pp 6-7.

334 Hunter Water submission, 12 April 2013, p 7. We note that the decrease in the cost of equity from Hunter Water's 2009 Determination reflects the result of improved information available to IPART in regards to the beta estimate. Furthermore, any additional decreases imply (correctly or incorrectly) that investors in times of lower returns to riskless investments are willing to accept lower returns to risky investments.

335 Hunter Water submission, 12 April 2013, p 5.

336 Hunter Water submission, 12 April 2013, p ii.

E.3 Changes in our WACC methodology

We are currently reviewing our WACC methodology (see Box E.1) to address concerns that the use of current market data to estimate the expected cost of debt and long-term average data to estimate the expected cost of equity may be problematic in more uncertain and changeable market conditions.

We released a discussion paper in December 2012.[337] We received 6 submissions in response to this paper, and held a workshop to discuss the issues and way forward for the review of the WACC methodology in March 2013.

Submissions from utilities, including Hunter Water, to our WACC review indicated preference for the use of longer term averages in calculating the WACC. However, we have also received submissions suggesting that updating the market risk premium (MRP) to reflect current market condition would be appropriate in determining the expected cost of equity.[338]

Stakeholders (both through submissions and the workshop) also identified a number of areas where further work is required before we make final decisions on our WACC methodology. We agreed with our stakeholders that in view of this it was not feasible to move to final decision on the review at this point in time. Further work is being undertaken on the issues identified at the workshop and there will be further consultation with stakeholders on these issues. We now expect to publish a final decision on our WACC methodology by the end of 2013.

Box E.1 Previous WACC methodology

Our previous WACC methodology (which we are currently reviewing) involves the following 3 steps:

1. Estimating a range for the expected cost of debt over the determination period using current data (based on a short-term average of 20 days) to calculate the risk-free rate and the debt margin.
2. Estimating a range for the expected cost of equity using the Capital Asset Pricing Model (CAPM), long-term average data for the market risk premium (MRP), and current data (based on a short-term average of 20 days) for the risk-free rate.
3. Adding these estimates together to establish the feasible range for the WACC, then using our judgement to select a point within this feasible range that reflects the efficient cost of capital for our benchmark utility. In recent decisions, we have had regard to the long-term averages for the costs of debt and equity in setting the WACC within this range.

[337] IPART, *Review of Method for determining the WACC – Discussion Paper*, 21 December 2012.
[338] For example, see AGL, *Draft Report on Regulated Retail Electricity Prices 2012-13,* p 7, 11 May 2012.

Although we have not finalised the review of WACC methodology, we have reached the view that in the current market conditions our previous methodology yields estimates of the WACC that are too low by market standards. Therefore, we decided that our best view in the interim is to:

1. Estimate a WACC range based on current market data (using a 40-day averaging period rather than the 20-day period we have previously used) and Bloomberg's estimate of the current forward-looking MRP (instead of using the historical MRP as a proxy for current expectations).
2. Continue to estimate a WACC range based on long-term averages (with a 10-year averaging period) using the methodology used in our recent decisions.
3. Select a point estimate of the WACC within the range established by the midpoints of these 2 WACC ranges (in Steps 1 and 2), having regard to relevant market data.

This is a change in methodology from the previous approach, which had regard to the WACC estimated using long-term averages, but constrained the WACC to be no more than the upper-bound of the WACC range derived from our existing WACC methodology. The interim approach used in this decision gives greater weight to the WACC estimated using the long-term averages.

Table E.2 provides more detail on how we estimated the market-based parameters (in Steps 1 and 2 above) for this Determination. We explain in greater detail below (sections E.3.1 and E.3.2) how we select a point estimate for our final decision (Step 3 above).

Table E.2 Estimating the expected cost of capitals using current market data and long-term averages

Parameter	Expected cost of capital using current market data	Expected cost of capital using long-term averages
Risk-free rate	- 40-day average of 5-year Commonwealth Government bond yield	- 10-year average of 5-year Commonwealth Government bond yield
Inflation	- 40-day average of swap market implied inflation with a 5-year term-to-maturity	- Breakeven inflation from bond markets using 10-year term-to-maturities averaged over 10 years
Debt margin	- Our current bond portfolio and the 5-year Bloomberg fair value curve	- 10-year average of 5-year Bloomberg fair value curve
MRP	- 40-day average of the implied MRP from Bloomberg[a]	- Historical arithmetic average MRP of 5.5-6.5%

[a] We currently use the implied MRP from Bloomberg to estimate the expected cost of capital using short-term averages. Further work is required on how to best estimate the expected MRP using current market data. We have engaged SFG to assist us with this task. The SFG report will be released together with our interim decision on the WACC review, in June 2013.

E.3.1 Establishing WACC Range using current market data and long-term averages

We take into account the WACCs using current market data and long-term averages in establishing the WACC range for this Determination. Based on the consultations we have conducted for our WACC review to date, we consider that investors are influenced by both long-term experience of rates and currently available rates:

- **Long-term rates.** When prevailing market rates are roughly in line with historical trends, there is little further consideration required by investors. However, when there is a difference between prevailing rates and historical trends, it is unlikely that investors will be able to completely abandon their experience as a guide to future expectations.
- **Current market estimates.** Current market prices reflect all information available about the intrinsic value of the underlying asset of a security and they are used in mark-to-market valuations.

It can be observed that firms in competitive markets use a wide range of financing instruments, fixed and floating bonds, local and offshore bonds and interest rate and currency swaps. These have the effect of reducing their exposure to market risk.

E.3.2 Choosing an appropriate WACC within the feasible range

When we choose an appropriate point estimate of the WACC within the feasible range, we are seeking to estimate the weight that investors would give to current market rates against the expectations formed based on their past experience.

Pending further work for our current WACC review, there is no reasoned basis to have a default point estimate, other than the midpoint of the feasible range. The only current alternative is not to have a default at all, but to select each time within the range without any starting point. However, in the absence of tools to make a selection, any effort would highly depend on judgement on the day, which is difficult for all parties to predict and analyse.

We will work on developing techniques to form a reasoned position on selecting an appropriate point estimate. However, in the interim, we are adopting the view that the default should be the midpoint of the feasible WACC range for this review.

E.4 Detailed summary of IPART's decisions on the WACC parameter values

As noted, our interim methodology is to establish a WACC range based on the 2 midpoints of the WACCs estimated using current market data and long-term averages. The WACC decision is the midpoint of this range. We present the parameters used to estimate the WACCs using current market data and long-term averages in Table E.3.

Table E.3 Parameter values for Hunter Water's final WACC

Parameter	Current market data	Long-term averages
Averaging period	40 days	10 years
Risk-free rate[a]	3.0%	5.0%
Inflation adjustment[a]	2.7%	2.7%
Debt margin[a]	Range: 2.3-2.9%	2.4%
Market risk premium (MRP)	7.4%	Range: 5.5-6.5%
Gearing	60%	60%
Equity beta	0.6-0.8	0.6-0.8

a: The risk-free rate, inflation adjustment and debt margin are based on a 10-year term-to-maturity.
Source: Bloomberg and IPART analysis.

We also use financial market sources to guide the choice of the WACC including the WACC parameters values. We consider that financial market intelligence can provide us with a cross-check on our WACC parameters and the final choice of the WACC. We consider that this type of information is directly relevant to determining how financial markets price debt and equity at a given point in time.

For this decision, we have collected relevant data from Independent Expert Reports and used this information as a cross-check on our WACC parameter values [see E.4.1] and the final choice of the WACC [see E.4.2].

E.4.1 WACC parameters used in the independent experts' reports

For this review, we used the information contained in 6 independent experts' reports to choose an appropriate WACC within the range. The 6 independent experts' reports included BDO Corporate Finance (2012a;[339] 2012b[340]), Ernst & Young (2012;[341] 2013[342]), and Grant Thornton (2012a;[343] 2012b[344]).

We used these reports to identify how financial market practitioners estimated investors' expected returns. In doing this, we focused on:

- the values and estimation methodologies used for the WACC parameters
- the recommended expected cost of debt and cost of equity
- whether any adjustments to the expected cost of debt and cost of equity were made.

Risk-free rate

BDO Corporate Finance (2012a; 2012b) and Ernst & Young (2012; 2013) used the prevailing risk-free rate at the time of their valuation. Grant Thornton (2012a) averaged the risk-free rate over 180 and 360 days, and Grant Thornton (2012b) averaged the risk-free rate over 30 and 60 trading days.

Market risk premium

BDO Corporate Finance (2012a; 2012b) noted that the implied MRP obtained from Bloomberg was 8%, and considering both historical MRP and the Bloomberg MRP they adopted a MRP range of 6% to 8%. Ernst & Young (2012; 2013) stated a MRP range of 4% to 8%. They used a MRP of 6% in the expected cost of equity estimation. Grant Thornton (2012a; 2012b) established a MRP range of 6% to 8% based on the historical MRP and used 6% in the expected cost of equity estimation.

339 Focus Minerals Ltd, *Notice of Annual General Meeting,* 23 October 2012.
340 Regis Resources, Meeting Booklet, 9 November 2012.
341 Talison Lithium, *Scheme Booklet – Part 1,* 26 October 2012.
342 Endocoal, *Scheme Booklet – Attachment F,* 29 January 2013.
343 Grant Thornton, *Norton Gold Fields Limited – Independent Expert's Report and Financial Services Guide,* 13 July 2012.
344 Grant Thornton, *Republic Gold Limited – Independent Expert's Report and Financial Services Guide,* 13 September 2012.

Debt margin/Cost of debt

BDO Corporate Finance (2012a; 2012b) used the actual cost of debt of the company being valued. Ernst & Young (2012) used a nominal pre-tax cost of debt of 6.1%. They considered the margin implicit in corporate bond yields over government bond yields and the debt ratings of comparable companies. Grant Thornton (2012a) used a range of **8.5% to 9.0%** for the nominal cost of debt. This was based on the weighted average interest rates on credit outstanding for large and small businesses over the last 12 months as published by RBA and current cost of debt of the company being valued. Grant Thornton (2012b) used a nominal cost of debt of 12% based on discussions with the management of the company being valued.

Adjustments made to the market-based WACC parameters in light of current conditions

Ernst & Young (2012; 2013) considered the current risk-free rate is at historically low levels and hence added to its expected cost of equity estimation a specific risk premium ranging from 2% to 4%. In its reports, Ernst & Young stated that:

> We believe that the current risk-free rate (usually estimate with reference to the 10 year Government bond rate) is at historically low levels. Most market observers regard this as inconsistent with current share prices, the observe volatility in markets and general economic uncertainty. In response, many valuers have either used a normalised risk-free rate, increase their estimates of the market risk premium or have include an additional risk factor in their calculations of the cost of equity.[345]

Grant Thornton (2012b) added a specific risk premium called 'alpha factor' of 2% to their estimated cost of equity, which was based on a MRP of 6% and the prevailing 5-year risk-free rate. They stated that one of the reasons for including the alpha factor was to take account of the current easing in monetary policy and the influence on the risk-free rate.

E.4.2 How we have used independent experts' reports in selecting an appropriate WACC within the feasible range

To select an appropriate WACC estimate within the range, we first examined what should be appropriate point estimates for the expected cost of equity and expected cost of debt within their respective ranges.

[345] Talison Lithium, *Scheme Booklet – Part 1*, p 62, 26 October 2012; Endocoal, *Scheme Booklet – Attachment F*, p 216, 29 January 2013.

In selecting the appropriate expected cost of equity and cost debt, we considered the evidence documented in the 6 independent experts' reports. The 6 independent experts' reports provided several valuable implications for selecting an appropriate WACC within the range:

- With respect to the risk-free rate, the independent experts generally seemed to agree that current risk-free rate is unusually low as compared to the historical average.
- With respect to the expected MRP, the independent experts either
  - considered the expected MRP using current market data
  - chose a MRP range higher than our MRP range of 5.5% to 6.5%.
- Given the unusual current market conditions, the independent experts made adjustments to the expected cost of equity estimation. Most independent experts included an additional risk premium in calculating the expected cost of equity, which subsequently increased the WACC.

Based on the evidence, we consider that appropriate point estimates for the expected cost of equity and the expected cost of debt should be chosen having regard to both current market data and long-term averages. We note that independent experts added a specific risk premium ranging from 2% to 4% to the expected cost of equity, but they did not specify how much significance they place on the historical risk-free rate.

On balance, we considered that choosing the midpoint cost of equity and cost of debt is consistent with the evidence obtained from the independent experts' reports. Therefore, we obtain the WACC for our final decision which is at the midpoint of the WACC range. The midpoint of our range reflects the expected cost of capital based on an equal weighting of the information obtained from current market data and historical data.

The sections below outline our final decisions and analysis on the individual WACC parameters.

E.4.3 Risk-free rate

IPART's decision is to use the risk-free rates shown in Table E.4 in determining the WACC.

Table E.4 Decision on risk-free rate for 5 industry sectors

Averaging period	Risk-free rate
40 days	3.0%
10 years	5.0%

Note: Market data are as at 16 April 2013.
Source: Bloomberg.

The risk-free rate is used as a point of reference in determining both the expected cost of equity and the cost of debt within the WACC. In both the Capital Asset Pricing Model and the cost of debt calculation, the risk-free rate is the base to which a premium or margin is added to reflect the riskiness of the specific business for which the rate of return is being derived.

E.4.4 Inflation rate

IPART's decision is to use the inflation rates shown in Table E.4 in determining the WACC.

Table E.5 Decision on inflation rate

Averaging period	Inflation rate
40 days	2.7%
10 years	2.7%

Note: Market data are as at 16 April 2013.
Source: Bloomberg and the RBA.

The inflation rate is used to convert nominal parameters into real parameters. For the Determination, we have:

- Used an inflation rate of 2.7% to estimate the expected cost of capital using current market data. This reflects the 40-day average of the swap market-implied inflation with a 5-year term-to-maturity.
- Used an inflation rate of 2.7% to estimate the expected cost of capital using long-term averages. This reflects the 10-year average breakeven inflation rate, based on the Fisher equation using the 10-year Government bond and indexed bond.[346]

E.4.5 Debt margin

IPART's decision is to use the debt margins shown in Table E.6 in determining the WACC.

Table E.6 Decision on debt margins

Averaging period	Debt margin
40 days	2.3-2.9%
10 years	2.4%

Note: The debt margins include 20 basis points for debt raising costs. Market data are as at 16 April 2013.
Source: Bloomberg.

[346] Data are sourced from the RBA website: www.rba.gov.au/statistics/tables/xls/f02dhist.xls.

The debt margin represents the cost of debt a company has to pay above the nominal risk-free rate. For the Determination, we have:

- Used a debt margin range of 2.3% to 2.9% to estimate the expected cost of capital using current market data. This estimate is based on an interquartile range and median of the 40-day averages of the debt margins of the 5-year Bloomberg fair value curve and a portfolio of BBB+ and BBB rated Australian corporate bonds issued in Australian and the US.
- Used a debt margin of 2.4% to estimate the expected cost of capital using long-term averages. This estimate is based on the 10-year average of the 5-year Bloomberg fair value curve.

The debt margins include an allowance of 20 basis points for debt raising costs.

E.4.6 Equity beta

The equity beta is a security specific parameter that measures the extent to which the return of a particular security varies in line with the overall return of the market. It represents the systematic, or market wide, risk of a security that cannot be avoided by holding it as part of a diversified portfolio. It is important to note that the equity beta does not take into account business-specific or diversifiable risks.

Hunter Water proposed that we adopt a beta estimate of 0.8 to 1.0. Hunter Water stated that they have a higher volumetric risk than other regulated water utilities and require a higher WACC accordingly.[347]

Our decision is to use a beta estimate of 0.6 to 0.8. We consider that this is the most appropriate range based on our analysis and the analysis performed by our consultants, Strategic Finance Group, as part of the 2012 Sydney Desalination Plant price review on the benchmark water utility beta. We do not consider Hunter Water's volumetric risk to significantly increase its non-diversifiable risk compared to other regulated water utilities.

[347] Hunter Water submission 14 September 2012, pp 85-86 and Appendix I.

E.4.7 Market risk premium

IPART's decision is to use the market risk premiums shown in Table E.7 in determining the WACC.

Table E.7 Decision on MRPs

Averaging period	MRP
40 days	7.6%
10 years	5.5-6.5% with a midpoint of 6.0%

Note: Market data are as at 3 April 2013.
Source: Bloomberg.

The MRP is the expected rate of return over the risk-free rate that investors would require for investing in a well-diversified portfolio or risky assets. The MRP is an expected return and is not directly observable. It therefore needs to be estimated through proxies.

In recent years, market conditions have become significantly volatile and the risk-free rate has declined to historical lows. As a result, the use of the expected MRP using historical long-term averages has been criticised for underestimating the 'true value' of the expected MRP.

We are reviewing the methods for estimating the expected MRP using current market data. However, in the interim, we decided to:

- Use an MRP of 7.6% to estimate the expected cost of capital using current market data. This estimate is based on the 40-day average of the implied MRP obtained from Bloomberg.
- Use an MRP range of 5.5% to 6.5% with a midpoint of 6.0% to estimate the expected cost of capital using long-term averages. This estimate is based on the historical arithmetic average MRP.

E.5 Our review of the WACC methodology

The purpose of our WACC methodology review is to determine how we can improve the way we calculate the WACC to ensure it enables us to meet our regulatory objectives in a range of financial market conditions and industry circumstances. Therefore, our review of the WACC methodology does not seek to change our objective in determining the WACC.

E.5.1 Our objective in determining the WACC

In determining the WACC used in our price setting process, our objective is to reflect the cost of capital for an efficient 'benchmark utility' that operates in a competitive market (outlined in detail below), faces similar economic risks to the regulated business, and is a new entrant. This objective recognises that:

- There is a strong information asymmetry between regulators and utilities, and thus the best reference to efficiency is competitive markets.
- While utilities' product markets may not be competitive, the markets for their inputs usually are, including capital markets.
- Outcomes in competitive markets do not lead to automatic or smooth matching of costs and revenues. Rather, for firms in competitive markets, there are periods of prosperity and periods of poor performance. Competitive markets create incentives to strive for lower costs and to capitalise upon opportunities to reset costs (including the cost of capital) to lower levels.

In addition, we aim to determine the WACC that reflects investors' current expectations of risk-adjusted returns for both debt and equity.

WACC and the Building Block Approach

Under a building block approach to determine a regulated business's revenue requirement, we calculate the compensation or return on capital for funds invested by shareholders in the business and for bearing the risks associated with that investment.

Current regulatory practice is for the return on capital to be calculated by applying a rate of return that reflects the cost of capital to an asset base.

We use the post-tax WACC approach to determine a rate of return.[348] Under the post-tax WACC approach, the tax liability is estimated separately from the WACC, based on revenue and expenses of regulated business activities.

[348] In December 2011, we changed our approach from a pre-tax WACC model to a post-tax WACC model, which better estimates the tax liability for regulated business. IPART, *The incorporation of company tax in pricing determinations – Final Decision*, December 2011.

A post-tax real WACC can be estimated using the following formula:

$$WACC^{post-tax} = \frac{\left(1+\left\{R_e.(\frac{E}{D+E})+R_d.(\frac{D}{D+E})\right\}\right)}{(1+\Pi)}-1$$

where R_e is the return on equity, R_d is the return on debt, $\frac{E}{D+E}$ is the proportion of equity, $\frac{D}{D+E}$ is the proportion of debt, and Π is the inflation adjustment.

$$R_e^{real\ post-tax} = \frac{1+[Rf+\beta_e \times MRP]}{1+\prod}-1$$

$$R_d^{real\ post-tax} = \frac{1+[(Rf+DM)\times(1-t)]}{1+\prod}-1$$

The parameters in the above formulas are explained below:

1. Parameters determined by financial market data:

- Nominal risk free rate (R*f*)
- debt margin (*DM*)
- adjustment for expected inflation (Π).

2. Parameters determined through other methods:

- the market risk premium (*MRP*)
- the correlation between common equity returns and that of the overall market (*βe* equity beta)
- the level of gearing (*D* debt, *E* equity)
- Corporate tax rate (*t*).

E.5.2 Estimating the expected cost of equity

Under our previous WACC methodology, we relied predominantly on the current market estimates of the costs of debt and equity, built up from parameters observed in the market on the day. Our view regarding one parameter – the MRP – was that it could not be reliably observed in the market "on the day". Therefore, we used the long-term average of the MRP as a proxy for current expectations under our existing WACC methodology.

However, our investigation for our WACC review to date suggests that it may be valuable to estimate the expected MRP using current market data (ie, an implied MRP). We consider that there is a greater need to estimate the expected MRP using current market data than previously thought, as we have found that:

- There is evidence from a number of sources that the MRP and risk-free rate are at times inversely related.[349]
- Using the prevailing risk-free rate and the long-term average, the MRP is unlikely to take into account this inverse relationship when it occurs.

Use of the expected MRP estimate based on current market data is likely to introduce greater volatility in prices for customers and revenues of utilities. However, it is more consistent with the assumption of efficient capital markets and in theory, at least, competitive market outcomes.

E.5.3 Estimating the expected cost of debt

Under our previous approach, the cost of debt estimate has been largely driven by the prevailing risk-free rate and debt margin. We still consider that this is the best estimate of current expectations of the cost of debt for a new entrant.

Utilities have argued that a 10-year trailing average cost of debt would provide a better estimate reflecting actual debt management practices of NSW utilities. However, we do not find their arguments convincing for at least 3 reasons:

1. **They overstate the role of IPART.** Utilities have argued that using the current cost of debt leads to inefficient hedging practice. This argument overstates our role in management of utilities. Our role is to set maximum prices and to oversee licence compliance. We do not dictate utilities' expenditure programmes, nor do we determine their financing or hedging practice.
2. **They do not reflect the practice of privately owned utilities.** The arguments for a trailing average do not appear to take account of evidence that private firms in regulated sectors have been able to match their debt costs to on-the-day costs of debt. There is evidence that Victorian energy network businesses have been successful in hedging the base rate (our risk-free rate proxy) borrowing costs to on-the-day rates to coincide with regulatory resets, without confronting unmanageable risks of refinancing.

[349] CEG, *Internal consistency of risk-free rate and MRP in the CAPM,* A report prepared for Envestra, SP AusNet, MultiNet and APA, March 2012, p iv.

3. **They overstate the optionality of competitive firms.** The arguments for a trailing average also overstate the extent to which unregulated firms in competitive markets are able to match costs and revenues. Unregulated firms are required to borrow and invest in conditions of uncertainty and many invest in long-term fixed assets. They can adjust operations and capital expenditure as conditions change, as can regulated utilities. Hence, they typically adopt a more flexible, adaptive financing strategy using various instruments.

However, a trailing average approach that included a wider range of debt instruments including floating rate debt, could partly address the last 2 concerns.

E.5.4 Further work on the review of our WACC methodology

We plan to undertake further work on the use of other market information to determine the WACC within an identified range in a transparent and predictable way. Our views on how that work might progress are outlined below.

We are releasing an interim report on the WACC methodology after this Determination for Hunter Water. We invite stakeholders to provide comments on the interim WACC methodology, which is available on our website, and the further work we plan to undertake before making a final decision on the WACC methodology.

Considering the impact of market conditions

Firstly, we will consider the possible impact of general market conditions. In times of capital market stability and steady economic growth – for example, when growth and inflation rates are within the RBA ranges, or there is neutral monetary policy – investors are more likely to have confidence in market estimates of rates and returns. It is also more likely that the market estimates will be close to the long-term historical averages. In this case, market estimates of rates are more likely to weigh on the minds of investors and lenders.

In contrast, at times of disturbances in capital markets – when growth and inflation are outside the RBA ranges, or monetary policy is outside neutral bands – the range between market estimates and long-term averages may increase. At these times, investors may place less reliance on short-term rates in forming expectations about the future, and more weight on long-term historical averages.

As well as the RBA settings, we might, for purposes of our WACC analysis, consider matters such as:

- volatility in relevant capital markets
- measured liquidity in relevant capital markets
- bid-ask spreads in relevant markets: when spreads between buy and sell bids are unusually high it may mean that investors (and therefore we) are not giving weight to the market prices (averaged between sell and buy bids).

Considering expert reports and capital market consultations

We will be considering whether and how we can use expert reports and structured discussions with capital market participants to form views on weights to be given to market estimates and long-term historical rates.

Using actual transactions

We may use evidence from actual capital market transactions for real assets to form a view on the relative weights given to market estimates and long-term historical rates.

Framework for choosing the WACC

We understand that stakeholders may be concerned about the way we will choose a WACC in future decisions, especially if the scope for discretion is increased. We consider that any additional uncertainty that may arise if we change our WACC methodology can best be managed by providing a transparent framework that outlines how we will decide on the WACC value from the range provided by whatever scenario we choose. By providing such a framework, we will be able to provide the right balance between choosing the highest quality WACC estimate and reducing uncertainty. We will do further work on how we can incorporate financial markets intelligence into such a framework.

Inflation adjustment

We currently use the swap market implied inflation to convert our nominal WACC into a real WACC.

Swap market data is only available from 2008 onwards and we decided to use the break-even inflation from the nominal and real Commonwealth Government bond market.

The use of 2 different inflation estimates makes the nominal to real conversions inconsistent between our estimates of the expected WACC based on current and long-term data series. We will do further work before our final decision on how we can make the two estimates consistent.

F Our assessment of Hunter Water's financeability

This section outlines in further detail our approach to estimating Hunter Water's forecast cost of debt for assessing its financeability and our estimates of its cash flows for the 2013 Determination.

F.1 Cost of debt for the financial ratios - methodology

We have used a forecast of Hunter Water's actual and projected cost of debt, based on its submission, to calculate the financial ratios used in our assessment of Hunter Water's financeability (see Chapter 14). Using the actual cost of debt instead of using the notional cost of debt from the WACC reflects our approach in the 2012 Sydney Water and Sydney Catchment Authority Determinations. Our review on our financeability test is considering the appropriate methodology for the cost of debt.[350]

Our estimate of Hunter Water's actual cost of debt is shown in Row 3 of Table F.1. It differs to Hunter Water's implied cost of debt by 50 basis points. We reduced Hunter Water's estimate of its actual cost of debt (in Row 1) because we consider that its forecast interest payments are based on assumptions that are too high compared with current market rates. We explain our decision in further detail below.

[350] IPART, *Financeability test in price regulation – Discussion Paper*, September 2012, p 12.

Table F.1 Forecast cost of debt used to assess Hunter Water's financeability over the 2013 determination period

Financial year	2012/13	2013/14	2014/15	2015/16	2016/17
1. Cost of debt implied from Hunter Water's submission (AIR)	7.1%	7.0%	7.0%	7.4%	7.5%
2. IPART adjustment to cost of debt reflecting market parameters	0.5%	0.5%	0.5%	0.5%	0.5%
3. Cost of debt - IPART estimate for financial ratios	6.6%	6.5%	6.5%	6.9%	7.0%
4. Market interest rate assumptions, Hunter Water Statement of Corporate Intent	8.4%	8.2%	8.1%	8.0%	7.9%
- comprising:					
- Long term interest rate	6.1%	6.1%	6.1%	6.1%	6.1%
- Government guarantee fee	2.3%	2.1%	2.0%	1.9%	1.8%
5. NSW Government bond rate at IPART's Determination of the WACC[a]	5.7%	5.7%	5.7%	5.7%	5.7%

a 10-year average of the 10-year NSW Government Bond rate calculated at 16 April 2013.

Source: Row 4 - Hunter Water, *Statement of Corporate Intent 2012-2017*, July 2012, p 22.

F.1.1 Hunter Water's forecast cost of debt for the financial ratios

We calculated the actual cost of debt each year from Hunter Water's submission implied by the formula:

(1) [forecast interest payments / forecast year end debt].

Hunter Water's implied cost of debt (shown in Row 1) ranges from 7.0% in 2013/14 to 7.5% by the end of the determination period. Compared with current market rates, we consider that Hunter Water's forecast interest payments are based on assumptions that are too high.

In its Statement of Corporate Intent, Hunter Water provides information on cost of debt assumptions used to forecast its interest payments.[351] These interest rates are intended to reflect market rates that would be faced by a business of a similar risk.[352] These are a forecast long term interest rate of 6.1% and a government guarantee fee of 2.1% in 2013/14 declining to 1.8% in 2016/17 (see Row 4).

[351] 2013 Statement of Corporate Intent, p 22. http://www.hunterwater.com.au/Resources/Documents/Legislation-and-Governance/Statement-of-Corporate-Intent-2012-17.pdf Accessed 24 January 2013.

[352] NSW Treasury, *Government Guarantee Fee Policy for Government Businesses*, September 2010, p 5.

We note that these interest rates are higher than the actual cost of debt that Hunter Water has forecast (Row 1). This is consistent with a debt portfolio which includes debt that was financed at lower rates in the past. However, we are not able to model the impact of Hunter Water's interest rate assumptions on its forecast interest payments (Row 1) because this will depend on the maturity and costs of debt in its debt portfolio.

To consider the effect of current market rates on Hunter Water's forecast interest payments, we compared Hunter Water's long-term interest rate projection (Row 4), which is based on a 10-year trailing average of the NSW Government bond 10-year nominal rate, with the 10-year trailing average of that rate at the date of our WACC parameters (Row 5). We found that there is a differential of around 50 basis points. Hence, we reduced Hunter Water's estimate of its actual cost of debt in Row 1 to reflect the most recent 10-year trailing average of the NSW Government bond 10-year nominal rate. Our final decision is shown in Row 3 of Table F.1.

F.2 Hunter Water's forecast financial statements

Our forecast of Hunter Water's financial statements over the 2013 determination period is presented in the tables below.

We expect Hunter Water to have sufficient cash available to meet its operating obligations and dividend payments at the standard 70% payout ratio each year.[353] Hunter Water can also partially fund its capital expenditure program from revenue rather than borrowing the whole amount – ie, we estimate that Hunter Water can internally fund approximately 49% to 78% of its capital expenditure program.

[353] We have used NSW Treasury's standard reference point of a dividend payout ratio of 70% of after-tax profit for Government businesses. NSW Treasury, *Financial Distribution Policy for Government Businesses,* November 2009, TPP 09/06, p 2.

Table F.2 Hunter Water combined business cashflow ($millions, $2012/13)

	2012/13	2013/14	2014/15	2015/16	2016/17
Earnings before interest and tax	118	117	113	112	112
Depreciation and amortisation	29	31	32	32	33
Cost of assets sold	-	-	-	-	-
Change in other assets	21	-	-	-	-
Change in working capital	(3)	(4)	(1)	2	(1)
Change in provisions and other liabilities	2	-	-	-	-
Abnormal items	-	-	-	-	-
Cash flow from operations	167	145	143	147	144
Net interest received (paid)	(72)	(64)	(66)	(70)	(74)
Tax paid (-)	(14)	(16)	(14)	(13)	(11)
Cash flow before capex	**80**	**65**	**64**	**64**	**59**
Payment for fixed assets	(142)	(76)	(57)	(89)	(78)
Capital contributions (cash)	7	14	7	7	7
Net cash flow	(56)	3	14	(18)	(12)
Dividends paid (-)	(22)	(26)	(23)	(21)	(19)
Net cash for the year	(77)	(23)	(9)	(38)	(31)
Opening cash	4	12	-	-	-
Net cash available	(73)	(11)	(9)	(38)	(31)
allocated to unscheduled repayments	-	-	-	-	-
new borrowings	85	11	9	38	31
Closing cash	12	-	-	-	-

Note: Numbers may not add due to rounding.

Table F.3 Hunter Water combined business Profit and Loss Statement ($millions, $2012/13)

	2012/13	2013/14	2014/15	2015/16	2016/17
Regulatory revenue	265	263	262	263	266
Non-regulatory revenue	3	3.3	3.3	3.3	3.3
AFOC	1	-	-	-	-
Total Regulated Revenue	**268**	**266**	**266**	**266**	**269**
Operating expenditure	122	118	121	121	124
EBITDA	**146**	**149**	**145**	**145**	**145**
Depreciation & amortisation	29	31	32	32	33
EBIT	**118**	**117**	**113**	**112**	**112**
Interest paid	73	65	66	70	74
Interest income	0	1	-	-	-
Operating profit before abnormals	45	53	47	42	38
Abnormal items	-	-	-	-	-
Net Profit before Tax (NPBT)	45	**53**	**47**	**42**	**38**
Tax equivalent	14	16	14	13	11
Net Profit After Tax (NPAT)	**31**	**37**	**33**	**29**	**27**
Retained profits at beginning of year	438	447	459	468	477
Adjustments / transfers from reserves	-	-	-	-	-
Total available for appropriation	469	485	492	498	504
Dividends	**22**	**26**	**23**	**21**	**19**
Retained Earnings	447	459	468	477	485

Note: Numbers may not add due to rounding.

Table F.4 Hunter Water combined business Balance Sheet ($millions, $2012/13)

	2012/13	2013/14	2014/15	2015/16	2016/17
Assets					
Cash and investments	12	-	-	-	-
Receivables	32	30	31	31	32
Inventory	3	2	2	2	2
Prepayments	2	2	2	2	2
Property, plant & equipment	2,165	2,195	2,213	2,262	2,300
Future income tax benefit	-	-	-	-	-
Other	13	13	13	13	13
Total Assets	2,226	2,242	2,261	2,310	2,349
Liabilities					
Accounts payable	21	15	14	17	16
Provision for income tax	2	2	2	2	2
Provision for dividends	24	24	24	24	24
Borrowings	1,025	1,036	1,046	1,084	1,115
Provision for deferred income tax	310	310	310	310	310
Employee and other provisions	129	129	129	129	129
Other	-	-	-	-	-
Total liabilities	1,511	1,516	1,524	1,565	1,595
Net assets employed	715	726	736	745	753
Equity					
Total capital and reserves	**715**	**726**	**736**	**745**	**753**

Note: Numbers may not add due to rounding.

G Impact of 2008 decision to limit Hunter Water's ability to levy developer charges

In 2008, the State Government announced changes to water infrastructure contributions levied by Sydney Water and Hunter Water. As part of the reforms, the contributions paid by developers for water supply, sewerage and stormwater development were set to zero for some developments.[354]

Contributions for recycled water and out of sequence developments continue to apply for Sydney Water and Hunter Water. Developer charges for water, sewerage, stormwater and recycled water levied by Gosford City Council and Wyong Shire Council are not subject to the zero cap. Outside the greater metropolitan area, other councils are also able to impose developer charges for these services under guidelines published by the NSW Office of Water.

The Government's decision to set developer charges to zero for some developments has contributed to increases in the bills to customers of Sydney Water and Hunter Water.

Hunter Water collected approximately $10 million ($2012/13) per year from developer charges in the years prior to 2009/10. The revenue Hunter Water received from developer charges over one determination period was subtracted from the value of its regulatory asset base before rolling it forward to the start of the subsequent determination for price setting purposes. This ensured Hunter Water only earned a return on the funds that it had invested in infrastructure, and not on the infrastructure funded by developer charges.

Given that Hunter Water collected about $10 million ($2012/13) in developer charges per year prior to the 2009 determination period, we estimate that the decision to set some developer charges to zero adds about $12 or 1.1% to a typical residential customers' annual water bill in 2013/14. The cumulative impact over the 2013 determination period is an increase of about $58 or 1.4% in real terms ($2012/13) to the typical bill. We present the customer impacts of setting developer charges to zero in Table G.1.

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354 IPART's current determination for developer charges was made in 2000 and sets a methodology for fixing the maximum price (IPART, Developer Charges Determination No 9, 2000). The determination applies to Sydney Water, Hunter Water, Gosford Council and Wyong Council. However, in 2008 the NSW Government decided to set Sydney Water's and Hunter Water's developer charges at a level less than the maximum allowed by the determination ie, the charges were set at zero.

In July 2011, the Minister for Planning and Infrastructure announced a full review of the planning system in NSW (the planning review). The planning review focuses on rewriting the State's main planning law, the *Environmental Planning and Assessment Act 1979* (EP&A Act).

In its Green Paper, the Government proposed transformative changes to the planning system in NSW, including 'Provision of Infrastructure' reforms. IPART made a submission to the Government's Green Paper in September 2012 that focused on the Government's proposed reforms for the provision of infrastructure as these relate most closely to IPART's functions. One of our suggested directions for reform to encourage development in the most cost effective locations was to:

> … introduce simple Sydney Water and Hunter Water developer charges limited to recovering the direct costs of connecting to the network.[355]

The rationale for a simple developer charge for Sydney Water and Hunter Water is to improve incentives for the provision of efficient infrastructure and to remove barriers to competitive entry.

Simple developer charges would help to bring the arrangements for Sydney Water and Hunter Water closer to the arrangements in other areas of the State, where developer charges remain.

[355] IPART, *NSW Planning System Review: Submission on the Green Paper*, September 2012, p 2.

Table G.1 Average impact of zero developer charges on Hunter Water customers ($nominal)

	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17
Estimate of developer charges contribution ($ million)	9.3	9.6	9.8	10.0	10.3	10.5	10.8	11.0
Impact on RAB								
Annual depreciation not applied to RAB ($ million)**)**	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8
Reduction in RAB – cumulative[a] ($ million)	9.2	19.0	28.7	39.0	49.8	60.9	72.5	84.5
Impact on notional revenue requirement								
Reduction in return on assets ($ million) **(A)**	0.6	1.2	1.9	2.5	2.8	3.4	4.1	4.7
Average impact on bills								
Actual/projected number of water connections ('000) **(B)**	225	226	229	232	236	239	242	246
Average annual impact per water connection ($) (A/B)								
Typical annual residential bill - zero developer charges[b] ($)	841	908	940	1,026	1,049	1,076	1,102	1,130
Typical annual residential bill – with developer charges[b] ($)	838	903	932	1,015	1,037	1,061	1,086	1,111
Increase in typical residential bill from zero developer charges (%)	0.3%	0.6%	0.9%	1.1%	1.1%	1.3%	1.5%	1.7%

a To calculate the cumulative reduction in the RAB from developer charges in nominal dollars, we index the reduction in RAB in each year by CPI before adding the following year's estimate of developer charges contribution.

b Typical residential bill is based on 200 kL consumption per year.

Note: Numbers may not add due to rounding.

H Miscellaneous and ancillary charges

Our final decision on Hunter Water's miscellaneous and ancillary services charges for the 2013 Determination is shown in Table H.1. These charges are set in real terms and will increase with inflation in each year of the determination period.

Table H.1 IPART's decision on Hunter Water's miscellaneous and ancillary services ($2012/13)

Service No.	Function	2012/13 (2009 Determination)	2013/14 (2013 Determination)
1	Conveyancing certificate		
	a) Over the counter	$30.85	$30.50
	b) Electronic	$9.45	$9.40
2	Property sewerage diagram (up to A4)	$18.20	$18.75
3	Service location diagram		
	a) Over the counter	$25.40	$24.65
	b) Electronic	$14.80	$14.75
4	Meter reading – special reads and by appointment		
	a) During business hours	$26.20	$24.10
	b) Outside business hours	$48.15	$98.70
5a)	Billing record search statement (up to 5 years)	$69.25	$59.85
5b)	Billing record search for multiple properties	$86.95/hour	$86.55/hour
6	Building over or adjacent to sewer advice	$86.65	$70.15
7	Water reconnection after restriction		
	a) During business hours	$66.80	$106.00
	b) Outside business hours	$180.00	$128.00
8a)	Workshop flow rate test of a mechanical water meter		
	20mm-25mm	$175.00	$158.00
	32mm	$239.00	$222.00
	40mm	$250.00	$226.00
	50mm light	$287.00	$266.00
	50mm heavy	$515.00	$331.00
	65mm	$517.00	$333.00
	80mm	$526.00	$389.00

Service No.	Function	2012/13 (2009 Determination)	2013/14 (2013 Determination)
	100mm	$639.00	$464.00
	150mm	$792.00	$526.00
8b)	Workshop flow rate and strip test of a mechanical water meter		
	20mm-25mm	$242.00	$218.00
	32mm	$306.00	$282.00
	40mm	$318.00	$282.00
	50mm light	$355.00	$326.00
	50mm heavy	$582.00	$391.00
	65mm	$585.00	$393.00
	80mm	$594.00	$449.00
	100mm	$706.00	$524.00
	150mm	$860.00	$576.00
9a)	Application for water disconnection (all sizes)	$107.00	$66.35
9b)	Application for recycled water disconnection	$138.00	$133.00
10	Application for water service connection (all sizes)	$113.00	$72.20
11	Application for water service connection (32mm to 65mm)		No longer required
12	Application for water service connection (80mm or greater)		No longer required
13	Application to assess water main adjustment	$297.00	$340.00
14	Standpipe hire security bond		
	20mm	$314.00	$305.20
	32mm low flow	$382.00	$370.55
	32mm high flow	$842.00	$817.45
	50mm	$842.00	$817.45
15	Standpipe hire – tri-annual and monthly fees		
	Monthly		
	20mm	$9.50	$11.45
	32mm low flow	$10.60	$12.65
	32mm high flow	$18.35	$20.85
	50mm	$18.35	$20.85
	Tri-annual		
	20mm	$42.95	$31.85
	32mm low flow	$44.10	$33.05
	32mm high flow	$51.85	$41.25
	50mm	$51.85	$41.25
16	Standpipe water usage fee	As per water usage tariff per kilolitre	As per water usage tariff per kilolitre
17	Backflow prevention device application and registration fee	$26.10	$32.50

Service No.	Function	2012/13 (2009 Determination)	2013/14 (2013 Determination)
18a)	Backflow prevention device annual administration fee	$17.10	$20.80
18b)	Backflow device test	$272.00	$312.00
19	Major works inspection fee		
	Water mains	$7.75/m	$9.61/m
	Gravity sewer mains	$11.65/m	$14.48/m
	Rising sewer mains	$7.75/m	$9.61/m
	Pressure sewer mains	$7.75/m	$9.61/m
20	Statement of available pressure and flow	$323.00	$311.00 plus Technical Services Hourly Rate (if required)
21	Application to connect/disconnect sewer services (for a special internal inspection permit)	$140.00	$72.20
22	Application to connect/disconnect water and sewer services (combined application)	$113.00	$72.20
23	Irregular and dishonoured payments		
	a) Banking authority – cheque declined	$24.65	$33.50
	b) Banking authority – direct debit declined	$27.45	$26.00
	c) Australia Post – cheque declined	$41.45	$38.50
24	Request for separate metering of units	$44.25 per plan	$29.95 per plan
25	Unauthorised connections	$166.00	$108.00
26	Building plan stamping	$13.00	$11.75
27	Determining requirements for building over/adjacent to Hunter Water sewer or easement	$93.90	$150.00
28a)	Application to hire a metered standpipe	$184.00	$169.00
28b)	Breach of standpipe hire conditions		
	Breach 1	$22.35	$18.20
	Breach 2	$28.10	$24.05
	Breach 3 – Step 1	$32.45	$29.95
	Breach 3 – Step 2	$35.35	$29.95
29	Meter affixtures/handling fee		
	a) Meters up to 50mm light duty	$25.75	$83.25
	b) Meters 50mm or larger	$19.65	$83.25
30	Inspection of non-compliant meters	$54.50	$56.10 plus contractor hourly rate (if required)

Service No.	Function	2012/13 (2009 Determination)	2013/14 (2013 Determination)
31	Services requirement audit (previously 'Standard Plumbing Inspections')		
	a) General plumbing	$105.65	$91.75 (single fee for services requirement audit due to changes in plumbing legislation)
	b) Inspection	$109.00	
	c) Inspection hourly rate	$77.25/hour	
32	Connecting to or building over/adjacent to a stormwater channel for a single residence	$79.85	$90.20
33	Stormwater channel connection	$281	$322
34	Hydraulic design assessment	Up to 10 drawings: $290	Residential 25-40mm:$226.00
		11-50 drawings: $290 plus $25.80/drawing. Maximum fee for 50 drawing set $1,322.00	Residential >40mm: $270.00 Non-residential 25-40mm: $323.00
		Over 50 drawings: Quote	Non-residential >40mm: $354.00
35	Pump station design assessment		
	Water pump stations	$3,793.00	$4,342.00
	Sewer pump stations	$4,177.00	$4,782.00
	Recycle water pump stations	$3,793.00	$4,342.00
36	Application to assess sewer main adjustment	$387.00	$443.00
37	Indicative developer charge application	$224.00	$255.00
38	Revision of development assessment requirements	$321.00	$368.00
39	Bond application	$1,463.00	$1,676.00 plus Technical Services Hourly Rate for each additional asset.
40	Bond variation	$211.00	$242.00
41	Development assessment application	$387.00	$443.00
42	Application for water/sewer main extensions	$387.00	$443.00
43	Assessment of minor works	$693.00	$795.00

Service No.	Function	2012/13 (2009 Determination)	2013/14 (2013 Determination)
44a)	Major works design review and contract preparation	$2,367.00	$2,709.00
44b)	Major works design re-assessment	$312.00	$358.00
45a)	Connect to existing water system – major works (valve shutdown)	$674.00	$657.00
45b)	Connect to existing water system – major works (non-valve shutdown)	$279.00	$280.00
46a)	Insertion or removal of tee and valve (valve shutdown and charge up)	$1,023.00	$1,034.00
46b)	Insertion or removal of tee and valve (non-valve shutdown and charge up)	$627.00	$646.00
47	Application for additional sewer connection point	$281.00	$322.00
48	Tee and valve connection	$205.00	$255.00
49	Minor works inspection fee	$181.00	$207.00
50	Major works inspection and WAE fee		
	Water pump stations	$4,844.00	$6,028.00
	Sewer pump stations	$6,562.00	$8,165.00
	Recycle water pump stations	$4,844.00	$6,028.00
51	Application to assess encroachment on Hunter Water land, easement right or assets	$387.00	$385 plus technical services hourly rate (if required)
52	Technical services hourly rate	$111.00/hour	$100.00/hour
53	Remote application fee	$240.00	$275.00
54	Preliminary servicing advice	$366.00	$419.00
55	Servicing strategy review		
	a) Standard review process	$642.00	$1,075.00
	b) Additional review process	N/A	$307.00
56	Environmental assessment report review	$642.00	$1,075.00 plus technical services hourly rate (if required)
57	Recycled water inspection and WAE fee	$10.60/m	$28.96/m
58	Reservoir construction inspection and WAE fee	Quote	Quote
59a)	Inspection of a water cart tanker	$128.00	$128.00
59b)	Reinspection of a water cart tanker due to non-compliance	$111.00	$116.00
60	Inaccessible meter – reading agreement	$51.30	$41.65
61	Inaccessible meter – imputed charge for breach of meter reading agreement	$18.85 + imputed usage	$17.60 + imputed usage

Service No.	Function	2012/13 (2009 Determination)	2013/14 (2013 Determination)
62	Damaged meter replacement		
	20mm	$78.95	$60.40
	25mm	$123.00	$100.00
	32mm	$167.00	$139.00
	40mm	$194.00	$166.00
	50mm light	$319.00	$355.00
	50mm heavy	$375.00	$405.00
	65mm	$476.00	$495.00
	80mm	$487.00	$621.00
	100mm	$509.00	$646.00
	150mm	$908.00	$1,106.00
	250mm	$3,149.00	$4,065.00
	300mm	$3,999.00	$5,063.00
63	Affix a separate meter to a unit	$33.70	$56.10
64	Recycled water meter affix fee	$53.85	$36.15
65	Plumbing non-compliance follow up inspection fee		No longer required
66	Application for recycled water service connection – domestic		
	a) Pre-laid connections	$322	$46.95
	b) Redevelopment	$411	$138.75

Source: Hunter Water submission, 14 September 2012, Appendix O.