IPART
New South Wales

Independent Pricing and Regulatory Tribunal

Review of prices for Hunter Water Corporation

From 1 July 2016 to 30 June 2020

Water — Draft Report
March 2016

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Invitation for submissions

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

Submissions are due by 18 April 2016.

We would prefer to receive them electronically via our online submission form <www.ipart.nsw.gov.au/Home/Consumer_Information/Lodge_a_submission>.

You can also send comments by mail to:

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Late submissions may not be accepted at the discretion of the Tribunal. Our normal practice is to make submissions publicly available on our website <www.ipart.nsw.gov.au> as soon as possible after the closing date for submissions. If you wish to view copies of submissions but do not have access to the website, you can make alternative arrangements by telephoning one of the staff members listed on the previous page.

We may choose not to publish a submission—for example, if it contains confidential or commercially sensitive information. If your submission contains information that you do not wish to be publicly disclosed, please indicate this clearly at the time of making the submission. IPART will then make every effort to protect that information, but it could be disclosed under the *Government Information (Public Access) Act 2009* (NSW) or the *Independent Pricing and Regulatory Tribunal Act 1992* (NSW), or where otherwise required by law.

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

Contents

1 Executive summary

The Independent Pricing and Regulatory Tribunal of NSW (IPART) is determining the maximum prices Hunter Water Corporation (Hunter Water) can charge its customers for its monopoly water, sewerage and stormwater drainage services.[1] As part of this review, we are also determining the maximum prices for Hunter Water's trade waste services and a range of ancillary and miscellaneous services.[2]

This Draft Report sets out our draft decisions on Hunter Water's maximum prices over the 4-year period from 1 July 2016 to 30 June 2020 (the 2016 determination period) and how these would affect residential and non-residential customers. It also explains how we reached these draft decisions and how our draft prices compare to Hunter Water's proposed prices.

Our current determination of Hunter Water's prices covers the period from 1 July 2013 to 30 June 2017. However, at Hunter Water's request, we have brought this price review forward by 1-year to align it with our review of prices for Sydney Water Corporation (Sydney Water).[3]

The matters that we are required to have regard to in this review are set out in Appendix A. Appendix B provides an overview of the wider context for the review.

We invite submissions from all interested parties, which we will consider before finalising our decisions and our report in June 2016. The new charges are expected to apply from 1 July 2016.

1 This review is conducted under section 11 of the *Independent Pricing and Regulatory Tribunal Act 1992* (the IPART Act).

2 We are deferring regulation of the prices for Hunter Water's recycled water schemes until we have completed a broader review of our approach to regulating recycled water prices. This is discussed in more detail in Chapter 10.

3 IPART, *Timing of IPART's price review for Hunter Water Corporation – Media Release*, 14 July 2014.

Concurrent to this determination of Hunter Water's maximum prices, we are also reviewing and recommending dishonoured or declined payment fees to be charged by Hunter Water.[4] We received a referral to undertake this review from the Premier under section 12A of the *Independent Pricing and Regulatory Tribunal Act 1992* (IPART Act).[5] Dishonoured or declined payment fees are not fees for the provision of a monopoly service.

We have also decided to conduct a separate review of prices for wholesale water and sewerage services supplied by Hunter Water and Sydney Water. The reason we have decided to undertake this as a separate review is that:

- this is a new area of price regulation for IPART
- the decision will likely have a large impact on the future of the NSW urban water market, and
- we intend to ensure that there is a consistent approach to wholesale pricing across the Sydney and Lower Hunter regions.

Therefore, our 2016 Draft Determination does not apply to wholesale services. Rather, it sets maximum prices for 'residential' and 'non-residential' properties, with no reference to wholesale customers. We will release a Discussion Paper on wholesale pricing in April 2016.[6]

1.1 Our draft prices

All dollar figures quoted in this Draft Report are in $2015-16, unless stated otherwise.[7]

4 Under clause 4.9.1 of the customer contract contained in Hunter Water's Operating Licence 2012-2017, if payment of an account is dishonoured or declined, Hunter Water will charge the relevant administrative fee set by IPART.

5 We received the referral under section 12A, and the terms of reference for review of both fees on 7 December 2015 (see Appendix C). This review also includes the late payment and dishonoured or declined payment fees to be charged by Sydney Water.

6 To date, 'wholesale water and wastewater pricing' has been considered as part of this Hunter Water price review. All stakeholder submissions received on this issue and at the public hearing will be considered as part of our separate wholesale pricing review. The timetable for our separate review of the maximum charges for Sydney Water and Hunter Water wholesale water and wastewater services is available at http://www.ipart.nsw.gov.au/Home/Industries/Water/Reviews/Metro_Pricing/Review_of_wholesale_pricing_for_Sydney_Water_and_Hunter_Water.

7 Prices and revenue for 2015-16 in Hunter Water's pricing proposal submitted in June 2015 are forecasts, because at the time the proposal was drafted, the March-on-March CPI used to set prices was unavailable. Hunter Water based its proposal on an estimate of the March 2014 to March 2015 CPI change of 2.1%; the actual change was 1.3%. We will use actual 2015-16 prices in our Draft Report, and report any resulting differences with Hunter Water's proposal, where material.

In setting prices we have been mindful that the first year of the 2016 determination period would have been the last year of the 2013 determination period (if Hunter Water's price determination had not been brought forward by one year, at its request). For the majority of Hunter Water's customers – ie, residential (house) customers – under the 2013 Determination, their 2016-17 water and sewerage prices (and hence water and sewerage bills) would have increased in line with inflation.

Our draft decision is that Hunter Water's efficient costs are $25 million higher than proposed by Hunter Water. This is mainly due to our draft decision regarding the rate of return on Hunter Water's assets which differs from that proposed by Hunter Water. We have set the Weighted Average Cost of Capital (WACC) to be included in prices using our published methodology and updated information in relation to market parameters.

We have also revised our assumptions on Hunter Water's asset lives used to calculate its regulatory depreciation allowance, to better reflect the actual useful life of its assets. This has resulted in an increase to its regulatory depreciation allowance which places upward pressure on prices. We have phased in these changes to asset lives to reduce the price impacts of this decision. We made this decision to ensure that Hunter Water receives sufficient revenue from its customers to maintain its assets used in delivering its monopoly services. This will help to ensure that Hunter Water is able to provide reliable services to its regulated customers over the long term.

Our draft prices also reflect our decisions to reallocate costs, and restructure elements of price structures, to ensure prices are more cost-reflective. This removal of cross-subsidies would result in residential customers and most small businesses paying more as these customers currently do not fully pay for the costs of the services they receive. This means that Hunter Water's large non-residential customers are currently paying more than their share of costs.[8] These price structure changes do not aim to increase the total revenue Hunter Water recovers from its customer base. Rather, they are intended to ensure that customers who receive similar services in Hunter Water's network pay similar charges (ie, remove existing cross-subsidies).

We have limited the increase in prices for a typical residential (house) customer (water usage of 185 kL per year), such that their water and sewerage bills would increase by no more than 1% in 2016-17 and then 2.9% each year thereafter, excluding inflation. This represents an increase of 3.1% for 2016-17 and then 5.5% each year thereafter, including inflation.

[8] This is with the exception of stormwater costs, where medium to very large non-residential customers are currently paying less than their share of costs. However, only about 25% of customers receive stormwater services from Hunter Water

Other features of our draft prices include:

- We have decided to charge dual occupancies based on the number of meters connected to Hunter Water's network. This means that dual occupancies serviced by a single meter would no longer pay two service charges.
- We have decided to continue the transition towards area-based stormwater drainage charges by allocating smaller increases in stormwater prices to residential and small non-residential customers, and larger increases to other non-residential customers.
  - We have also decided to set a low-impact customer category for residential stormwater customers equal to the charge for apartments, and maintain the low-impact category for non-residential customers (equal to the house charge). These low impact charges can accommodate, for example, a situation where a customer invests in significant on-site water retention facilities.[9]

Our draft prices are outlined in Table 1.1.

[9] We note that Sydney Water currently requires non-residential customers to apply for the low impact discount: there is a simple two page form, which is followed by Sydney Water's assessment (at Sydney Water's cost). We consider that this process should be adopted by Hunter Water and also extended to its residential customers.

Table 1.1 Draft prices for major services from 1 July 2016 ($2015-16) – without inflation

	2015-16	2016-17	2017-18	2018-19	2019-20
Water					
Usage charge ($/kL)	2.22	2.22	2.22	2.22	2.22
Residential service charge ($/year)	17.75	25.28	48.86	73.79	101.00
Annual change		*42.4%*	*93.3%*	*51.0%*	*36.9%*
Non-residential (20mm meter stand-alone) ($/year)	17.75	25.28	48.86	73.79	101.00
Annual change		*42.4%*	*93.3%*	*51.0%*	*36.9%*
Non-residential service charge (20mm meter)[a] ($/year)	18.54	29.99	54.19	78.05	101.00
Annual change		*61.8%*	*80.7%*	*44.0%*	*29.4%*
Sewerage					
Usage charge ($/kL, $nominal – with inflation)	0.67	0.67	0.67	0.67	0.67
House service charge[b] ($/year)	593.58	597.00	604.93	612.20	618.45
Annual change		*0.6%*	*1.3%*	*1.2%*	*1.0%*
Apartment service charge[c] ($/year)	430.35	432.82	438.57	443.84	448.38
Annual change		*0.6%*	*1.3%*	*1.2%*	*1.0%*
Non-residential (20mm meter stand-alone)[d] ($/year)	593.58	597.25	617.83	637.15	654.82
Annual change		*0.6%*	*3.4%*	*3.1%*	*2.8%*
Non-residential service charge (20mm meter)[e] ($/year)	943.66	943.32	817.98	734.57	654.82
Annual change		*0.0%*	*-13.3%*	*-10.2%*	*-10.9%*
Environmental Improvement Charge	38.37	38.37	38.37	38.37	38.37
Stormwater					
Multi premise residential and non-residential ($/year)	26.59	26.85	27.11	27.38	27.64
Annual change		*1.0%*	*1.0%*	*1.0%*	*0.9%*
Standalone residential and small non-residential ($/year)	71.86	72.56	73.27	73.97	74.67
Annual change		*1.0%*	*1.0%*	*1.0%*	*0.9%*
Medium non-residential ($/year)	129.91	153.87	182.24	215.85	255.66
Annual change		*18.4%*	*18.4%*	*18.4%*	*18.4%*

a Charge applicable per 20mm meter if there are multiple 20mm meters, or if it is a common 20mm meter.

b The house service charge has the 75% residential discharge factor applied and the 120 kL discharge allowance usage charge added to it.

c Apartments would continue to pay 72.5% of the service charge applicable to houses.

d Under the 2013 Determination, non-residential standalone 20mm meter customers paid the residential service charges. By 2019-20, their base charge (excluding discharge factors) would be the same as other non-residential customers. For indicative purposes, the charges for 2016-17 to 2019-20 assume an average discharge factor of 80%, and has the increasing discharge allowance usage charge added to it.

e For indicative purposes, has an average discharge factor of 80% applied for comparison with the standalone 20mm meter, and has the increasing discharge allowance usage charge added to it. For example, this would be the charge for a common 20mm meter with a discharge factor of 80%.

1.1.1 Customer bills

As mentioned previously, our draft prices mean that bills for residential customers would increase by more than inflation over the 4-year determination period. This is because of our draft decisions on Hunter Water's efficient costs and its price structures. These decisions also affect non-residential customers, but result in varying bill impacts:

- Small businesses on a stand-alone 20mm meter would be likely to face an increase in their water and sewerage bills, including inflation. This is mainly because of our decision to align service charges across Hunter Water's customer base, so that costs are allocated equitably.
- Medium to large business would be are likely to face a decrease in their water and sewerage bills, excluding inflation. However, including inflation, some large businesses may face a small increase. This is because these customers are currently paying proportionately more for their service charges compared with residential customers and small businesses on a stand-alone 20mm meter. Our draft decision to unwind this cross-subsidy would mean that these customers would pay proportionately less as residential customers and small non-residential customers would contribute more.

Residential customers

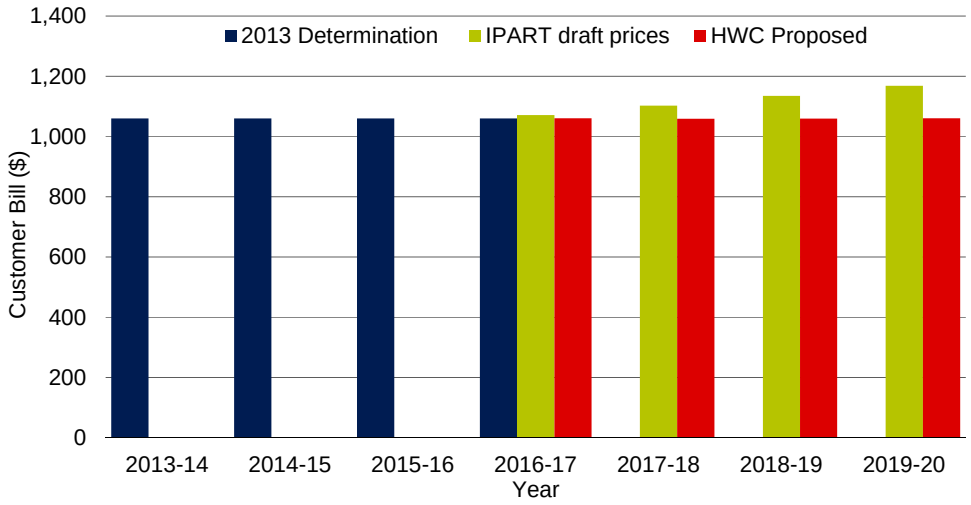
All residential customers' water and sewerage bills would rise under our draft prices. Under our draft prices, bill impacts, **including the effects of inflation**, are as follows:

- A **typical household** consuming 185 kL of water per year would see its annual bill increase by $33 (or 3.1%) in 2016-17, from $1,060 to $1,093. By 2019-20, a typical household would pay $1,284, which represents an increase of $223 over the 4-year period. Hunter Water's proposal would have increased bills by $110 over the same period.
- A **typical apartment** consuming 150 kL of water per year would see its annual bill increase by $27 (or 3.2%) in 2016-17, from $819 to $846. By 2019-20, a typical apartment would pay $1,011, which represents an increase of $192 over the 4-year period. Hunter Water proposed an increase of about $265 over this same period. Under our draft prices, apartments would face a smaller increase than compared with Hunter Water's proposal, mainly due to our decision to not equalise the sewerage service charges for apartments with houses.
- **Eligible pensioners**[10] in houses consuming 150 kL of water per year would see their annual bill increase by $22 (or 3.2%) in 2016-17 from $670 to $692. By 2019-20, these pensioners would pay $824, which represents an increase of $154 over the 4-year period. Hunter Water proposed an increase of $69 over this same period.

10 Those eligible to receive a pensioner rebate.

Figure 1.1 below compares the typical residential bill using our draft prices, with Hunter Water's proposal and our 2013 Determination. This excludes the effects of inflation.

Figure 1.1 Comparison of typical residential water and sewerage bills under different prices ($2015-16) - without inflation



Note: Based on an individually metered residential (house) customer with an annual water consumption of 185 kL. The bills also include the Environmental Improvement Charge.

Data source: Hunter Water pricing proposal to IPART, June 2015, p 92 and IPART analysis.

Customers that pay **stormwater drainage** charges would also face increases in bills. Under our draft decisions on stormwater charges, bill impacts, **including the effects of inflation**, are as follows:

- Households would see stormwater service charges increase by $10.16, from $71.86 in 2015-16 to $82.02 by 2019-20. Under Hunter Water's proposal, these charges would have increased by $12.50, resulting in a charge of $84.36 by 2019-20.[11]
- Apartments would see stormwater charges increase by $3.77, from $26.59 in 2015-16 to $30.36 by 2019-20. Under Hunter Water's proposal, these charges would have increased by $4.28, resulting in a charge of $30.87 by 2019-20.

Table 1.2 shows the residential bills under our draft prices and provides a comparison against Hunter Water's proposal in percentage terms.

[11] Calculated by IPART using Hunter Water's proposed prices.

Table 1.2 Residential bills ($ nominal) – including inflation

	2015-16	2016-17	2017-18	2018-19	2019-20	*Change 2015-20*	
						IPART	Hunter Water[b]
House (185 kL)	1,060	1,093	1,153	1,216	1,284	**223**	110
Annual change		*3.1%*	*5.5%*	*5.5%*	*5.5%*	***21.0%***	*10.4%*
Apartment (150 kL)	819	846	898	953	1,011	**192**	265
Annual change		*3.2%*	*6.1%*	*6.1%*	*6.2%*	***23.4%***	*32.3%*
Pensioner (150 kL)[a]	670	692	733	777	824	154	69
Annual change		*3.2%*	*6.0%*	*6.0%*	*6.0%*	*23.0%*	*10.3%*
House (185 kL) with stormwater	1,132	1,167	1,230	1,296	1,366	**234**	123
Annual change		*3.0%*	*5.4%*	*5.4%*	*5.4%*	***20.6%***	*10.8%*
Apartment (150 kL) with stormwater	846	873	926	982	1,042	**196**	269
Annual change		*3.2%*	*6.0%*	*6.0%*	*6.1%*	***23.1%***	*31.8%*
Pensioner (150 kL)[a] with stormwater	742	766	810	856	906	**164**	81
Annual change		*3.2%*	*5.8%*	*5.7%*	*5.8%*	***22.1%***	*11.0%*

a A pensioner in a house who is eligible to receive the pensioner rebate from Hunter Water. The pensioner bills do not include the Environmental Improvement Charge.

b These figures were not included in Hunter Water's proposal, and have been calculated by IPART.

Note: Inflation is estimated to be 2% in 2016-17 and 2.5% per annum over the rest of the 2016 determination period. 185 kL/year is average usage for a house, 150 kL/year is average usage for an apartment. The bills for houses and apartments are inclusive of the Environmental Improvement Charge.

Source: Hunter Water Price Submission Summary, June 2015, p 3, and Hunter Water pricing proposal, June 2015 pp 92-93 and IPART analysis.

Non-residential customers

Under our draft prices, non-residential customers, other than those with a stand-alone 20mm meter, would see their water and sewerage bills decrease, excluding inflation. However, including inflation, some large businesses may face a small increase.

Small non-residential customers with a stand-alone 20mm meter are likely to face an increase above inflation, but this would vary depending on their specific discharge factor.[12,13] Customers with a discharge factor greater than the residential discharge factor of 75% (eg, 85%) would face a greater increase than residential customers, and those with a smaller discharge factor would face a lower increase. For example, a small businesses consuming 185 kL of water per year (similar to an average residential property), with a discharge factor of 85%,

12 A discharge factor is the estimated percentage of incoming water used by a property (as measured by the property's water meter) which is discharged to the sewerage system. Discharge factors are used as discharges to the sewerage system are typically not metered.

13 If a customer on a stand-alone 20mm meter has a very low discharge factor (eg, 30%) then they are likely to face a decrease in their water and sewerage bill, including inflation.

would face a bill increase of about $256 (or 22.6%), including inflation, over the 4-year period.

Other businesses would face varying impacts, depending on their actual water consumption and meter connection. For example:

- Non-residential customers with a 25mm meter with water usage of 300 kL per year, and a discharge factor of 85%, would face a decrease in their water and sewerage bills of $259 (or 10.6%), including inflation, over the 4-year period.
- Non-residential customers with a 100mm meter with water usage of 40,000 kL per year, and a discharge factor of 60%, would face an increase in their water and sewerage bills of $5,302 (or 4.3%), including inflation, over the 4-year period. This increase is less than inflation and less than the increase they would have received under Hunter Water's proposed prices. Under Hunter Water's proposal, we estimate they that they would have received an increase of $13,923 (or 11.3%), including inflation, over the 4-year period.

1.2 We are improving the cost-reflectivity of price structures

We have made changes across Hunter Water's price structures to ensure that charges are more cost-reflective. The main changes are as follows:

- **Simplifying water and sewerage service charges**. We are simplifying water and sewerage service charges so that they are all referenced to a standard 20mm meter by 2019-20. This 're-basing' of all charges with reference to a standard 20mm meter also ensures that these charges better reflect costs across Hunter Water's customer base.
- **Bringing the sewerage discharge allowance for non-residential customers in line with residential customers**. Our draft decision is to decrease the sewerage discharge allowance for residential (house) customers from the current 150 kL per year, embodied in their sewerage service charges, to 120 kL per year from 1 July 2016. Therefore, for non-residential customers, we are increasing the annual discharge allowance over the 2016 determination period from 50 kL per year to 120 kL per year by 2019-20. This ensures that residential and non-residential customers are treated consistently.
- **Changing the calculation of the sewerage service charges.** We are separating out the implicit discharge allowance in the sewerage service charge for residential and non-residential customers. This would correct the existing discrepancy in usage charging, where non-residential customers with large meters pay too much for sewerage discharges. We are also applying a discharge factor to residential customers. This has previously only applied to non-residential customers. Therefore, this ensures consistent treatment between residential and non-residential customers.

1.3 We are encouraging Hunter Water to be more efficient and more responsive to its customers

As part of the concurrent review of prices for Sydney Water and WaterNSW, we have been considering changes to the form of regulation. We have considered the merits of taking a consistent approach to regulation, particularly for Hunter Water and Sydney Water, and have decided in some cases to make changes to the way we regulate these businesses.

In addition, we have reviewed Hunter Water's proposed expenditure in detail to ensure it is prudent and efficient.

1.3.1 We are reducing Hunter Water's proposed allowance for capital and operating expenditure

We have reviewed Hunter Water's proposed capital and operating expenditure and our draft decision is to reduce the amounts in some areas to ensure that it is prudent and efficient. We are satisfied our approach would not adversely affect the ability of Hunter Water to operate, maintain, renew and develop the assets required to deliver its regulated services over the 2016 determination period. Further, we are satisfied our draft decisions would enable Hunter Water to earn a reasonable rate of return on its assets.

We have set Hunter Water's allowance for operating expenditure at $525 million over the 2016 determination period. In doing so, we have reduced Hunter Water's proposed core operating expenditure by $9.4 million (1.8%).

Some of the reductions to Hunter Water's operating expenditure are continuing efficiency targets ($1.9 million). We consider these efficiency targets are reasonable as firms competing in competitive markets are required to continually seek efficiencies. They are also consistent with approaches taken by economic regulators in other jurisdictions.

Our draft decision on forecast capital expenditure is to include $364.5 million in capital expenditure over the 2016 determination period. In doing so, we reduced Hunter Water's proposed capital expenditure by $23.2 million (6%), which included the following adjustments:

- $15.7 million (or 4.0%) of reductions to specific capital programs
- $5.0 million (or 1.3%) of reductions to take account of systemic over-estimation of project costs, and
- $2.2 million (or 0.6%) in efficiency savings.[14]

[14] We also made a $0.3 million (or 0.1%) reduction due to updating the amount of corporate costs to be indirectly allocated to recycled water.

We applied a real post-tax WACC of 4.8% for the purposes of calculating an appropriate rate of return on Hunter Water's assets. Our draft decision is to use our standard methodology for all WACC parameters. Hunter Water's proposal was for a WACC of 4.6%.[15]

1.3.2 We are introducing pricing flexibility

We have decided to introduce greater pricing flexibility by allowing Hunter Water and large non-residential customers to enter into unregulated pricing agreements for water supply and sewerage services. This is consistent with our decision in the Sydney Water review. If Hunter Water and a large non-residential customer enter into such an agreement, then Hunter Water and that customer will not be subject to IPART's determined prices for water supply and sewerage services to the extent that such prices are set in the pricing agreement.

These pricing agreements will only apply where Hunter Water and the customer have reached an agreement. Otherwise, the default arrangement is that prices set by IPART would apply.

Large non-residential customers are defined in the draft determination as stand-alone non-residential customers that have annualised water consumption greater than 7.3 ML.

This form of pricing flexibility would allow Hunter Water to search for opportunities to uncover value for its customers by tailoring prices and potentially services to better meet their customers' individual preferences as would occur in a competitive setting. It provides a strong incentive for Hunter Water to engage with customers in order to develop mutually beneficial price offers specifically targeted to each customer's preferences.

Hunter Water has differential water usage prices that apply to around 20 of its major industrial and commercial customers who use more than 50 ML per year and are located in specific zones within its area of operation. These customers may choose to enter into unregulated pricing agreements. Our draft decision for pricing flexibility applies to a larger number of Hunter Water's non-residential customers (due to the lower water usage threshold for eligibility) than those customers who are eligible for location-based water usage prices.

Importantly, we have outlined in chapter 2 some key features and implications of unregulated pricing agreements that should be considered by both parties before entering into such an agreement.

[15] Hunter Water pricing proposal to IPART, June 2015, p 62.

1.3.3 We are introducing an efficiency carryover mechanism for Hunter Water

We have decided to implement an efficiency carryover mechanism (ECM). This approach is aimed at removing any incentive for Hunter Water to delay permanent cost savings, which means customers can benefit, through lower prices, sooner. This mechanism:

- applies to controllable operating expenditure from 2015-16 to 2018-19
- ensures the business is able to retain permanent cost reductions for four years before they are passed on to customers through lower prices, regardless of when these cost reductions are achieved in the regulatory period
- maintains the existing incentive for the business to control costs, and
- maintains the existing incentive for the business to manage temporary fluctuations in expenditure.

Our expectation is that by removing the incentive to delay savings and providing a tool for Hunter Water to demonstrate its performance over the regulatory period, the ECM would improve the amount and quality of information available to us at the next round of expenditure reviews.

1.3.4 We are encouraging greater use of performance benchmarking

We intend to work with regulated businesses and regulators in other jurisdictions to develop a performance benchmarking capability to inform future price reviews. While our current form of regulation makes some use of benchmarking in assessing business' performance during the expenditure review, we intend to make greater use of benchmarking in future price reviews. We consider that greater use of productivity benchmarking would help Hunter Water demonstrate its performance gains to stakeholders and would help to drive further performance gains in the future.

1.4 We have aligned the timing of reviews for Hunter Water and Sydney Water

By agreeing to Hunter Water's request to bring forward by 1-year our review of its prices, we have aligned the determination periods for Hunter Water and Sydney Water. Our decision to have a 4-year determination period for Hunter Water and Sydney Water means that the next reviews would also be undertaken concurrently. This would facilitate all stakeholders to better compare the performance of the two largest water utilities in NSW.

1.5 IPART's review process

As part of our review process, we have undertaken an extensive investigation and public consultation, including:

- inviting Hunter Water to make a pricing proposal in June 2015, detailing its proposed prices and forecast capital and operating expenditure necessary to maintain service levels and respond to regulatory demands
- releasing an Issues Paper in September 2015 to respond to Hunter Water's pricing proposal and assist stakeholders to identify and understand the key issues for the review
- inviting stakeholders to make submissions on the Issues Paper and Hunter Water's proposal by 5 October 2015[16]
- holding a public hearing in November 2015 to discuss a range of issues raised by Hunter Water and other stakeholders
- engaging independent consultants:
  - Jacobs Australia Pty Limited (Jacobs), to review Hunter Water's operating expenditure, asset planning framework and capital expenditure proposals[17]
  - Synergies Economic Consulting (Synergies), to review Hunter Water's proposed prices for its trade waste services and range of ancillary and miscellaneous services[18]
  - Jacobs, to review Hunter Water's forecast water demand and customer numbers[19], and
- releasing this Draft Report and Draft Determination and inviting stakeholders to make submissions in response to the drafts.

Our Issues Paper, stakeholder submissions, the transcript from the public hearing, and consultants' reports are available on our website (www.ipart.nsw.gov.au).

We will consider all submissions received on the Draft Report prior to releasing the Final Report and Determination in June 2016. The indicative timetable for this review is outlined in Table 1.3 below.

We are conducting a separate public hearing for Hunter Water's dishonoured and declined payment fees.

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16 A total of 11 written submissions were received from other interested parties.

17 Jacobs' final report was received in December 2015 and published on our website in February 2016.

18 Synergies' final report was received in January 2016. Much of the supplementary information on costs used in its analysis was provided to us by Hunter Water on a commercial-in-confidence basis. Therefore, we have not published this report on our website.

19 Jacobs' final report was received in January 2016. Much of the supplementary information on demand used in its analysis was provided to us by Hunter Water on a commercial-in-confidence basis. Therefore, we have not published this report on our website.

Table 1.3 Indicative review timetable

Task	Timeframe
Receive pricing proposal from Hunter Water	*30 June 2015*
Release Issues Paper	*7 September 2015*
Receive submissions to the Issues Paper and to Hunter Water's pricing proposal	*5 October 2015*
Public Hearing	*2 November 2015*
Release Draft Report and Draft Determination	*22 March 2016*
Public Hearing – late and dishonoured and declined payment fees	11 April 2016
Receive submissions to the Draft Report	18 April 2016
Release Final Report and Determination	Mid-June 2016

Note: These dates are indicative and are subject to change.

1.6 Structure of this Draft Report

The rest of this Draft Report provides more information about our draft decisions, and Hunter Water's pricing proposal:

- Chapter 2 outlines the changes we are making to the regulation of Hunter Water to encourage it to become more efficient and give Hunter Water greater pricing flexibility to respond to customer preferences.
- Chapters 3 to 10 discuss the issues related to the steps in our approach for setting water, sewerage, stormwater and other prices:
  - Chapter 3 covers the length of the determination period and Hunter Water's notional annual revenue requirement
  - Chapters 4 to 6 focus on the key inputs for applying this approach, including the allowance for operating expenditure, prudent and efficient capital expenditure, and the allowances for a return on capital, regulatory depreciation and tax
  - Chapters 7 covers the forecast sales volumes and customer numbers
  - Chapters 8 and 9 explain the decisions on price structures and set out price levels
  - Chapter 10 considers recycled water prices.
- Chapter 11 assesses the implications of our pricing decisions on customers, Hunter Water, general inflation and the environment.

1.7 List of draft decisions and draft recommendations

Our draft decisions and draft recommendations are outlined in the chapters of this Draft Report. For convenience, they are also listed below. We invite comments on any or all of these draft decisions and recommendations or any other matter relevant to our review.

Draft decisions

Form of regulation

Length of determination period and notional revenue requirement

Allowance for operating expenditure

Prudent and efficient capital expenditure

8 We have decided to require Hunter Water to report annually on progress against the output measures outlined in Appendix C. 58

Allowances for return on assets, regulatory depreciation and tax

9 We have decided to: 60

- set the opening RAB at 1 July 2016 by rolling the RAB forward from 2012-13 to 2015-16 as shown in Table 6.1, and 60
- adopt the value of the RAB in each year of the 2016 Determination as shown in Table 6.2. 60

10 We have decided to: 64

- Deduct the regulatory value of actual and forecast asset disposals from the RAB, where the regulatory value is determined as: 64
  a. For significant sales of assets purchased before the RAB line-in-the-sand: Asset sales revenue x RAB/DRC at the time the RAB was established. 64
  b. For significant sales of assets purchased post RAB line-in-the-sand: purchase price + capital expenditure – depreciation + indexation. 64
  c. For significant asset write-offs: Determined on a case-by-case basis. 64
  d. For non-significant write-offs: Zero unless determined by exception on a case- by-case basis. 64
  e. For non-significant asset sales: Receipts from asset sales. 64
- Retain the $10 million section 16A subsidy relating to the Kooragang Industrial Water Scheme in Hunter Water's RAB. 64
- Remove the avoided cost of $9.5 million relating to the KIWS from Hunter Water's Regulatory Asset Base. 64

11 We have decided to adopt: 70

- a straight-line depreciation method for the 2016 determination period, and 70
- new and existing asset lives as set out in Table 6.4. 70

12 We have decided to: 72

- apply a real post-tax WACC of 4.8% for the purposes of calculating the appropriate rate of return on Hunter Water's assets, and 72
- set an allowance for return on capital as shown in Table 6.7. 72

13 We have decided to: 75

- make no adjustment to the regulatory tax allowance for revenue from grants and cash capital contributions 75

Forecast water sales and customer numbers

Prices for water, sewerage and stormwater services

Prices for other services

Appendix G, and for these charges to be indexed annually in line with changes in the CPI. 121

– Deduct the revenue from miscellaneous and ancillary services from the notional revenue requirement as set out in Table 9.2. 121

– At the next price review, to investigate, on a proportionate basis, Hunter Water's miscellaneous and ancillary charges, including undertaking some targeted benchmarking of the costs of providing these services. 121

27 We have decided to maintain the current bulk water transfer price at $0.65/kL ($2015-16) indexed over the determination period, pending a wider review of bulk water prices to be charged by Hunter Water, Gosford City Council and Wyong Shire Council. 126

28 We have decided to set the Clarence Town Levy at $42.50 ($2015-16) per annum to be maintained in real terms until 30 June 2019. 127

29 We have decided to transition to an unfiltered water charge at the potable water usage rate minus $0.19 kL over the determination period as outlined in Table 9.4. 128

30 We have decided to maintain the current approach to charging unmetered properties comprising a service charge and a deemed water usage component and set the water service charge: 130

– equivalent to the non-residential stand-alone 20mm meter charge; and 130

– based on 180 kL of deemed water usage per year. 130

31 We have decided to consider the major service connection charge as part of a later consolidated review of developer charges and backlog sewerage services for the metropolitan water utilities. 131

Draft recommendation

1 Under the Section 12A referral received on 7 December 2015, we recommend Hunter Water's proposed irregular and dishonoured fees as outlined in Appendix G. 124

Recycled Water Pricing

32 We have decided to defer regulation of Hunter Water's recycled water prices until we have completed a broader review of our approach to regulating recycled water prices. 133

2 Form of regulation

Form of regulation refers to the methods used to regulate prices for monopoly services. These methods include how costs are assessed, whether prices are directly or indirectly controlled, how differences between forecast and actual demand are handled, and how performance gains are incentivised.

At the same time as reviewing Hunter Water prices, IPART is also undertaking reviews of WaterNSW (Greater Sydney) and Sydney Water. We noted in the Issues Paper that decisions made in these other price reviews may influence our decisions in this review of Hunter Water's prices.

As part of these other reviews, we are making changes to the form of regulation. These changes are aimed at achieving more effective regulation, which encourages businesses to become more efficient and gives them flexibility to better respond to customers' preferences.

The Draft Report for the Sydney Water price review provides detailed discussion of the form of regulation changes, the options considered in that review and the framework used for assessing the options.[20]

In the Issues Paper for this review of Hunter Water's prices, we noted that Hunter Water did not propose any changes to the form of regulation. We sought comments on whether we should apply some of the form of regulation changes (ie, greater pricing flexibility and an efficiency carryover mechanism) proposed in the concurrent price reviews to Hunter Water. This chapter sets out our decisions in relation to the form of regulation changes for Hunter Water for the 2016 determination.

2.1 Pricing flexibility

Our current form of regulation involves us setting price structures and maximum price levels for regulated services that apply for each year of the determination period.

[20] IPART, *Review of prices for water, wastewater, stormwater and other services for Sydney Water – Draft Report*, March 2016, chapter 2.

Sydney Water proposed increasing pricing flexibility through a weighted average price cap (WAPC). The proposal would allow Sydney Water to vary prices during the period for different customer groups.[21]

In our Issues Paper for this review of Hunter Water's prices, we said we are open to further considering Sydney Water's proposal for a WAPC, with a view to allowing this to apply to Sydney Water's regulated services for larger non-residential customers (ie, with a connection or connections greater than a 20mm meter equivalent), subject to suitable pricing principles, side constraints or the option for customers to 'opt in' to the WAPC.

Draft decision

1 We have decided to:

- allow Hunter Water and large non-residential customers to opt out of IPART's determined water and sewerage prices by voluntarily entering into unregulated pricing agreements, and
- define large non-residential customers as stand-alone non-residential customers that have annualised water consumption greater than 7.3 ML.

2.1.1 Reasons for draft decision

We support introducing pricing flexibility during the determination period, where it is likely to lead to more efficient prices and/or deliver value to customers.

In response to our Issues Paper, Hunter Water stated it was not proposing any form of regulation changes as part of the 2016 Determination. While it understands the merits of providing incentives to reduce costs and allowing greater pricing flexibility, the WAPC and efficiency benefits sharing scheme (EBSS –discussed below) involve some degree of complexity and additional administrative burden. Hunter Water considered that it would be best to reflect on the lessons learnt by Sydney Water over the 2016 determination period, before proposing similar measures. Hunter Water noted that the proposed form of regulation changes involve additional operational and administrative costs.

As part of the Sydney Water review, we considered two key options to increase pricing flexibility in light of Sydney Water's proposal.[22] These options were:

- a weighted average price cap, and
- unregulated pricing agreements.

21 Sydney Water pricing proposal to IPART, June 2015, pp 246-258.

22 IPART, *Review of prices for water, wastewater, stormwater and other services for Sydney Water – Draft Report*, March 2016, chapter 2.

For Sydney Water, our draft decision is to allow it and large non-residential customers to enter into **unregulated pricing agreements**. Under this approach, we would continue to set maximum prices for all monopoly services that Sydney Water supplies. However, if Sydney Water and a large non-residential customer enter into a pricing agreement, then Sydney Water and that customer would not be subject to IPART's determined prices for water supply and sewerage services to the extent that such prices are set in the pricing agreement.

Our draft decision is to apply the same approach to increasing pricing flexibility to Hunter Water for the 2016 Draft Determination.

These pricing agreements would only apply where Hunter Water and the customer have reached an agreement. Otherwise, the default arrangement is that prices set by IPART would apply.

This form of pricing flexibility would allow Hunter Water to search for opportunities to uncover value for its customers by tailoring prices, and potentially services, to better meet their individual preferences, just like in a competitive market. It would encourage Hunter Water to engage with its customers to develop mutually beneficial price offers specifically targeted to individual customer's preferences.

In its response to the Issues Paper, Hunter Water noted that it has a number of large industrial and commercial customers located near residential populations where there are capacity constraints in the water network.[23] Allowing Hunter Water and its customers to enter into unregulated pricing agreements would enable customer-specific pricing arrangements to be negotiated, which could lead to mutually beneficial outcomes for both Hunter Water and its customers. If these arrangements allowed capital expenditure to be deferred, for example, this would benefit all of Hunter Water's regulated customers.

This would also mean that there is a consistent approach to pricing flexibility provided to Hunter Water and Sydney Water and their large non-residential customers. The consistent application of the changes to the form of regulation to both Hunter Water and Sydney Water was supported by PIAC.[24]

We note that there are risks associated with entering into unregulated pricing agreements. The main risk is that a customer may enter into a pricing agreement that is not in its best interests. If this occurs, the legislative framework does not explicitly permit a customer to opt back in to regulated prices while the unregulated agreement is in place. We have mitigated this risk, at least to some extent, by limiting the option of unregulated pricing agreements to large non-residential customers (we discuss our definition of large non-residential customers below).

23 Hunter Water response to IPART Issues Paper, October 2015, p 3.
24 PIAC response to IPART Issues Paper – Hunter Water, p 8.

Coverage of unregulated pricing agreements

We are proposing that Hunter Water and large non-residential customers should be able to opt out of IPART's regulated prices for water supply services and sewerage services only. The Draft Determination does not allow Hunter Water and large non-residential customers to opt out of IPART's regulated prices for trade waste, stormwater, or ancillary and miscellaneous charges. However, we are interested in stakeholder feedback on the services of which Hunter Water and large non-residential customers should and should not be able to opt out by entering into unregulated pricing agreements.

We have limited the option of entering into unregulated pricing agreements to large non-residential customers. This option would be available to large non-residential customers at any time during the determination period.

We have limited the option of entering into unregulated pricing agreements to large non-residential users because these large businesses are likely to have experience negotiating commercial agreements and there is low risk that these customers would enter into an agreement that they do not fully understand.

EWON supported the introduction of flexible pricing for these customers as it would better match pricing to the usage profile of large businesses, provide customer choice, and offer incentives to encourage efficient usage. It did not support the extension of flexible pricing to residential customers until at least advanced metering technology is in place to facilitate a shift to flexible pricing.[25]

We have defined large non-residential customers as non-residential customers:

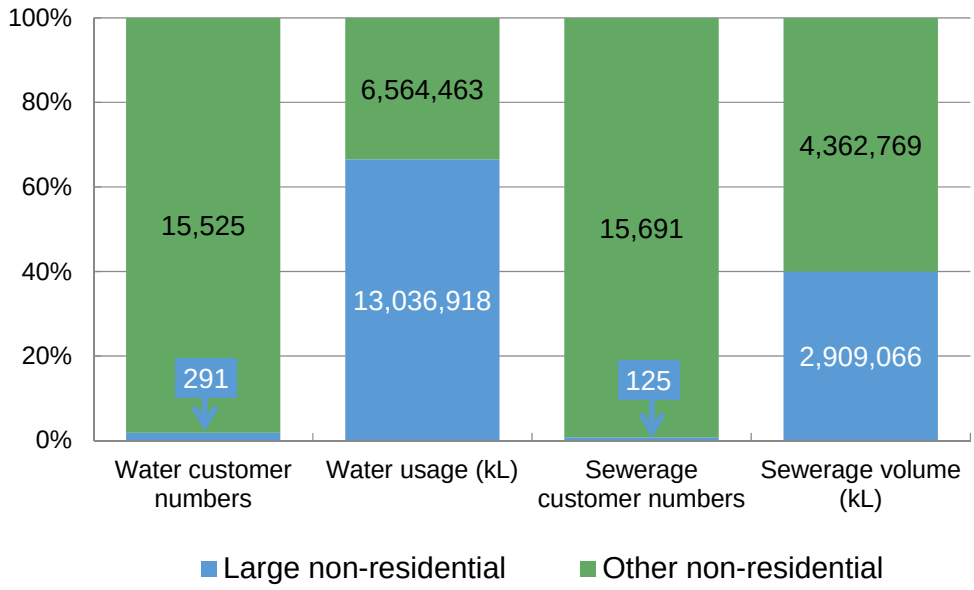
- that are standalone water or water and sewerage customers (ie, not customers that share a connection with other customers), and
- that have annualised metered water consumption greater than 7.3 ML (ie, water consumption greater than 20 kL per day on average).

Large non-residential customers would need to meet this definition in order to enter into an unregulated pricing agreement with Hunter Water.

We note that this definition comprises a relatively small portion of Hunter Water's non-residential customers in terms of numbers, but applies to a large portion of non-residential water usage and sewerage volumes. This is shown in Figure 2.1.

[25] EWON response to IPART Issues Paper – Hunter Water, October 2015, p 1.

Figure 2.1 Large non-residential customers as a share of total non-residential customers (2014-15)



Data source: Hunter Water, email received by IPART on 19 February 2016.

Hunter Water has differential water usage prices that apply to around twenty of its major industrial and commercial customers who use more than 50 ML per year and are located in specific zones within its area of operation. These customers may choose to enter into unregulated pricing agreements.

Our draft decision for pricing flexibility applies to a larger number of Hunter Water's non-residential customers.

We are interested in stakeholder feedback on our definition of large non-residential customers and whether there is a more appropriate definition. Specifically, we are interested in views on whether there is merit in lowering the threshold to allow a larger share of non-residential customers the option of entering an unregulated pricing agreement with Hunter Water.

Implications for Hunter Water's revenue and costs

Pricing flexibility has the potential to benefit both customers and Hunter Water. The potential for mutual gains provides incentives for Hunter Water and customers to engage with each other, uncover value, and agree on unregulated prices that share this value between Hunter Water and customers. We consider these incentives should be maintained over time by allowing Hunter Water and customers to retain any gains they generate through unregulated pricing agreements.

Gains retained by Hunter Water should be retained regardless of whether they are the result of increases in revenue or decreases in costs. While this is relatively straightforward for changes in revenue (additional revenue is automatically retained by the business), it can present challenges for changes in costs (which may be difficult to go back and isolate from the business's wider cost base).

To ensure that the regulated cost base and regulated prices continue to reflect the efficient costs of providing regulated services in the future, we would require Hunter Water to 'ring-fence' any changes in costs resulting from unregulated price agreements. This information would be assessed and factored into resetting expenditure allowances at the next price review. We will engage with Hunter Water between the Draft and Final Report to establish how this information would be recorded and reported.

Implementation of unregulated pricing agreements

This draft decision does not exclude large non-residential customers from the determination. Rather, we would continue to set maximum prices for monopoly services that would apply generally.

If a large non-residential customer chooses to enter a pricing agreement with Hunter Water, the customer would no longer be subject to IPART's determined prices for the services included in the agreement. To that extent, we have identified some key features and implications of unregulated pricing agreements that should be considered by both parties before entering into an agreement:

1. **The legislative framework does not allow for either party to opt back into regulated prices while the pricing agreement is in place.** For such a right to exist, it would have to be written into the pricing agreement or both parties would have to agree to terminate the pricing agreement.
2. **We do not specify what terms are to be included in the pricing agreement.** The terms of a pricing agreement are negotiated and/or accepted by the customer. This includes the duration of a pricing agreement (ie, end date) and conditions for terminating and cancelling pricing agreements (eg, whether Hunter Water's consent is required to terminate a pricing agreement).
3. **The terms of a pricing agreement apply.** If the pricing agreement contains terms that are inconsistent with any provisions contained in Hunter Water's customer contract, the provisions in the customer contract will cease to apply to the extent of the inconsistencies.
4. **If an agreement extends beyond a determination period, this could have implications for the prices contained within the pricing agreement.**
   a) Prices contained in pricing agreements will be valid as long as the option to opt out of determined prices applies in future regulatory periods. If a future Tribunal removes this option from a determination, it could mean that prices contained in unregulated pricing agreements are no longer valid. Specifically, where the price in the pricing agreement is higher than

IPART's determined maximum price, the agreed price would be unlawful to the extent that it involves Hunter Water fixing a price above the determined maximum price.

b) Where the price in the pricing agreement is lower than IPART's determined maximum price, the parties to the pricing agreement may disagree on which of those prices apply. For example, a party may claim that the price in the pricing agreement does not apply unless the NSW Treasurer's approval to fix the price below IPART's determined price is obtained (in accord with section 18(2) of the IPART Act).

c) We consider these risks could be mitigated, at least to some extent, by aligning the pricing agreement dates with Hunter Water's price determinations.

2.2 Efficiency carryover mechanism

Our current form of regulation allows a business to keep any benefits resulting from efficiency savings in operating or capital expenditure that it makes during the regulatory period.[26] This can occur because we set maximum prices for the regulatory period (eg, four years) based on our assessment of the business's efficient costs (or its revenue requirement) over that period. If the business can deliver its services at a lower cost than we allow for in setting maximum prices, then it retains the benefits until we reassess the business's costs for the next regulatory period, at the next price review.

This feature of our form of regulation is referred to as 'incentive regulation' because it provides a financial reward to incentivise businesses to deliver cost savings. Cost savings are considered a good thing because, if they are permanent, they can be passed on to customers, through lower prices, in subsequent regulatory periods (when the regulator re-sets prices based on its assessment of efficient costs).

A shortcoming of the current approach is that, to the extent there are opportunities to make permanent efficiency savings, the financial reward for achieving these savings deteriorates over the regulatory period. That is, a saving made in year one of the regulatory period results in four years of additional profit. Whereas a saving made in year three of the regulatory period results in just two years of additional profits.

The consequence of this feature of our form of regulation is that there is an incentive to delay savings from the latter years of one regulatory period to the early years of the next regulatory period. Delaying efficiency savings is wasteful and it means customers have to wait longer before they benefit from lower prices.

[26] By 'regulatory period', we mean determination period – ie, the duration of the determination, which is usually four years.

An efficiency carryover mechanism allows gains (or losses) to be held for a specified period of time, regardless of when they are achieved within the regulatory period. In its pricing proposal, Sydney Water proposed a symmetric efficiency benefit sharing scheme (EBSS) applying to controllable operating expenditure and a portion of capital expenditure.[27] WaterNSW also proposed an EBSS for operating expenditure for its Greater Sydney bulk water price determination.[28]

In our Issues Paper, we said that we were open to considering a modified version of Sydney Water's proposed operating expenditure EBSS and said that we were unlikely to adopt a capital expenditure EBSS at this time.

Draft decision

2 We have decided to establish an efficiency carryover mechanism for Hunter Water. This mechanism:

- applies to controllable operating expenditure from 2015-16 to 2018-19
- ensures the business is able to retain permanent cost reductions for four years before they are passed on to customers through lower prices, and
- allows the business to retain temporary over and under spends.

2.2.1 Reasons for draft decision

We have made a decision to adopt an efficiency carryover mechanism (ECM) to controllable operating expenditure at the next price reviews for Hunter Water, Sydney Water and Water NSW. This ensures a consistent approach to regulation across water utilities.

Our Draft Report for the Sydney Water review provides a detailed discussion on the options that we considered and the assessment that we undertook to determine the design of the ECM that is to be applied.

The objective of the ECM is to equalise the incentive to make permanent efficiency savings, regardless of when they are made within the regulatory period. This is done by enabling Hunter Water to retain permanent efficiency savings for four years regardless of when they are made during the regulatory period.

We consider the ECM would improve the form of regulation by removing the incentive to delay cost savings. Accelerating the delivery of these cost savings is in the long term interests of Hunter Water's customers.

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27 Sydney Water pricing proposal to IPART, June 2015, pp 254-265.
28 WaterNSW pricing proposal to IPART, p 63.

In its response to our Issues Paper, Hunter Water stated that it understands the merits of providing incentives to reduce costs but that this would involve some degree of complexity and additional administrative burden.[29]

Our ECM is asymmetric in the sense that while it equalises the incentive to achieve permanent efficiency savings over time, it preserves all other features of the current form regulation. That is:

- Permanent cost increases are held by the business until the next price review where they are assessed by the regulator and, if determined to be efficient, passed on to customers (through price increases as a result of an increase in the business's operating expenditure allowance) – this provides an incentive for the business to avoid inefficient increases in costs.
- Temporary over and under spends are retained by the business – this provides an incentive for the business to operate within its budget.

Similar to the approach taken for Sydney Water, we intend to apply the ECM to Hunter Water's controllable operating expenditure.

Implementing the ECM at future price reviews and the role of the expenditure review

We are consulting on our proposed ECM as part of this Draft Report. If included in the Final Report, our expression of intent to adopt an ECM as outlined above does not bind a future Tribunal to adopt such a mechanism. Therefore, we cannot prevent a future Tribunal deciding not to adopt, remove, amend, or replace the ECM. We acknowledge that the effectiveness of incentive mechanisms rests on the confidence businesses have in them.

The process for implementing the ECM at the next price review can be described in four steps:

- Did Hunter Water **permanently** reduce costs below the allowance ($X)?
- In which year was this saving achieved (n)?
- Ensure the allowance in the next regulatory period reflects the saving = $X.
- Carryover an efficiency benefit to the next regulatory period equal to $X*(n-1) to ensure Hunter Water retains the benefit for four years.[30]

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29 Hunter Water response to IPART Issues Paper, October 2015, p 3.

30 For example, if the business makes a $10 million (X=$10m) saving in year 3 (n=3) of a 4-year regulatory period, the ECM ensures the $10 million saving is factored into the expenditure allowance of the next regulatory period and it provides a carryover benefit of $10 million * (3-1) = $20 million in the next regulatory period. Adding this $20 million carryover benefit to the $20 million gained from underspending in years 3 and 4 of the first regulatory period means the total benefit to the business is $40 million (4 X $10m).

Importantly, a key feature of our ECM is that we would retain discretion in resetting expenditure allowances at the start of each regulatory period. The role of the expenditure review is therefore maintained and we would continue to set expenditure allowances to reflect the best available information on efficient costs. We will continue to monitor historical expenditure patterns and factor this information into our expenditure review process.

In preparation for the next price review, we would request that Hunter Water populate and submit the ECM spreadsheet along with its pricing proposal. We would then use the populated ECM spreadsheet as a tool to inform the expenditure review. Our expectation is that by removing the incentive to delay savings and providing a tool for utilities to demonstrate their performance over the regulatory period, the ECM would improve the amount and quality of information available to us at the next round of expenditure reviews.

Appendix E of the Draft Report for the Sydney Water review sets out the design of the ECM in greater detail and provides worked examples showing how the ECM would be applied in various scenarios.

2.3 Performance benchmarking

Our current form of regulation makes some use of benchmarking in assessing a business's performance during the expenditure review undertaken by consultants. In our Issues Paper for the Sydney Water review, we indicated our intention to make greater use of performance benchmarking of urban water utilities in NSW.[31]

We have also undertaken performance benchmarking work in the urban water and transport sectors. For example, in 2010 we reviewed the productivity of selected State-Owned Corporations (SOCs).[32] More recently, as part of our current review into public transport fares, we published an information paper on the total factor productivity of Sydney's rail network.[33]

Draft decision

3 We have decided to work with regulated businesses and regulators in other jurisdictions to develop a performance benchmarking capability to inform future price reviews.

31 IPART, Issues Paper for Sydney Water Price Review, September 2015, pp 80-81.
32 IPART, *Review of the productivity of state owned corporations - Final Report*, July 2010.
33 IPART, *Information Paper 13 – Total Factor Productivity Sydney's rail network*, December 2015.

2.3.1 Reasons for our draft decision

In a competitive market, firms are continually benchmarked against each other by their customers. Customers will gravitate towards strong performers that are offering value for money and away from poor performers that are not offering value for money. These competitive forces drive businesses to improve. In the absence of competition, there is an opportunity for the regulator to simulate these competitive forces by undertaking benchmarking.

There are several benefits to performance benchmarking, it would:

- Help inform our expenditure reviews.
- Help businesses demonstrate their performance.
- Simulate competitive forces and help drive businesses to improve.

Benchmarking urban water businesses in NSW is challenging for a number of reasons - there are relatively few water businesses and each varies significantly in size and scope of operations. However, we consider the potential value in benchmarking justifies us finding solutions to these challenges and developing a performance benchmarking capability.

There are several approaches to performance benchmarking that we intend to consider and develop, including:

- **Cost driver and activity benchmarking.** This approach analyses and compares specific cost drivers (eg, labour expenses) and activities (eg, IT and billing systems) against other businesses. Some functions (eg, billing) are general enough to be compared across businesses in different sectors.
- **Productivity index analysis.** This approach allows relatively small samples of firms to be benchmarked against each other. This is relevant in NSW where there are few urban water utilities. This approach also allows analysis of changes in a business's own productivity over time.
- **Efficiency frontier analysis.** This approach involves measuring a business's efficiency relative to an efficiency frontier, where the frontier represents the most efficient performance, across a range of measures, from a sample of comparable businesses.

There are opportunities to benefit from the benchmarking capabilities that have already been developed in other jurisdictions. For example, the Essential Services Commission (ESC) in Victoria has considerable experience in benchmarking urban water utilities.[34] Ofwat in the UK and the AER in Australia have also developed and applied benchmarking methodologies, which we can learn from. There may also be opportunities to collaborate with regulators in other jurisdictions to broaden the set of comparator utilities included in comprehensive benchmarking exercises.[35]

We note that the success of a performance benchmarking program depends significantly on the extent of involvement and buy in from the utilities. A major challenge will be developing and refining data sets for the regulated businesses.

However, we consider benchmarking complementary to potential further changes in the form of regulation, as is the case in the UK. Developing datasets by business function could also facilitate a future move towards component pricing, which would make costs more transparent, assist in performance comparisons, and could open the sector up to greater competition.

34 For example: ESC, *Victorian Urban Water Utility Benchmarking – prepared by Economic Insights,* January 2014.

35 Note that this collaboration would extend the work already undertaken and published through the national performance report.

3 Length of determination period and revenue requirement

The first step in our approach for determining prices is to decide on the length of the determination period and the approach for calculating Hunter Water's revenue requirement over this period. This chapter outlines our draft decisions on each of these issues.

3.1 Length of determination period

Draft decision

4 We have decided to adopt a 4-year determination period from 1 July 2016 to 30 June 2020.

3.1.1 Reasons for our draft decision

We have accepted Hunter Water's proposal for a 4-year determination period from 1 July 2016 to 30 June 2020. In making our draft decision we considered stakeholder submissions, as well as the following issues:

- **The confidence we can place in the utility's forecasts.** A 4-year determination gives sufficient confidence in our forecasts of capital and operating expenditure. We have less confidence in the detailed expenditure forecasts beyond June 2020.
- **The risk of structural changes in the industry.** A 4-year determination period balances the risk of structural change in the industry. We consider that significant structural change is unlikely in the next four years. However, the number of utilities operating under the *Water Industry Competition Act 2006* (the WIC Act) is growing, showing that the industry is potentially changing.
- **The need for price flexibility and incentives to increase efficiency.** A 4-year determination provides sufficient incentives to achieve efficiencies, while allowing for a timely reset of prices.
- **The need for regulatory certainty and financial stability**. A 4-year determination generally provides sufficient regulatory certainty, while balancing financial stability.

We have also decided to set a 4-year determination period for Sydney Water. It is useful to align Hunter Water's and Sydney Water's price reviews, as this provides for more consistent regulatory decisions for similar water utilities and allows better comparison of performance.

In response to stakeholder concerns[36] about aligning the water utilities' determination periods, we are mindful that smaller organisations may have limited resources to meaningfully respond to issues raised in concurrent price reviews. We will assess whether this has been a significant issue throughout this review, and consider whether there is scope to provide stakeholders more time to provide submissions for subsequent concurrent reviews.

3.2 Approach for calculating the notional revenue requirement

The **notional revenue requirement** represents our view of the total efficient costs of providing Hunter Water's regulated services to its customers in each year of the determination period. In general, we set prices to recover this amount of revenue.

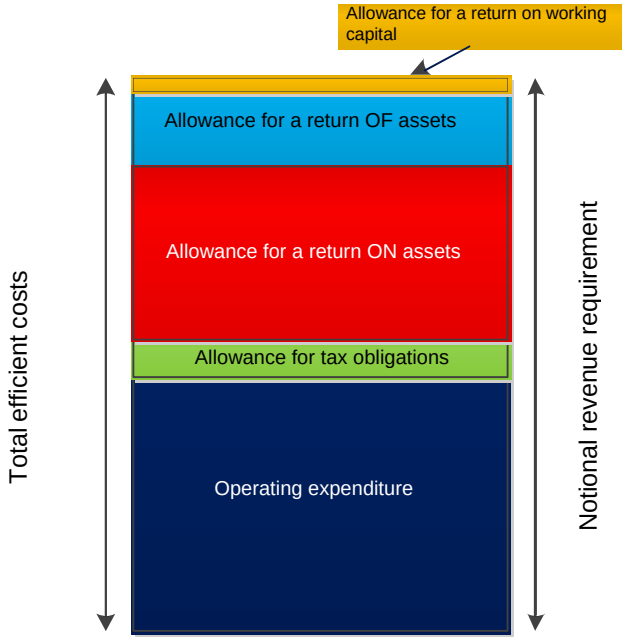
As for previous reviews, we have used a 'building block' method to calculate Hunter Water's revenue requirement. This method involves determining, for each year of the determination period, an allowance for:

- **Operating expenditure,** which represents our estimate of the efficient level of Hunter Water's forecast operating, maintenance and administration costs.
- A **return on the assets** Hunter Water uses to provide its services. This amount represents our assessment of the opportunity cost of the capital invested in Hunter Water, and ensures that it can continue to make efficient capital investments in the future. To calculate this amount, we need to decide on the efficient and prudent levels of Hunter Water's past and forecast capital expenditure, the value of Hunter Water's regulatory asset base (RAB), and the appropriate weighted average cost of capital (WACC).
- A **return of those assets (regulatory depreciation).** This allowance recognises that through the provision of services to customers, a utility's capital infrastructure will wear out over time, and therefore revenue is required to recover the cost of maintaining the RAB. To calculate this allowance, we need to decide on the appropriate asset lives and depreciation method.
- An **allowance for meeting tax obligations**. We use a real post-tax WACC to calculate the allowances for a return on assets, and calculate the allowance for tax as a separate cost block. We consider this method accurately estimates the tax liability for a comparable commercial business.
- An **allowance for a return on working capital**, which represents the holding cost of net current assets.

[36] Total Environment Centre submission to IPART, October 2015, p 2.

The sum of these allowances is the notional revenue requirement (see Figure 3.1).

Figure 3.1 Building block approach



Once we calculated Hunter Water's notional revenue requirement, we decided on the approach we should use to convert this amount into prices. This involved deciding on the **target revenue** for each year – that is, the actual revenue we expect Hunter Water to generate from prices and charges for that year. To make this decision, we considered a range of factors, including:

- the implications of the notional revenue requirement on price levels, and the rate and way in which they would change, and
- the impact of this on Hunter Water and its customers.

3.2.1 Hunter Water's revenue requirements

Draft decision

5 We have decided to:

- set Hunter Water's notional revenue requirement and target revenue as shown in Table 3.1, and
- set the components of the target revenue as shown in Table 3.6.

Table 3.1 IPART's draft findings and decisions on Hunter Water's revenue requirement ($ millions, $2015-16)

	2016-17	2017-18	2018-19	2019-20	Total
Draft decision					
Operating expenditure	128.8	130.9	132.5	132.9	525.0
Return on assets	114.0	116.6	118.8	120.7	152.9
Regulatory depreciation	34.7	36.9	39.3	42.0	470.2
Return on working capital	1.4	1.5	1.5	1.6	5.9
Tax allowance	6.8	7.1	7.5	8.1	29.5
Total notional revenue requirement	**285.7**	**293.0**	**299.6**	**305.3**	**1,183.5**
Target revenue	**282.0**	**290.9**	**300.7**	**310.8**	**1,184.4**
Rate of return[a]	4.6%	4.7%	4.8%	5.0%	4.8%

[a] Effective real post-tax rate of return. We set target revenue to be NPV neutral with the notional revenue requirement (NRR) over the 4-year determination period. In some years, target revenue is higher than the NRR, and in some years lower. As such, the predicted rate of return varies slightly from the WACC of 4.8% from year to year.

Note: Totals may not add due to rounding.

3.2.2 Reasons for our draft decision

Comparison with Hunter Water's proposal

Our draft notional revenue requirement of $1,183.5 million is $25.4 million (2.2%) higher than Hunter Water's proposal over the four years of the 2016 determination period. The notional revenue requirement is shown below in Table 3.2, compared to Hunter Water's proposal.

Table 3.2 Draft finding on notional revenue requirement compared with Hunter Water's proposal ($millions, $2015-16)

	2016-17	2017-18	2018-19	2019-20	Total
Hunter Water's proposal[a]	280.4	287.8	292.5	297.5	1,158.1
IPART's draft decision	285.7	293.0	299.6	305.3	1,183.5
Difference	5.3	5.2	7.1	7.8	25.4
Difference %	1.9%	1.8%	2.4%	2.6%	2.2%

[a] We have included bulk water costs of about $1.0 million to facilitate a comparison with our draft decision.

Note: Totals may not add due to rounding. The notional revenue requirement is our assessment of the efficient economic costs of delivering services. Before setting prices, we make other adjustments such as subtracting non-regulated income.

Source: Hunter Water's pricing proposal to IPART, June 2015, pp 65-66 and IPART calculations.

Table 3.3 below compares each of our building blocks with Hunter Water's proposal over the 2016 determination period. The main reasons for the difference are our draft decisions to:

- Lower operating expenditure (**-$9.4 million**) – mainly through lower costs for labour, head office lease, new initiatives and Lower Hunter Water Plan activities than proposed by Hunter Water, as well as continuing efficiency adjustments.
- Higher return on assets (**+$23.8 million**) through:
  - a higher WACC of 4.8% compared with Hunter Water's proposed 4.6%
  - a higher RAB arising from lower cash capital contributions than Hunter Water originally included in its June pricing proposal, and
  - partially offset by a lower RAB arising from around $23 million less capital expenditure over four years than Hunter Water proposed, as well as from our revised methodology for non-significant asset disposals.
- Higher regulatory depreciation (**+$14.4 million**) – due to our decision to use shorter asset lives (to better reflect the economic life of assets in Hunter Water's RAB).
- Lower tax allowance (**-$3.4 million**) – mainly due to our change in approach to not include a tax allowance for cash capital contributions (rather, any tax obligations are to be paid directly from the contributions received).

Table 3.3 IPART draft and Hunter Water proposed notional revenue requirement over the 2016 determination period ($ millions, $2015-16)

	Total for 2016-17 to 2019-20			
Building block	**Hunter Water proposed**	**IPART draft decision**	**Difference**	**Difference (%)**
Operating expenditure	534.4[a]	525.0	-9.4	-1.8%
Return on assets	446.4	470.2	23.8	5.3%
Regulatory depreciation	138.6	152.9	14.4	10.4%
Return on working capital	5.9	5.92	0.1	1.0%
Tax	32.9	29.5	-3.4	-10.4%
Total	1,158.1	1,183.5	25.4	2.2%

a We have included bulk water costs of about $1.0 million to facilitate a comparison with our draft decision.

Note: We have Totals may not add due to rounding.

Comparison with our 2013 determination

Our draft notional revenue requirement is also $49.9 million (4.4%) above what we used to set prices at the 2013 Determination. Table 3.4 below compares each of the building blocks between those we used to set prices at the 2013 Determination, and our draft findings for the 2016 Determination.

Table 3.4 Comparison of IPART's draft notional revenue for the 2016 determination period with the 2013 determination period ($millions, $2015-16)

	4-year total			
Building block	**2013-17**	**2016-20**	**Difference**	**Difference (%)**
Operating expenditure	522.2	525.0	2.8	0.5%
Return on assets	432.2	470.2	38.0	8.8%
Regulatory depreciation	134.8	152.9	18.1	13.4%
Return on working capital	3.8	5.9	2.1	53.8%
Tax	40.6	29.5	-11.1	-27.3%
Total	**1,133.6**	**1,183.5**	**49.9**	**4.4%**

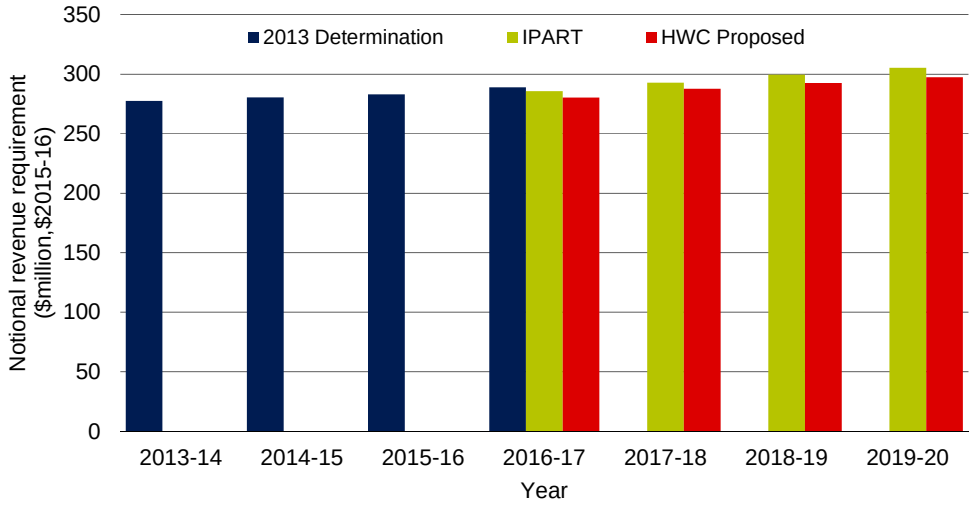
Note: Totals may not add due to rounding.

In relation to the key components of Hunter Water's notional revenue requirement, the differences between our decisions for the 2013 Determination and our draft decision for the 2016 Determination include:

- higher return on assets due to an increase in the WACC from 4.6% to 4.8% (refer to Chapter 6 and Appendix E)
- higher regulatory depreciation due to our decision to adopt shorter asset lives that better reflect the actual economic lives of assets in Hunter Water's asset base
- lower tax allowance due to our change in approach to not include a tax allowance for cash capital contributions, and
- slightly higher operating expenditure to meet increasing water and sewerage demands, due to anticipated growth in forecast connections to Hunter Water's network, and other necessary cost increases such as those associated with the Lower Hunter Water Plan.

Figure 3.2 below compares our draft decision on the notional revenue requirement for the 2016 determination period with both Hunter Water's proposed revenue requirement for this period and the notional revenue requirement we used to set prices over the 2013 determination period.

Figure 3.2 Comparison of 2016 draft notional revenue requirement with 2013 Determination and Hunter Water's proposal ($million, $2015-16)



Data source: Hunter Water pricing proposal to IPART, pp 65-66; IPART analysis.

Our draft decisions and findings on each of Hunter Water's building blocks are discussed in more detail in Chapters 4 to 6 of this Draft Report.

Target revenue

We have decided to set target revenue that provides customers with relatively smooth prices and bills over the 2016 determination period, such that Hunter Water can expect to achieve full cost recovery over the period in NPV terms. This means that while the target revenue is higher than the notional revenue requirement in some years and lower in other years, customers are no better or worse off over the whole determination period (in present value terms).

When making decisions regarding the revenue that Hunter Water receives from prices, we have been mindful of the impact that bringing forward Hunter Water's price review might have on its customers in the first year of the new determination period (ie, 2016-17), which would have been the last year of the current determination period. We have also given regard to Hunter Water's revenue requirements over the 2016 determination period.

For residential customers, there would be a small percentage increase in bills in the first year, followed by relatively small equal percentage increases in subsequent years of the 2016 determination period. For non-residential customers, there would be a small decrease in bills in the first year, followed by relatively larger decreases in subsequent years of the 2016 determination period.

Where increases in prices are necessary in the 2016 Determination, we generally applied a relatively small percentage increase in the first year. We provide further discussion on prices and bill impacts in Chapters 8, 9 and 11.

The total target revenue is $1,184.4 million over four years, which is $19.1 million higher than proposed by Hunter Water.[37] The target revenue is shown below in Table 3.5. It results in full cost-recovery in NPV terms over the 4-year period, with a slight under-recovery (-1.3%) in 2016-17 and a slight over-recovery (1.8%) in 2019-20.

Table 3.5 Comparison of draft notional revenue requirement and target revenue ($ million, $2015-16)

	2016-17	2017-18	2018-19	2019-20	4-yr NPV
Water	135.3	138.2	142.1	144.9	500.9
Sewerage	146.0	150.4	152.9	155.7	540.7
Stormwater	4.4	4.4	4.6	4.6	16.1
Notional revenue requirement	**285.7**	**293.0**	**299.6**	**305.3**	**1,057.8**
Water	128.9	136.3	144.2	152.4	501.0
Sewerage	148.8	150.1	152.0	153.7	540.7
Stormwater	4.3	4.4	4.5	4.7	16.1
Target revenue	**282.0**	**290.9**	**300.7**	**310.8**	**1,057.8**
Difference $	-3.7	-2.1	1.1	5.5	0.0
Difference %	-1.3	-0.7	0.4	1.8	0.0%
Return on assets	4.6%	4.7%	4.8%	5.0%	4.8%

Components of the target revenue

Whilst most of Hunter Water's revenue is raised through water, sewerage and stormwater drainage charges, it also generates revenue through other charges. When we set prices, we first deduct the total revenue generated from these other sources, and then set usage and service charges for its major services to raise the balance of the target revenue.

The revenue components of Hunter Water's total target revenue are set out in Table 3.6 below.

[37] We estimate that Hunter Water's target revenue is higher than its NRR by about $7.1 million over the four years to 2019-20. Hunter Water's total NRR is about $1,157.2 million and its target revenue is about $1,164.3 million.

Table 3.6 IPART's draft findings and decisions on the components of Hunter Water's target revenue ($ millions, $2015-16)

	2016-17	2017-18	2018-19	2019-20
Target revenue	**282.0**	**290.9**	**300.7**	**310.8**
Less				
Non-regulated revenue (rental income)	*1.1*	*1.1*	*1.1*	*1.1*
Non-regulated revenue (recycled water)[a]	*0.2*	*0.1*	*0.1*	*0.1*
Bulk water sales[b]	*0.2*	*0.2*	*0.2*	*0.2*
Revenue from potable top-up[c]	*0.1*	*0.1*	*0.1*	*0.0*
Unfiltered water sales	*0.1*	*0.1*	*0.1*	*0.1*
Miscellaneous	*2.8*	*2.8*	*2.8*	*2.8*
Trade waste	*2.1*	*2.1*	*2.1*	*2.1*
Revenue from usage and service charges	**275.5**	**284.4**	**294.3**	**304.5**

[a] Revenue from recycled water schemes classified as sewerage assets.

[b] Includes bulk water sales to Gosford City Council, Wyong Shire Council and MidCoast Water.

[c] Notional revenue from recycled water schemes using potable water to top-up supply.

Note: Totals may not add due to rounding.

As part of this draft determination, we have made a number of draft decisions relating to the revenue components shown in the table above. Revenue from unfiltered water sales, miscellaneous charges and trade waste fees and charges are discussed in Chapter 9. Revenue from non-regulated income, rental income and recycled water are discussed in the sections below.

Non-regulated rental income

Historically, we have deducted non-regulated revenue[38] derived from regulated assets from the notional revenue requirement before prices are set. In the 2008 Sydney Water price review, we decided to deduct 50% of Sydney Water's rental income from the notional revenue requirement. This 50% sharing of rental income approach was adopted and maintained for subsequent water price reviews, including for Hunter Water. The rationale for sharing the income is that it gives the agency a financial incentive to pursue more rental income where appropriate – while ensuring that 50% of the benefits will eventually flow on to customers through lower prices.

We have decided to maintain the above approach again for this price review.

[38] This is distinct from unregulated revenue, which is revenue that is received from an agency's unregulated businesses; that part of the business applied to producing products or services other than regulated business services.

Non-regulated revenue from recycled water assets classified as sewerage assets

Hunter Water also has non-regulated revenue from recycled water assets that are classified as sewerage assets. They are classified as sewerage assets because they are the least cost option to meet EPA licence requirements, and so are appropriately funded by regulated customers.

We note that Hunter Water sells the recycled water (a by-product) from these schemes to a range of small customers, including farms and golf clubs for a nominal amount.

Similar to rental income, we have decided to share 50% of the income with Hunter Water, as it provides a financial incentive for Hunter Water to pursue such customers. If more of the by-product is sold from these schemes, then it would result in benefits to regulated customers through lower prices.

Table 3.7 below sets out Hunter Water's forecast non-regulated revenue and the amount we deduct from target revenue.

Table 3.7 IPART's draft findings and decisions on Hunter Water's non-regulated income ($ million, $2015-16)

	2016-17	2017-18	2018-19	2019-20
Total rental income	2.2	2.1	2.1	2.1
Total revenue from recycled water assets (classified as sewerage assets)	0.3	0.2	0.2	0.2
Total non-regulated income	2.5	2.4	2.3	2.3
50% to be deducted	**1.2**	**1.2**	**1.2**	**1.2**

Source: Hunter Water Annual Information Return, September 2015.

4 Allowance for operating expenditure

This chapter sets out our assessment of Hunter Water's efficient level of operating expenditure over the 2016 determination period. As Chapter 3 discussed, the allowance for operating expenditure within the notional revenue requirement reflects our view of the efficient level of operating costs Hunter Water will incur in providing its services over the 2016 determination period. These costs include, amongst others, the costs of bulk water purchases, labour, service contractors, energy, materials, plant and equipment.

In making our draft decisions on core operating expenditure, we engaged consultants to review the efficiency of Hunter Water's proposed operating expenditure over the 2016 determination period, and recommend any efficiency savings that it considered Hunter Water should be able to achieve.

4.1 Operating expenditure

Draft decision

6 We have decided to set the efficient level of Hunter Water's operating expenditure as shown in Table 4.1.

Table 4.1 Draft decision on revenue required for operating expenditure ($millions, $2015-16)

	2016-17	2017-18	2018-19	2019-20	Total
Water (excluding bulk water purchases)	43.3	44.2	45.4	45.8	**178.8**
Bulk water purchases	0.2	0.2	0.2	0.2	**1.0**
Sewerage	43.9	45.3	45.5	46.1	**180.8**
Stormwater	1.4	1.3	1.4	1.3	**5.4**
Corporate	39.9	39.8	40.0	39.4	**159.1**
Total	**128.8**	**130.9**	**132.5**	**132.9**	**525.0**

Note: Operating costs exclude ring-fenced recycled water costs, including corporate overheads allocated to recycled water (see Chapter 10). Totals may not add due to rounding.

4.1.1 Reasons for our draft decision

We have set Hunter Water's allowance for operating expenditure at $525.0 million over the 2016 determination period. In doing so, we reduced Hunter Water's proposed operating expenditure by 1.8% (or $9.4 million).

Hunter Water proposed operating expenditure of $534.4 million over the 4-year period to 2019-20.[39] This represents an increase of $24.8 million (or 4.9%), when compared with the base 2015-16 operating costs extrapolated over the next four years.[40] Hunter Water indicated that increases in labour, electricity, chemical, operational activity and Lower Hunter Water Plan costs were the key factors driving the increase in its proposed operating expenditure.

Our draft decision reflects our assessment of the level of efficient operating expenditure Hunter Water should be able to achieve, given its operating environment. In making our decision, we considered:

- Hunter Water's actual operating expenditure over the 2013 determination period
- the level of operating expenditure it forecast over the 2016 determination period
- the steps it has taken to continually improve its efficiency and the level of services it delivers, and
- the additional efficiency savings we consider it could achieve over the four years of the new determination.

We engaged Jacobs to review Hunter Water's proposed operating and capital expenditure, and make recommendations regarding the efficient level of expenditure required to deliver its monopoly services over the four years to 30 June 2020. Jacobs recommended that Hunter Water's efficient level of core-operating expenditure should be around $9.5 million lower than Hunter Water's proposal.[41] Our draft decision is to accept Jacobs' recommendations regarding this operating expenditure. We have updated one of Jacobs' recommended savings (lower head office lease costs) with the WACC we have adopted for the 2016 Draft Determination – Jacobs' recommendation was based on Hunter Water's proposed WACC of 4.6%.[42] This means that the total operating

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39 This figure comprises $534.2 million in core operating expenditure costs and $1.0 million in bulk water purchase costs over the 4-year period.

40 The base 2015-16 costs of $127.2 million only include core operating expenditure costs (ie, they exclude bulk water purchase costs). We have assumed a bulk water purchase cost for 2015-16 of $0.2 million, consistent with the bulk water purchase cost for the 2016 determination period. The extrapolation over 4-years is calculated by multiplying the operating expenditure costs for Hunter Water's base year (2015-16) by 4 (ie, $127.4 million x 4 = $509.6 million). $24.8 million is calculated as ($129.1 million + $133.2 million + $135.1 million + $137.0 million) - $509.6 million.

41 Jacobs, *Hunter Water Expenditure Review,* February 2016, p 11.

42 We have also applied our updated asset lives to the return of capital Hunter Water would have otherwise received had the head office remained in its RAB (this resulted in a very marginal increase in its efficient head office lease allowance, less than $0.05 million per year).

expenditure savings are around $9.4 million (rather than the $9.5 million calculated by Jacobs).

We did not ask Jacobs to make recommendations on Hunter Water's bulk water purchase costs, which only account for about 0.2% of total operating costs. Hunter Water purchases bulk water from Gosford City Council and Wyong Shire Council (the Central Coast councils). We have included our draft decision on this bulk water price as part of Hunter Water's operating costs.

Our assessment of Hunter Water's actual operating expenditure over the 2013 determination period and its forecast operating expenditure over the 2016 determination period are discussed in the sections below. Table 4.2 below compares Hunter Water's proposal with our draft decisions on Hunter Water's efficient operating expenditure over the 2016 determination period.

Table 4.2 IPART's draft decision on operating expenditure compared with Hunter Water's proposal ($million, $2015-16)

	2016-17	2017-18	2018-19	2019-20	Total
Hunter Water proposal	129.1	133.2	135.1	137.0[a]	534.4
IPART draft decision	128.8	130.9	132.5	132.9	525.0
Difference	-0.4	-2.4	-2.6	-4.1	-9.4
Difference (%)	-0.3%	-1.8%	-1.9%	-3.0%	-1.8%

[a] Hunter Water advised that its proposed operating expenditure as per its written proposal was understated by $0.94 million in 2019-20 due to an error in its labour costings. $137.0 million represents the updated value.

Note: Totals may not add due to rounding.

Source: Hunter Water pricing proposal to IPART, June 2015, p 40, Annual Information Return and IPART calculations.

4.1.2 Core operating expenditure

Core operating expenditure is the day-to-day operating, maintenance and administration costs Hunter Water incurs in delivering its water, sewerage and stormwater drainage services (ie, its total operating costs excluding bulk water purchase costs).

Core operating expenditure over the 2013 determination period

Hunter Water has made moderate core operating cost savings over the current 2013 determination period. It expects actual expenditure over this period will be $514.4 million, which is $7.8 million (1.5%) less than the operating expenditure we used to set prices for the 2013 determination period (see Table 4.3 below).[43]

Hunter Water reported that the key drivers of its lower core operating expenditure over the 2013 determination period were savings related to its:[44]

- energy costs (-$21.1 million)
- labour costs (-$7.7 million), and
- treatment contracting costs (-$1.3 million).

These savings were partly offset by higher costs related to:[45]

- treatment, operations and maintenance (+$7.5 million)
- head office lease (+$4.6 million), and
- Lower Hunter Water Plan activities (+$3.5 million).

While some of the savings were the result of lower input costs such as energy prices, Hunter Water has taken several steps to reduce its ongoing operating costs. For example, Jacobs identified that Hunter Water had achieved efficiencies by tendering and contracting out treatment, operations and maintenance for its water and sewerage plants. Jacobs stated that Hunter Water's tendering and contracting processes:

> …were robust and have led to efficient opex forecasts which are lower than that determined efficient in IPART's 2013 price determination.[46]

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43 In response to our Issues Paper, a stakeholder raised concern about Hunter Water's expenditure on a particular media campaign during the 2013 determination period (G. Eather, submission to IPART Issues Paper, October 2015, p 1). This issue was raised at the public hearing and we note that Hunter Water responded indicating that the costs of the campaign (about $86,000) was funded within its existing advertising budget, and would have no impact on its costs for the next regulatory period (IPART, Review of prices Hunter Water Corporation – Transcript, November 2015, pp 40-43).

44 Hunter Water pricing proposal to IPART, June 2015, p 29.

45 Hunter Water pricing proposal to IPART, June 2015, pp 34-35.

46 Jacobs, *Hunter Water Expenditure Review,* February 2016, p 49.

Table 4.3 Hunter Water's actual operating expenditure compared with IPART determined over the 2013 determination period ($ millions, $2015-16)

	2013-14	2014-15	2015-16[a]	2016-17[b]	Total
Determination	126.9	130.5	130.9	133.7	522.2
Actual	121.0	132.5	127.2	133.7	514.4
Difference	-5.9	1.9	-3.8	0.0	-7.8
Difference %	-4.7%	1.5%	-2.9%	0.0%	-1.5%

a 2015-16 figures are forecasts.

b 2016-17 figures represent those IPART used to set prices in the 2013 Determination, adjusted for inflation.

Note: Totals may not add due to rounding.

Source: Hunter Water pricing proposal to IPART, June 2015, Annual Information Return and IPART calculations.

Core operating expenditure over the 2016 determination period

As part of the expenditure review, Jacobs found there was scope to reduce core operating expenditure below what Hunter Water has proposed. Jacobs recommended savings of $9.5 million over four years, mainly relating to:

- specific adjustments to costs for labour, head office lease, new initiatives and Lower Hunter Water Plan activities ($7.7 million), and
- continuing efficiency savings ($1.9 million).[47]

Jacobs found there was scope for Hunter Water to reduce its **labour** costs by **$4.1 million**.[48] This was mainly from its new Enterprise Agreement (August 2015) maintaining gross salaries constant in real terms. While Hunter Water had factored in a real increase in labour costs of 0.5% to 0.6% per year, the new Enterprise Agreement requires that any real increases in labour costs need to be offset by productivity savings, resulting in no net increases in costs.

Jacobs also recommended lowering **head office lease** costs by around **$2.0 million**. Jacobs considered these costs were inefficient as they are higher operating costs, than if Hunter Water had retained ownership of the building, and therefore would result in higher prices for customers. It recommended that the lease costs to be included in Hunter Water's operating costs and recovered via prices be limited to the avoided costs of Hunter Water owning its head office (ie the return on and of capital Hunter Water would have otherwise received through the capital costs of the head office being in its regulatory asset base).[49]

47 Numbers may not add to $9.5 million due to rounding.

48 Jacobs, *Hunter Water Expenditure Review,* February 2016, pp 65-66.

49 Jacobs, *Hunter Water Expenditure Review,* February 2016, pp 59-60.

Hunter Water has proposed **new initiatives** above those approved in our 2013 Determination. These relate to operational activities, as well as customer service and billing activities. Jacobs considered that some of these initiatives were once-off expenditures for 2015-16, and Hunter Water had not demonstrated their ongoing need.[50] This reduced expenditure on new initiatives over the four years of the 2016 determination period by **$1.4 million**.

In addition to these specific adjustments, Jacobs has recommended that a **continuing efficiency saving** be applied to Hunter Water's forecast core operating expenditure. Continuing efficiency represents the scope for a top performing or 'frontier' company to continue to improve its efficiency.

Jacobs recommended a continuing efficiency factor of 0.25% per year on controllable operating expenditure, to reflect what a frontier company competing in an open market with strong commercial pressures would be implementing. In total, continuing efficiencies represent around **$1.9 million** in savings over four years.[51]

We have examined Jacobs' review of operating expenditure and its recommendations on efficient core operating costs. We consider that Jacobs undertook a thorough review, and so consider its recommendations to be appropriate and substantiated. For example, we agree with Jacobs that Hunter Water's sale and lease back of its head office is not efficient as it results in higher prices for customers. We note that Jacobs found that the NSW Government's credit rating requirement for Hunter Water was for it to be investment grade, which it was prior to the sale of its head office.[52]

Our draft decision is to accept Jacobs' recommendations (with a minor adjustment to its recommended efficient head office lease costs – we have updated the return on and of capital that Hunter Water would have otherwise received had it still owned its head office, with our draft decision WACC of 4.8% and updated asset lives).[53]

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50 For example, Jacobs considered that the $200,000 per year Hunter Water sought for ICT strategies and studies only related to a once-off expenditure and would not be recurring (Jacobs, *Hunter Water Expenditure Review,* February 2016, p 58).

51 Jacobs, *Hunter Water Expenditure Review,* February 2016, p 190.

52 The NSW Government's commercial policy framework is that all Government Businesses are to be investment grade, which means Baa3 or better (Hunter Water's credit rating was Baa3 at the time it sold its Head Office), Jacobs, *Hunter Water Expenditure Review,* January 2016, p 59.

53 As mentioned previously, we have also applied our updated asset lives to the return of capital Hunter Water would have otherwise received had the head office remained in its RAB (this resulted in a very marginal increase in its efficient head office lease allowance, less than $0.05 million per year).

4.1.3 Bulk water transfer costs to Central Coast Councils

Hunter Water has a water trading agreement with the Central Coast Councils (Gosford City Council and Wyong Shire Council). Under this agreement, either party can supply potable drinking water to the other. The agreement is due to expire in 2026.

Our draft decision is to maintain Hunter Water's bulk water transfer costs constant in real terms. This is consistent with our draft decision to maintain the current bulk water transfer price at $0.65/kL ($2015-16) indexed over the determination period, pending a wider review of bulk water prices to be charged by Hunter Water and the Central Coast Councils (see Chapter 9).

We have determined the costs of Hunter Water purchasing bulk water from the Central Coast Councils to be $0.24 million per year (see Table 4.5). We calculated this figure using Hunter Water's forecast of its bulk water purchases over the 2016 determination period (365,000 kL per year)[54] and our draft bulk water transfer price ($0.65/kL).[55]

Table 4.4 Hunter Water's bulk water costs for 2016 determination period ($ millions, $2015-16)

	2016-17	2017-18	2018-19	2019-20	Total
Bulk water transfer costs to Central Coast Councils	0.2	0.2	0.2	0.2	1.0

54 In its proposal, Hunter Water forecast that 365,000 kL per year would be both sold and purchased between it and the Central Coast Councils in order to manage water quality in the transfer pipeline (Hunter Water pricing proposal to IPART, June 2015, p 29).

55 $0.24 million is calculated as 365,000 kL x $0.65 per kL.

5 Prudent and efficient capital expenditure

This chapter sets out our draft decisions on Hunter Water's prudent and efficient capital expenditure. As with operating expenditure, we engaged a consultant (Jacobs) to review Hunter Water's historical and forecast capital expenditure and make recommendations on the amount of capital expenditure that should be included in the RAB.

Using the building block method, there is no explicit allowance for capital expenditure in the notional revenue requirement. Instead, capital expenditure is added to the RAB and recovered through the allowances for a return on assets and regulatory depreciation (discussed in Chapter 6).

To decide how much capital expenditure is added to the RAB, we review Hunter Water's proposals and apply:

- a prudence test to its actual capital expenditure over the 2013 determination period (past capital expenditure) and also to its proposed capital expenditure for the 2016 determination period (forecast capital expenditure), and
- an efficiency test to its past and forecast capital expenditure.

The prudence test assesses whether, in the circumstances that existed at the time, the decision to invest in the asset is one that the utility, acting prudently, would be expected to make. The test assesses both:

- the prudence of how the decision was made to invest, and
- the prudence of how the investment was executed (ie, the construction or delivery of the asset), having regard to information available at the time.

The efficiency test examines whether the proposed capital expenditure represents (over the life of the asset) the best way of meeting customers' needs, subject to the utility's regulatory requirements.

This chapter also outlines the output measures we have set for the 2016 determination period. We use these measures to determine whether Hunter Water is delivering on its capital expenditure plan.

5.1 Capital expenditure

Draft decision

7 We have decided to set the prudent and efficient level of Hunter Water's capital expenditure to be included in the RAB as shown in Table 5.1 and Table 5.2.

Table 5.1 IPART's draft decision on Hunter Water's prudent and efficient past capital expenditure ($ millions, $2015-16)

	2013-14	2014-15	2015-16	Total
Hunter Water's proposal	89.3	83.7	112.5	285.6
Adjustments	0.0	4.8	-7.7	-2.8
IPART's draft decision	89.3	88.6	104.9	282.7

Note: Totals may not add due to rounding.

Source: Hunter Water pricing proposal to IPART, June 2015, Annual Information Return and IPART calculations.

Table 5.2 IPART's draft decision on Hunter Water's efficient forecast capital expenditure ($ millions, $2015-16)

	2016-17	2017-18	2018-19	2019-20	Total
Hunter Water's proposal	112.9	92.1	89.2	93.5	387.7
Adjustments	-8.3	-3.6	1.8	-13.0	-23.2
IPART's draft decision	104.6	88.4	91.0	80.4	364.5

Note: Totals may not add due to rounding.

Source: Hunter Water pricing proposal to IPART, June 2015, Annual Information Return and IPART calculations.

5.1.1 Reasons for our draft decisions

We set Hunter Water's allowance for capital expenditure at $364.5 million over the 2016 determination period. In doing so, we reduced Hunter Water's proposed capital expenditure by $23.2 million (6.0%). We also slightly reduced Hunter Water's actual capital expenditure over the 2013 determination period by $2.8 million (1.0%).

Our draft decisions on capital expenditure reflect our assessment of the prudent and efficient expenditure on capital works that should be included in the RAB, and hence recovered through prices.

In making our draft decisions, we considered Hunter Water's historical capital expenditure and the savings it achieved in capital expenditure over the 2013 determination period. We then considered the capital programs it has proposed for the 2016 determination period, whether that proposed expenditure was fully justified and any potential further savings it could achieve through greater efficiencies in delivering its capital program.

In its review of Hunter Water's expenditure, we asked Jacobs to look at both past and forecast capital expenditure. In making our draft decisions, we considered the recommendations made by Jacobs regarding Hunter Water's prudent and efficient level of capital expenditure over both the 2013 and 2016 determination periods.

Our assessment of Hunter Water's capital expenditure over the 2013 determination period and its forecast capital program over the 2016 determination period are discussed in the sections that follow.

Capital expenditure over the 2013 determination period

Our draft decision on past capital expenditure is to include $282.7 million in capital expenditure between 2013-14 and 2015-16 in the RAB.[56] In doing so, we slightly reduced Hunter Water's proposed past capital expenditure of $285.6 million over this period by 1.0% (or $2.8 million).

Table 5.3 below compares Hunter Water's proposal with our draft decisions on Hunter Water's prudent and efficient capital expenditure over the 2013 determination period.

Table 5.3 IPART's draft decision on Hunter Water's prudent and efficient past capital expenditure ($ millions, $2015-16)

	2013-14	2014-15	2015-16	Total
Hunter Water proposal	89.3	83.7	112.5	285.6
IPART draft decision	89.3	88.6	104.9	282.7
Difference	0.0	4.8	-7.7	-2.8
Difference (%)	0.0%	5.8%	-6.8%	-1.0%

Source: Hunter Water pricing proposal to IPART, June 2015, Annual Information Return and IPART calculations.

Our draft decision reflects our assessment that some of Hunter Water's actual capital expenditure was not prudent and efficient over this period. In making our decision, we considered:

- Hunter Water's capital expenditure over-spend, compared to the level we forecast at the 2013 Determination, and
- Jacobs' prudence and efficiency findings, leading to it recommending a capital expenditure reduction of $2.8 million.

[56] Our draft decision is to also accept Jacobs' recommendation to increase capital expenditure for 2012-13 by $0.09 million ($2015-16), which is for the Burwood Beach WWTW Disinfection project. Jacobs' recommended a reduction in the costs for this project (over 2012-13 to 2016-17) by $11.9 million ($2015-16) to reflect substantial changes in the project value – however, this involved an increase of $0.09 million for 2012-13 to align the project costs with Hunter Water's latest capital project summary for the project. Jacobs, *Hunter Water Expenditure Review,* February 2016, pp 135, 136.

Over the 2013 determination period, Hunter Water has spent about $48.8 million (or 15.2%) more on capital works than we forecast (see Table 5.4).

Table 5.4 Hunter Water's actual and IPART determined capital expenditure for the 2013 determination period ($ millions, $2015-16)

	2013-14	2014-15	2015-16[a]	2016-17[b]	Total
Determination	81.2	60.7	94.9	83.9	320.7
Actual	89.3	83.7	112.5	83.9	369.5
Difference	8.1	23.1	17.6	0.0	48.8
Difference %	10.0%	38.0%	18.6%	0.0%	15.2%

a 2015-16 figures are forecasts.

b To facilitate a 4-year comparison against the 2013 Determination, we included our determined values as Hunter Water's actual values for 2016-17.

Note: Totals may not add due to rounding.

Source: Hunter Water pricing proposal to IPART, June 2015, Annual Information Return, and IPART calculations.

Hunter Water indicated that the main reasons for the higher than determined capital expenditure over 2013-14 to 2015-16 were:

- delayed delivery of projects from 2012-13, which resulted in the carryover of $36 million into the 2013 determination period[57]
- additional delivery of projects under round two of the Housing Acceleration Fund, which resulted in an additional $8.5 million in expenditure[58]
- delivery of small projects that are partially or fully funded by external parties[59], and
- upgrade to the Hunter Central Coast transfer capacity, which is an outcome of the Lower Hunter Water Plan.[60]

57 At the 2013 Determination, capital expenditure for 2012-13 was a forecast, and so is appropriately assessed at this (2016) Determination.

58 The Housing Acceleration Fund is a NSW Government program to drive housing growth through co-funding of infrastructure projects such as water, wastewater, roads and electricity. The projects funded are Farley regional wastewater network, Lochinvar wastewater network upgrades and Lochinvar water mains project. Hunter Water pricing proposal to IPART, June 2015, p 46.

59 For example, Government grants and third-party cash contributions (these amounts are deducted from Hunter Water's RAB as it should not earn a return on and of capital for capital expenditure it did not fund, see Chapter 6).

60 Hunter Water pricing proposal to IPART, June 2015, p 46.

Following its review of Hunter Water's capital expenditure over the 2013 determination period, Jacobs recommended that $2.8 million of expenditure is not efficient.[61] We outline Jacobs' reasons for this recommendation in the following section.[62]

Capital expenditure over the 2016 determination period

Our draft decision on forecast capital expenditure is to include $364.5 million in capital expenditure over the 2016 determination period. This is $23.2 million (6.0%) below Hunter Water's proposed capital expenditure over the same period (see Table 5.5).

Our draft decision on Hunter Water's prudent and efficient capital expenditure over the 2016 determination period largely reflects Jacobs' recommendations.

Hunter Water proposed capital expenditure over the 2016 determination period of $387.7 million, which is:

- $67.0 million (20.9%) higher than we used to set prices for four years in our 2013 determination.[63]
- $18.2 million (4.9%) higher than actual capital expenditure over the 2013 determination period.[64]

Hunter Water's proposed capital expenditure is shown in Table 5.5. It indicated that the drivers of this capital expenditure are mandatory standards and asset service reliability (73%), growth in connections (18%), and other factors (less than 10%) such as discretionary standards and government programs.[65]

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61 Given that we accepted Jacob's recommendations for prudent and efficient expenditure over the 2013 determination period, we have excluded $2.8 million in capital expenditure when rolling the RAB forward to 2015-16 (see Chapter 6).

62 Rather than examining capital expenditure over the current period (2013-14 to 2015-16) separately to the forecast period (2016-17 to 2019-20), Jacobs examined periods together. This is because expenditure for projects and programs typically spans across periods.

63 $67.0 million is calculated as $320.7 million (which is the IPART determined capital expenditure for the 2013 determination period, as shown in Table 5.4) - $387.7 million.

64 $18.2 million is calculated as $369.5 million (which is Hunter Water's actual capital expenditure for the 2013 determination period, as shown in Table 5.4) - $387.7 million.

65 Hunter Water pricing proposal to IPART, June 2015, p 54.

Table 5.5 Hunter Water's proposed capital expenditure for the 2016 determination period and IPART's adjustments ($ millions, $2015-16)

	2016-17	2017-18	2018-19	2019-20	Total
Hunter Water's proposal					
Water	34.4	31.4	39.7	42.0	147.6
Sewerage	64.3	47.9	34.7	36.8	183.7
Stormwater	0.6	1.1	1.4	0.4	3.5
Corporate	13.6	11.6	13.4	14.2	52.9
Total	**112.9**	**92.1**	**89.2**	**93.5**	**387.7**
IPART's adjustments					
Adjustments to specific capital projects and programs	-6.8	-1.6	4.2	-11.4	-15.7
Adjustment for systemic over-estimation of project costs	-1.0	-1.5	-1.7	-0.8	-5.0
Adjustment for continuing efficiencies	-0.3	-0.4	-0.7	-0.8	-2.2
Total adjustments[a]	**-8.3**	**-3.7**	**1.8**	**-13.0**	**-23.2**
Total capital expenditure allowance	**104.6**	**88.4**	**91.0**	**80.4**	**364.5**

a We have re-allocated corporate capex across water, sewerage, stormwater and unregulated recycled water based on the proportion of efficient costs for each service. Given that our draft decisions on the efficient capital costs for water, sewerage and stormwater are lower than proposed by Hunter Water, this means that a lower amount of corporate costs have been allocated to these items compared with Hunter Water's proposal – about $0.2 million less in 2016-17 and $0.1 million less in 2017-18 ie we have made an additional reduction of $0.3 million due corporate cost re-allocations over the forecast period (see Chapter 10).

Note: Totals may not add due to rounding.

Source: Hunter Water pricing proposal to IPART, June 2015, p 53, Annual Information Return and IPART calculations.

Hunter Water also reported that it expects to make ongoing capital efficiency savings in the areas of asset management, cost estimation and procurement. It has factored potential efficiency savings into its proposal on capital expenditure by reducing the cost estimate for each future project by 5% compared with that proposed in the preliminary business case.[66]

In response to our Issues Paper, a stakeholder commented on Hunter Water's proposed stormwater capital expenditure. It recommended that the expenditure include rehabilitation of stormwater canals to more natural conditions where feasible, and commented that a particular project from the previous review should continue – Hunter Water's proposed investigation of Lower Throsby Creek rehabilitation requirements.[67]

66 Hunter Water pricing proposal to IPART, June 2015, p 59.

67 Total Environment Centre submission to IPART Issues Paper, October 2015, p 3.

We note that several stormwater projects were re-prioritised by Hunter Water prior to the 2013 Determination due to cost pressures, and hence were deferred, - including expenditure for the Lower Throsby Creek.[68] For the 2016 Determination, we consider that Hunter Water has included appropriate stormwater projects, and we note that at the public hearing, it indicated that it has established a committee to manage the dredging and rehabilitation of the Lower Throsby Creek.[69]

In its review of Hunter Water's forecast expenditure, Jacobs assessed its planning, procurement and cost-estimation practices as well as the business cases supporting its proposed capital program. It recommended:

- $17.6 million of reductions to specific capital programs and projects
- $5.0 million in reductions to take account of systemic over-estimation of project costs (mainly due to changes in market conditions), and
- $2.2 million in reductions for continuing efficiency targets on capital expenditure.

Following its review of a sample of 12 projects (about 41% of Hunter Water's total capital expenditure), Jacobs made a number of recommendations equating to reductions of **$17.6 million** to **specific capital programs and projects** over the 2016 determination period.[70] According to Jacobs, these reductions were due to:

- submitted project costs in the SIR (Special Information Return, prepared in 2014) were overall too high compared with the latest cost information available from Hunter Water[71]
- Hunter Water undertaking options analysis but not selecting the least cost option (primarily for forecast capex)[72] or not providing a detailed businesses case demonstrating it had selected the best option, and

68 Atkins/Cardno, *Review of Hunter Water Corporation's operating and capital expenditure – Final Report*, December 2012, pp 86, 127.

69 Hunter Water, Public Hearing, Transcript, 2 November 2015, p 31.

70 This figure is calculated by adding together Jacobs' recommended one-off adjustments to Hunter Water's proposed capital expenditure for the period 2016-17 to 2019-20. The calculation is $7.00 million + 2.31 million – 3.18 million + 11.45 million = $17.58 million. See Table 1.3 in Jacobs, *Hunter Water Expenditure Review,* February 2016, p 13.

71 For example, Hunter Water submitted $25.96 million in costs for the Burwood Beach Wastewater Treatment Works in its SIR and hence pricing proposal. Its more recent project summary (August 2015) indicated the cost was $14.06 million. As such, Jacobs recommended a reduction of around $11.9 million for this project: Jacobs, *Hunter Water Expenditure Review,* February 2016, pp 135- 136.

72 For example, Jacobs recommended a reduction of $1.5 million to the proposed costs for ICT capex for 2016-17, because it considered that Hunter Water had not picked the least cost option without adequate justification (Customer Service Platform Refresh Program): Jacobs, *Hunter Water Expenditure Review,* February 2016, p 115.

- Hunter Water's costs for some options being above Jacobs' own benchmark cost estimates.[73]

Jacobs considered there to be a **systemic over-estimation of project costs** in the estimates provided by Hunter Water, primarily due to changes in market conditions. It recommended **$5.0** million[74] in reductions to take account of this over-estimation:

- Jacobs calculated the weighted average of the over-estimation in project costs, due to changing market conditions, to be about 9% across four relatively large projects it had examined.
- It adopted a conservative view and applied half of the over-estimation (ie, 4.5%) to the forecast costs of those significant capital projects (with estimated costs exceeding $5 million) which Jacobs did not examine.[75,76]

We note that it is difficult to accurately forecast capital project costs, and that the projects examined in detail by Jacobs are at different stages of Hunter Water's project development process (hence the level of cost certainty varies between the projects examined).[77]

However, on-balance, we consider Jacobs' approach of adopting a conservative approach to extrapolation by applying half of the cost over-estimation, due to changes in market conditions, to the forecast costs of other capital projects (with estimated costs exceeding $5 million) to be appropriate – particularly given its findings from the sample projects it examined in detail.[78,79] This approach means that over the 2016 determination period, the risk of changes in costs due to changes in market conditions, are being shared between Hunter Water and its regulated customers.

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73 For example, Jacobs found that Hunter Water's estimates for the Kurri Wastewater Treatment Works were around 40% higher based on its relatively recent experience (early 2014) on a similar project. Jacobs found that Hunter Water's estimates were done by a consultant using contract prices based on a water plant upgrade that was tendered in 2011, when market conditions at the time were likely to result in higher costs: Jacobs, *Hunter Water Expenditure Review,* February 2016, p 155.

74 Jacobs, *Hunter Water Expenditure Review,* February 2016, p 13.

75 We note that Jacobs extrapolated its findings to one off projects (excluding projects with HAF funding) and not programs. These 'significant projects' comprised 22 projects, with costs estimated to exceed $5 million.

76 Jacobs, *Hunter Water Expenditure Review,* February 2016, pp 12-13.

77 Jacobs, *Hunter Water Expenditure Review,* February 2016, pp 173-174.

78 We note that Jacobs' indicated that the projects it sampled were at advanced planning stages. Therefore, it considered its extrapolated findings to be real and achievable given that it applied its findings to projects which are less certain in scope and are likely to have greater variability in cost. Jacobs, *Hunter Water Expenditure Review,* February 2016, p 174.

79 The purpose of examining a sample is to identify whether there could be a systemic issue in Hunter Water's overall capital expenditure proposal.

At the 2020 Determination, we would examine Hunter Water's actual capital expenditure over the 2016 determination period. If actual costs are higher, and deemed prudent and efficient, then we would reflect the higher efficient capital costs in Hunter Water's RAB at the 2020 Determination.[80]

In addition to the above specific adjustments, Jacobs has recommended that a **continuing efficiency saving** be applied to Hunter Water's forecast capital expenditure. Continuing efficiency represents the scope for a top performing or 'frontier' company to continue to improve their efficiency. It justified the application of continuing efficiencies to capex on the grounds that an efficient frontier company would continue to improve its efficiency in delivering its capital program.

Jacobs recommended a continuing efficiency factor of 0.25% per year on capital expenditure to reflect a frontier company competing in an open market with strong commercial pressures. In total, continuing efficiencies represent around **$2.2 million** in savings over four years.[81]

We have accepted Jacobs' recommendations, with the exception of one project: Munibung Creek Stormwater Rehabilitation works – which Jacobs recommended as not being prudent as there is no specific regulatory driver requiring Hunter Water to undertake expenditure to address erosion at Munibung creek and reinforce creek banks. Whilst not recommending inclusion of this expenditure in its regulatory allowance, Jacobs did find that Hunter Water had undertaken options analysis, and found the proposed expenditure to be efficient.[82]

Jacobs also considered the possibility of treating the project as discretionary expenditure, but found that Hunter Water had not demonstrated customers' willingness to pay.

Hunter Water stated that the expenditure was in response to numerous customer complaints about the state of the creek, including an article in the Newcastle Herald. It also advised that residents have indicated that they would escalate their complaints to their local MP or the Energy and Water Ombudsman of NSW, if action was not undertaken.[83]

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80 As shown in Table 5.4, Hunter Water's capital expenditure (over 2013-14 to 2015-16) was about $50 million higher than our 2013 Determination. Our draft decision, as shown in Table 5.1, is that Hunter Water's prudent and efficient capital expenditure over 2013-14 to 2015-16 is about $283, which is about $46 million higher than our 2013 Determination, over the same period.

81 Jacobs, *Hunter Water Expenditure Review,* February 2016, pp 190, 192.

82 Jacobs, *Hunter Water Expenditure Review,* February 2016, pp 164-166.

83 Hunter Water's response to Jacobs Draft Report, p 39.

On balance, our draft decision is to deem the expenditure to be prudent, as a business in a competitive market would weigh up the pros and cons of negative publicity against the least cost option of addressing the problem. We consider that Hunter Water has undertaken such a process, despite not explicitly asking customers whether they were willing to fund the expenditure. We consider it appropriate to consider such matters on a case by case basis.

5.2 Output measures

Draft decision

8 We have decided to require Hunter Water to report annually on progress against the output measures outlined in Appendix C.

5.2.1 Reasons for our draft decision

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.

Performance against output measures for the 2013 determination period

Hunter Water supports the use of output measures to help determine the value for money it achieves from its capital portfolio, as well as how effective it is in delivering those projects.[84]

Jacobs found that Hunter Water met the majority of its output measures set for the 2013 determination period (see Appendix C.1). It considered that Hunter Water provided valid reasons for any under or over achievement against the target performance.[85]

84 Hunter Water pricing proposal to IPART, June 2015, p 58.
85 Jacobs, *Hunter Water Expenditure Review,* February 2016, p 198.

Output measures for the 2016 determination period

We have decided to keep using output measures over the 2016 determination period (see Appendix C.2). These measures would be a starting point for assessing prudent capital expenditure at the 2020 price determination. They also provide a basis for reporting on any deviation from the established targets.

Hunter Water proposed a set of output measures for the 2016 Determination. They were largely drawn from its output measures for the 2013 Determination. Jacobs found that Hunter Water's proposed output measures were reasonable, with one exception.[86] We have accepted Hunter Water's proposal, as modified by Jacobs' recommendation.

We have also included an output measure for business processes. Jacobs recommended that, for projects and programs exceeding $5 million ($2019-20), Hunter Water should submit base forecast costs to IPART on a condition and risk based asset management approach.[87]

We consider this output measure to be reasonable, given that it would encourage Hunter water to better determine an efficient expenditure profile for asset replacements and refurbishments.

[86] In relation to the 'Critical trunk mains replacement' output measure, Jacobs notes that Hunter Water plans to deliver three trunk mains (totalling 3.05km) by 2016-17, and so recommends an output measure of 3km for the 2016 Determination. We consider this to be a reasonable measure that should be achievable by Hunter Water.

[87] Jacobs, *Hunter Water Expenditure Review,* February 2016, p 201.

6 Allowances for return on assets, regulatory depreciation and tax

To calculate the allowances for a return on assets and regulatory depreciation[88] in the revenue requirement, we need to determine three key inputs:

- the value of Hunter Water's regulatory asset base (RAB), which represents the economic value of the assets used to deliver the monopoly services
- the appropriate asset lives and depreciation method for Hunter Water's RAB, and
- the appropriate rate of return (eg, using the WACC) on Hunter Water's RAB.

The sections below provide an overview of our decisions on these issues and their impact on the value of the RAB.

We also discuss our draft decisions on factors affecting the regulatory tax allowance and set out our findings on that tax allowance over the 2016 determination period.

6.1 Value of the RAB

The RAB represents the value of Hunter Water's assets on which we consider it should earn a return on capital and an allowance for regulatory depreciation. In determining the value of the RAB over the 2016 determination period, we have calculated:

- the opening RAB at 1 July 2016, by rolling the RAB forward from 2012-13 to 2015-16, and
- the value of the RAB in each year of the 2016 determination period.

Draft decision

9 We have decided to:

- set the opening RAB at 1 July 2016 by rolling the RAB forward from 2012-13 to 2015-16 as shown in Table 6.1, and
- adopt the value of the RAB in each year of the 2016 Determination as shown in Table 6.2.

[88] Regulatory depreciation is also known as 'return of assets', as the regulatory depreciation allowance returns the value of assets over their lives.

6.1.1 Reasons for our draft decision

Calculating the opening RAB

In calculating the opening RAB, we rolled forward the RAB over the 2013 determination period. This involved using the determined RAB as at 1 July 2012[89] and making the following adjustments:

- adding prudent and efficient capital expenditure (see Chapter 5)
- deducting cash capital contributions
- deducting the regulatory value of assets disposals
- deducting the regulatory depreciation we allowed at the 2012 determination, and
- adding the annual indexation of the RAB.[90]

This determines the opening RAB for the 2016 determination period. The calculation of the opening RAB is set out in Table 6.1 below. Our decisions regarding the treatment of cash contributions and asset disposals are discussed in this chapter.

Table 6.1 IPART's opening RAB calculation for Hunter Water's 2016 Draft Determination period ($millions, $nominal)

	2012-13	2013-14	2014-15	2015-16[a]
Opening RAB	**1,980.8**	**2,100.5**	**2,211.4**	**2,260.6**
Plus: Actual prudent and efficient capex	98.3	85.9	86.4	104.9
Less: Cash capital contributions	7.8	7.0	14.8	7.0
Less: Asset disposals	0.9	0.1	22.8	0
Less: Allowed regulatory depreciation	28.4	32.0	33.1	34.6
Plus: Indexation[b]	48.6	64.2	33.5	57.7
Plus: KIWS s16A subsidy[c]	10.0	0.0	0.0	0.0
Closing RAB	**2,100.5**	**2,211.4**	**2,260.6**	**2,381.5**

a Figures for 2015-16 are forecasts.
b Inflation figures used are sourced from ABS All Capitals Consumer Price Index, 6401.0: 2011-12, 2.3%; 2012-13, 2.4%; 2013-14, 3.0%; 2014-15, 1.5%; 2015-16, 2.5%.
c At the 2013 Determination, we had included $9.5 million in avoided costs for 2012-13 relating to the KIWS. Our Draft Decision is to remove this amount. See Section 6.2.
Note: Totals may not add due to rounding.

89 When we set the RAB at our 2013 determination, the figures we used for 2012-13 were forecasts. Therefore, we need to adjust the 2012-13 figures for our actual figures including our decisions on capital expenditure for 2012-13.

90 Hunter Water's pricing proposal was due by June 30 2015. This meant that Hunter Water was unable to include actual inflation for 2014-15 in its RAB calculations. Instead, we directed Hunter Water to use the Bloomberg Mean Consensus inflation forecast (as at 10 October 2014) of 2.4% for 2014-15. We have updated inflation for this year to the actual 2014-15 inflation figure of 1.5%. The impact of adopting the actual inflation figure in the RAB roll-forward is a reduction in a typical residential (house) water and sewerage bill (185 kL per year) of about $5 to $6 per year on average.

Calculating the RAB over the 2016 determination period

To calculate the RAB in each year of the 2016 determination period, we rolled forward the RAB to 2019-20 by:

- adding $364.5 million of prudent and efficient forecast capital expenditure over the period (discussed in Chapter 5)
- deducting:
  - $20.2 million for capital contributions, and
  - $156.5 million for regulatory depreciation.

This gives the forecast RAB for each year of the 2016 determination period, which we have used to generate the allowances for the return on capital and regulatory depreciation in the notional revenue requirement.

The RAB roll-forward over the 2016 determination period is shown in Table 6.2 below. With the exception of prudent and efficient forecast capital expenditure (discussed in Chapter 5), we discuss our decisions on the various RAB adjustments in further detail in the sections below.

Table 6.2 IPART's RAB for Hunter Water's 2016 Draft Determination ($million, $2015-16)

	2016-17	2017-18	2018-19	2019-20
Opening RAB	**2,381.5**	**2,445.7**	**2,491.3**	**2,537.0**
Plus: Efficient capital expenditure	104.6	88.4	91.0	80.4
Less: Forecast cash capital contributions (net of tax liabilities)[a]	5.0	5.0	5.1	5.1
Less: Asset disposals	0	0	0	0
Less: Regulatory depreciation	35.6	37.8	40.2	43.0
Closing RAB	**2,445.7**	**2,491.3**	**2,537.0**	**2,569.4**

[a] 'Cash Capital Contributions' includes the environmental levy, Clarence Town Levy and third party cash contributions.

Note: Totals may not add due to rounding

Our calculation of the RAB for the 2016 determination period results in the RAB being $19.1 million (or 3%) lower at the end of the determination period than Hunter Water proposed. Table 6.3 below compares our finding on the RAB to Hunter Water's proposal.

Table 6.3 IPART and Hunter Water proposed RAB ($ millions, $2015-16)

	2015-16	2016-17	2017-18	2018-19	2019-20
IPART	2,381.5	2,445.7	2,491.3	2,537.0	2,569.4
Hunter Water Proposed	2,385.4	2,444.4	2,493.8	2,539.5	2,588.5
Difference	*-3.9*	*1.3*	*-2.5*	*-2.5*	*-19.1*
Difference %	*-0.6%*	*-1.5%*	*-2.2%*	*-2.7%*	*-3.0%*

Note: Hunter Water's proposed RAB includes forecast inflation for 2014-15 of 2.4%. The outturn inflation for 2014-15 was 1.5%. Our RAB for 2016-17 is higher than Hunter Water's proposed RAB due to a difference in the treatment of HAF funding (we have treated it as an equity injection whereas Hunter Water treated it as a grant, see Section 6.5).Totals may not add due to rounding.

Source: Hunter Water supplementary information, 20 August 2015.

The main differences leading to a lower RAB than Hunter Water proposed are:

- our draft decision to reduce Hunter Water's capital expenditure by about $26 million[91]
- the use of actual inflation for 2014-15 in the RAB roll-forward, which decreased the RAB by around $20 million
- our draft decision on the appropriate treatment of asset disposals, which decreased the RAB by about $12 million
- our draft decision to update asset lives to better reflect the economic life of assets in Hunter Water's RAB, which increased regulatory depreciation by about $18 million[92], and
- treating Housing Acceleration Fund (HAF) expenditure as an equity injection rather than a grant, which increased the RAB by about $21 million.[93]

6.2 Adjustments for asset disposals

The value of any regulatory assets Hunter Water disposes of during the 2013 determination period and proposes to dispose of during the 2016 determination period are deducted from the RAB. This ensures customers are not charged a return on assets or regulatory depreciation for assets that are no longer used to provide regulated services.

Disposals can include asset sales, write-offs and write-downs. We regard disposals as significant if they attract capital gains tax or account for more than 0.5% of the RAB.

91 In $2015-16 for the period 2012-13 to 2019-20.

92 This is incorporating our draft decision on Hunter Water's RAB to be $2,381.5 million for 2015-16, and our draft decisions on prudent and efficient forecast capital expenditure. This value is an end of year value and so differs from the depreciation allowance presented in the NRR (which has been discounted by six months for the purposes of setting prices, as revenue is assumed to be received, on average, half way through the year).

93 The HAF funding is $21 million in $nominal, or $20.7 million in $2015-16.

Draft decision

10 We have decided to:

- Deduct the regulatory value of actual and forecast asset disposals from the RAB, where the regulatory value is determined as:
  a. For significant sales of assets purchased before the RAB line-in-the-sand: Asset sales revenue x RAB/DRC at the time the RAB was established.
  b. For significant sales of assets purchased post RAB line-in-the-sand: purchase price + capital expenditure – depreciation + indexation.
  c. For significant asset write-offs: Determined on a case-by-case basis.
  d. For non-significant write-offs: Zero unless determined by exception on a case- by-case basis.
  e. For non-significant asset sales: Receipts from asset sales.
- Retain the $10 million section 16A subsidy relating to the Kooragang Industrial Water Scheme in Hunter Water's RAB.
- Remove the avoided cost of $9.5 million relating to the KIWS from Hunter Water's Regulatory Asset Base.

6.2.1 Reasons for our draft decision

We have changed the way we treat asset disposals from our 2013 Determination.

Our approach to asset disposals reflects our view that the asset's identifiable **regulatory value** should be removed from the RAB. This is the value of the asset as it entered the RAB (if known), adjusted for the effect of depreciation and indexation. We also consider that the business should pay any tax obligations from the regulatory profit it retains.

This approach means the business bears the risk of any profits or losses arising from the sale of an asset, and customers are not affected. We consider this to be appropriate because the benefit customers received came from consuming the service, not from ownership of the asset. We consider that the impact of any profit or loss should lie entirely with the business (or shareholder).

Our policy on the regulatory treatment of asset disposals is set out in detail in Appendix D.

In response to our Issues Paper, Hunter Water raised what it considered to be three 'minor' issues with our proposed approach for treating asset disposals. We discuss these three items further below.

Our treatment of Hunter Water's disposal of its Head Office

Hunter Water sold its head office at Honeysuckle for $25.8 million in 2014-15. It proposes that the regulatory value of the asset should be deducted from its RAB.

We note that capital expenditure relating to the head office occurred after the RAB was established in 2000, and thus it is possible to identify its value, adjusted for the effects of depreciation and indexation.

Therefore, our draft decision is to accept Hunter Water's proposal to remove the regulatory value of its head office from its RAB. We have identified this value as $22.4 million for 2014-15.

Our treatment of Hunter Water's land sales

Hunter Water has identified a relatively small amount of land it has disposed of over the current determination period. Hunter Water advised that this land was all acquired before its RAB was established. In its modelling, Hunter Water has removed the book value (or cost of goods sold) of $3.1 million ($2015-16) of this land from its RAB.

Given that the land was acquired before Hunter Water's RAB was established, we consider it appropriate to deduct the RAB/DRC proportion (ie, 42%) from the sales amount, as per our policy set out in Appendix D. Therefore, we have deducted $1.3 million ($2015-16) from its RAB over the 2013 determination period.

Our treatment of Hunter Water's non-significant asset sales

Hunter Water identified a relatively small amount of non-significant asset sales over the current determination period, mainly relating to sales of equipment. In its modelling, Hunter Water removed the book value (or cost of goods sold) of $0.1 million from its RAB.

According to our policy as set out in Appendix D, we consider it appropriate to deduct the receipts of the asset sales from Hunter Water's RAB. Therefore, we have deducted $0.2 million from its RAB over the 2013 determination period.

Our treatment of Hunter Water's non-significant asset write-offs

Hunter Water provided information concerning various write-offs over the 2013 determination period. In its modelling, Hunter Water removed the book value (or cost of goods sold) of $10.9 million from its RAB.

In response to our Issues Paper for the Sydney Water price review we are undertaking concurrently, Sydney Water put forward the position that asset write-offs should be, and are, addressed through the expenditure review.[94] It argued that using the accounting treatment of write-offs to calculate a RAB deduction potentially double counts write-offs and will disadvantage the utility because of differences between regulatory and book asset lives (because regulatory lives are more aggregated).[95]

Our draft decision is to accept Sydney Water's proposal as being reasonable, and as such, we have adopted a default assumption that **non-significant** asset write-offs have no regulatory value (because they have reached the end of their regulatory lives) unless a regulatory value is identified, by exception, on a case-by-case basis.

Therefore, we have made no adjustments to Hunter Water's RAB concerning the $10.9 million in write-offs identified.

Our treatment of the Hunter Water's sale of Hunter Water Australia and land related to Tillegra Dam

Hunter Water also identified that it had sold its subsidiary company Hunter Water Australia (HWA) in late 2014, and is proposing to sell some land relating to Tillegra Dam.[96] It proposed that the sale of these assets should have no impact on its RAB.

Our draft decision is to accept Hunter Water's proposal regarding the sale of HWA and land related to Tillegra Dam. This is because:

- HWA was not a regulated asset and so capital expenditure related to it was not in Hunter Water's RAB, and so there are no appropriate adjustments to be made.
- At the 2013 Determination, we removed all expenditure related to Tillegra Dam from Hunter Water's RAB, and so again there are no appropriate adjustments to be made.

94 Sydney Water submission to IPART Issues Paper, October 2015, p 42.
95 Sydney Water submission to IPART Issues Paper, October 2015, pp 42, 83.
96 Subsequent to submitting its proposal, Hunter Water sold the land related to Tillegra Dam. Hunter Water, *Tillegra Dam Land Sold – Media Release*, 22 August 2015.

Our treatment of the $10 million section 16A subsidy relating to the Kooragang Industrial Water Scheme (KIWS)

At the 2013 Determination we included in Hunter Water's RAB a $10 million subsidy relating to the Kooragang Industrial Water Scheme (KIWS), following a ministerial direction to IPART under section 16A of the IPART Act.[97]

In its June 2015 proposal, Hunter Water proposed to remove the $10 million subsidy from its RAB in consideration of the potential sale of KIWS during 2015-16. However, following its announcement of the sale of KIWS to a private party (ITOCHU Corporation)[98] in December 2015, it provided additional information and a different view to that put forward in its pricing proposal.[99] In its December 2015 correspondence to IPART, Hunter Water:

- Considered the section 16A direction to IPART to be a standing direction, which would continue to apply until revoked by the relevant portfolio Minister – hence, according to Hunter Water, the $10 million section 16A subsidy should remain its RAB.
- Indicated that the $10 million subsidy was factored into its decision-making process for the construction of the scheme, and noted the purpose of the subsidy was to (partially) cover the shortfall in any costs compared to revenues earned[100].
- Advised that recycled water is supplied from the KIWS at below cost-reflective prices.

Our draft decision is to retain the $10 million section 16A subsidy in Hunter Water's RAB. We consider the section 16A direction issued in March 2013 applies to the 2013 Determination only ie, it is not a standing direction. However, the intention of the section 16A direction was for regulated customers to subsidise Hunter Water's costs in relation to the KIWS by up to $10 million. At the 2013 determination, Hunter Water sought the inclusion of the full $10million subsidy in its RAB to ensure the viability of the KIWS. We accepted this proposal as part of the 2013 Determination. Hunter Water has not, to date, recovered the full $10 million from its regulated customers[101]. Therefore, our draft decision means that regulated customers would continue to pay for a return

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97 Under section 16A of the IPART Act, the portfolio Minister for a government agency may direct the Tribunal to include in the maximum price an amount representing the efficient cost of complying with a specified requirement imposed on the agency.

98 http://www.hunterwater.com.au/Resources/Documents/Media-Releases/2015/Media-release---Hunter-Water-Announces-Sale-of-Kooragang-Industrial-Wate.pdf, accessed 12 January 2016.

99 Hunter Water correspondence, 24 December 2015.

100 We note that the business case supplied by Hunter Water at the 2013 Determination outlined that forecast revenue from the scheme was expected to contribute just over 50% towards the overall cost of the scheme.

101 As the $10 million was included in Hunter Water's water RAB in the 2013 Determination, regulated customers have been contributing via a return on and of capital of the $10 million.

on and of capital for the section 16A subsidy until Hunter Water receives $10 million in total (in NPV terms).[102]

Our treatment of Hunter Water's avoided cost of $9.5 million relating to the Kooragang Industrial Water Scheme

Hunter Water proposed that the $9.5 million ($2012-13) included in its RAB in the 2013 Determination, for avoided and deferred costs associated with the KIWS, should remain in its RAB for the 2016 Determination. The avoided costs represented the estimated cost savings to regulated water customers from deferring the need to upgrade treatment works at Grahamstown Water Treatment Plant and the trunk delivery system as a result of the KIWS supplying recycled water instead of potable water to a large customer on Kooragang Island. Hunter Water considers that these avoided costs to water customers remain relevant with the operation of the KIWS.[103]

As part of the review of Hunter Water's prudent and efficient costs, we asked Jacobs to update the value of the avoided costs arising from the KIWS.[104] Jacobs found that the avoided costs are now only about $2.5 million ($2012-13), and thus substantially less than expected at the 2013 Determination. This is mainly due to lower than expected uptake of recycled water, currently about 6.2 ML per day compared with 9 ML per day assumed in 2013. This resulted in the timing of capital expenditure for upgrading Grahamstown Water Treatment Plant and other augmentation works being brought forward. Therefore, there are less benefits (or avoided costs) to regulated customers than expected.[105]

In addition to the actual value of avoided costs, we have questions about whether Hunter Water should maintain avoided costs in its RAB for a recycled water scheme it will no longer own. For example, when Hunter Water no longer owns and operates the schemes, it is not clear how it will be possible to ensure that regulated customers would continue to benefit from the avoided costs delivered by the KIWS. The avoided cost framework was designed in 2006 for recycled water schemes owned and operated by public water utilities.[106] In 2017-18, we intend to conduct a full review of our approach to recycled water pricing, including the issue of avoided costs (see Chapter 10).

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102 Regulated customers would pay, in $2015-16, about $0.5 million per year in return on capital and about $0.2 million per year in return of capital.

103 Hunter Water pricing proposal to IPART, June 2015, p 64.

104 According to our avoided costs guidelines, we may use a post-adjustment mechanism to correct where agencies over or understate the length and cost of deferral or misrepresent an avoided costs' value. IPART, *Assessment process for recycled water scheme avoided costs – Guidelines*, January 2011, p 1.

105 Jacobs, *Hunter Water expenditure review – Final Report*, February 2016, pp 100-101.

106 Avoided costs can be used by regulated water utilities to cross-subsidies recycled water schemes. Private parties could also potentially cross-subsidise recycled water costs with their own customer base if they choose to do so. However, we do note that regulated utilities have a larger customer base to cross-subsidies recycled water costs, and so this may provide regulated utilities with a cost advantage due to their scale.

On balance, our draft decision is to remove the avoided cost of $9.5 million for the KIWS from Hunter Water's RAB. We note that over the 2013 determination period, due to lower than expected uptake of recycled water, regulated customers have been paying for a return on and of capital for the $9.5 million, which is substantially more than Jacobs' updated assessment of $2.5 million. Therefore, we consider it appropriate at this time to remove the avoided cost amount from Hunter Water's RAB, pending the full review of our approach to recycled water pricing, including avoided costs in 2017-18.

Our response to Hunter Water's concerns raised in response to our Issues Paper

In relation to asset disposals, Hunter Water raised the following three issues in response to our Issues Paper:

- In our Issues Paper, we defined significant asset write-offs, as assets that are not sold and if the book value of the 'disposed asset' or 'class of assets' accounts for more than 0.5% of the opening value of the RAB, in the year in which the asset is disposed. Hunter Water interpreted this to apply when a whole class of asset is written off and so would prefer to use the term 'book value of the disposed asset or assets'.
  - Our draft decision is to adjust the definition to 'the book value of the disposed asset**/s** or class of assets' for clarity.
- In terms of calculating the asset sale value for the sale of significant pre-2000 assets, Hunter Water argued that the cost of transacting any sales should be deducted from the sales amount.
  - Hunter Water suggested that if the cost of transacting any sales is not deducted from the sales value prior to multiplying the amount by the RAB to DRC value of 42%, then an amount larger than the asset's indicative RAB value would be deducted from its RAB.
  - In response, we do not consider transaction costs to be such a substantial amount to warrant such an adjustment.

    For example, for 2014-15 Hunter Water has indicated total selling expenses of about $180,000 for pre-2000 land sales totalling about $0.66 million. If we were to make Hunter Water's suggested adjustment it would mean that $0.20 million would be deducted from Hunter Water's RAB instead of $0.28 million. This would only provide an additional $20,000 in return on and of capital (or less than 0.01% of its total expected NRR), over the 4-year determination period.
- Hunter Water supported our proposal to treat non-significant asset disposals in a 'simple, uniform manner' using the ratio of the utility's RAB to book value in the year in which the disposal occurs multiplied by the sale value. However, Hunter Water sought clarification that this approach applies to all non-significant asset disposals, whether acquired pre or post 2000.
  - Our preliminary view as stated in the Issues Paper was that the approach applied to all non-significant asset disposals.

However, our draft decision is to remove the receipts from asset sales from the RAB as it is simpler to administer, particularly for disposals that represent a relatively small proportion of the utility's RAB (ie, less than 0.5%).

6.3 Regulatory depreciation

An allowance for regulatory depreciation is included in the revenue requirement (and used in calculating the value of the RAB, as discussed above). This is intended to ensure that the capital invested in the regulatory assets is returned over the useful life of each asset.

To calculate this allowance, we determine the appropriate lives for the assets in Hunter Water's RAB, and the appropriate depreciation method to use.

Draft decision

11 We have decided to adopt:

- a straight-line depreciation method for the 2016 determination period, and
- new and existing asset lives as set out in Table 6.4.

6.3.1 Reasons for our draft decision

We have accepted Hunter Water's straight-line approach to depreciation. This is consistent with our approach in previous reviews.[107] We consider this method is superior to alternatives in terms of simplicity, consistency and transparency.

For asset lives, Hunter Water proposed 100 years for new assets and 70 years for existing assets. This is consistent with the asset lives adopted to calculate regulatory depreciation for the past three price determinations.[108] Thus, they have been unchanged during this period.

As part of the review of Hunter Water's costs, we asked Jacobs, our consultant, to investigate and recommend updated asset lives that better reflect the actual economic lives of assets in Hunter Water's RAB. Based on its analysis, it recommended 67 years for new assets and 62 years for existing assets.[109]

[107] 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 life.

[108] Hunter Water's approach differs from Sydney Water's (which has disaggregated its assets into different asset categories such as Civil, Electrical, Mechanical, Electronic and Non-Depreciating and applied specific asset lives to each category).

[109] Jacobs, *Hunter Water expenditure review – Final Report*, February 2016, p 10.

We have decided to update the asset lives, to better reflect the actual economic lives of assets in Hunter Water's RAB, as this would provide Hunter Water with an appropriate depreciation allowance (ie, Hunter Water would be returned the capital it has invested over the economic life of its assets, which it can reinvest to renew its asset base).

If we were to adopt Jacobs' recommendations for 2016-17 onwards, it would have a substantial impact on customers' bills.[110] Therefore, our draft decision is to transition towards Jacobs' recommended asset lives as shown in Table 6.4 below.

Table 6.4 IPART's draft and Hunter Water's proposed asset lives (years)

		2016-17	2017-18	2018-19	2019-20
Hunter Water proposed	New assets	100	100	100	100
	Existing assets	70	70	70	70
IPART draft decision	New assets	92	84	75	67
	Existing assets	68	66	64	62

The comparison between our allowance for regulatory depreciation (a return of capital) is compared to Hunter Water's proposed allowance in Table 6.5 below. Our depreciation allowance is $13.0 million (or 9.1%) higher than Hunter Water's proposed allowance, due to the updated asset lives providing a higher depreciation allowance.

Table 6.5 IPART draft and Hunter Water's proposed allowance for regulatory depreciation (return of capital) ($ millions, $2015-16)

	2016-17	2017-18	2018-19	2019-20	Total
IPART draft decision	35.6	37.8	40.2	43	156.5
Hunter Water proposed	34.6	35.5	36.3	37.2	143.5
Difference	*1.0*	*2.3*	*3.9*	*5.8*	*13.0*
Difference %	*3.0%*	*6.6%*	*10.7%*	*15.7%*	*9.1%*

Note: Totals may vary due to rounding. Our draft decision in the table above is higher than the regulatory depreciation amounts presented in the notional revenue requirement (NRR). This is because the amounts in the NRR have been discounted by ½ a year for pricing purposes as revenue is received, on average, mid-year, whilst the regulatory depreciation amounts in the above table are end of year values.

Source: Hunter Water pricing proposal to IPART, June 2015, BBM Models (Depreciation, Year End values) and IPART calculations.

[110] A typical residential (house) water and sewerage bill (185 kL per year) would face an additional increase of about $25 per year on average, compared with Hunter Water's proposal.

6.4 Return on capital

We include an allowance for a return on assets in the revenue requirement. This represents our assessment of the opportunity cost of the capital invested to provide the regulated services. Our approach ensures that the business can continue to make efficient capital investments in the future.

To calculate this allowance, we multiply the value of the RAB in each year of the determination period by an appropriate rate of return. As for previous reviews, we have determined the rate of return using an estimate of the weighted average cost of capital (WACC).

Draft decision

12 We have decided to:

- apply a real post-tax WACC of 4.8% for the purposes of calculating the appropriate rate of return on Hunter Water's assets, and
- set an allowance for return on capital as shown in Table 6.7.

6.4.1 Reasons for our draft decision

We have developed our current approach to setting the WACC in consultation with stakeholders in a number of reviews.[111] Our draft decision is to use the resulting methodologies for all aspects of the WACC. We have set the WACC at the midpoint of the range at 4.8%.

The WACC is based on market data (risk free rate, debt margin and inflation) sampled to 20 January 2016. The market-based parameters and the resulting WACC will be updated before we make our final decision. Our draft decisions on parameters are shown in Table 6.6.

[111] We completed a major review of the WACC in 2013 (IPART, *Review of WACC Methodology – Final Report*, December 2013). More recently, we developed the method of estimating the debt margin and the inflation adjustment (IPART, *IPART's New Approach to Estimating the Cost of Debt – Final Report*, April 2014; IPART, *New approach to forecasting the WACC inflation adjustment – Fact Sheet*, March 2015).

Table 6.6 Recommended WACC for draft decisions (sampled to 20 Jan 2016)

	WACC: current data			WACC: long-term			WACC range		
	Low	Mid	High	Low	Mid	High	Low	Mid	High
Nominal risk free rate		2.8%			4.6%				
Inflation		2.5%			2.5%				
Debt margin		2.8%			2.9%				
Gearing		60%			60%				
Market risk premium	7.0%	8.5%	10.0%	5.5%	6.0%	6.5%			
Equity beta	0.6	0.7	0.8	0.6	0.7	0.8			
Cost of debt (nominal pre-tax)		5.6%			7.5%				
Nominal Vanilla WACC	6.2%	6.9%	7.7%	7.7%	8.0%	8.4%	6.9%	7.4%	8.0%
Post-tax real WACC	3.6%	4.3%	5.1%	5.0%	5.4%	5.8%	4.3%	**4.8%**	5.4%

Source: Bloomberg, RBA, Secretariat calculations.

Hunter Water proposed a WACC of 4.6%.[112] It calculated its proposed WACC using our standard approach and industry-specific parameters for all aspects of the WACC except for one: it did not propose the midpoint WACC. Instead, it placed a 60% weighting on the long-term (10-year) data and 40% weight on the current market data to calculate the cost of debt in the WACC estimate.[113] Additionally, it raised concerns with our equity beta estimate.

As our measure of market uncertainty is currently within one standard deviation of the long term average, we have selected the midpoint WACC value. This is consistent with our decision rule for selecting a point within our range of WACC values established as part of our 2013 review of the WACC.[114] We have also retained our standard valuation for the industry-specific parameters, including the equity beta.

Our consideration of Hunter Water's views on the WACC is presented in Appendix E.

112 Hunter Water submission to IPART on prices to apply from 1 July 2016, June 2015, p 62.

113 In response to our Issues Paper, the Public Interest Advocacy Centre (PIAC) commented that we may apply equal weightings to the long-term WACC estimate and the current WACC estimate. It requested information on how such a change would be reflected in final residential water prices (PIAC response to IPART Issues Paper – Hunter Water, p 7). In response to PIAC's comment, adopting Hunter Water's proposal and using data sampled to 20 January 2016, would have resulted in a WACC of 4.9%. Therefore, not accepting Hunter Water's proposal means that a typical residential water and sewerage bill is otherwise lower by about $12 ($2015-16) per year, on average.

114 IPART, *Review of WACC Methodology – Final Report,* December 2013,p 4.

Allowance for return on capital

Based on the RAB values set out in section 6.1 and our draft decision on a WACC of 4.8%, the resulting return on capital (WACC% x RAB) is shown in Table 6.7 below.

Our allowance for a return on capital is higher than proposed by Hunter Water in its June 2015 pricing proposal. This is the result of the higher WACC more than offsetting lower RAB values due to our efficiency and prudency adjustments to capital expenditure.

Table 6.7 IPART's draft and Hunter Water's proposed return on capital ($millions, $2015-16)

	2016-17	2017-18	2018-19	2019-20	Total
IPART draft decision	114.0	116.6	118.8	120.7	470.2
Hunter Water proposed	108.1	110.6	112.8	114.9	446.4
Difference	*5.9*	*6.0*	*6.1*	*5.8*	23.8
Difference %	*5.5%*	*5.5%*	*5.4%*	*5.0%*	*5.3%*

Source: Hunter Water pricing proposal to IPART, June 2015, pp 65-66 and IPART calculations.

6.5 Allowance for tax

As discussed above, we include an explicit allowance for tax, because we use a post-tax WACC to estimate the allowance for a return on assets in the revenue requirement. This allowance reflects the regulated business's forecast tax liabilities.

We calculate the tax allowance for each year by applying a 30% statutory corporate tax rate adjusted for gamma to the business's (nominal) taxable income.[115] For this purpose, taxable income is the notional revenue requirement (excluding tax allowance) less operating cost allowances, tax depreciation, and interest expenses. As part of calculating the appropriate tax allowance, the business is required to provide forecast tax depreciation for the determination period. Other items such as interest expenses are based on the parameters used for the WACC, and the value of the RAB.[116]

The tax allowance is one of the last building block items we calculate, due to its dependence on other items such as operating cost allowances and WACC parameters.

[115] Under a post-tax framework, the value of franking credits (gamma) enters the regulatory decision only through the estimate of the tax liability.

[116] The nominal cost of debt is the sum of the nominal risk free rate and nominal debt margin.

Draft decision

13 We have decided to:

- make no adjustment to the regulatory tax allowance for revenue from grants and cash capital contributions
- adopt Hunter Water's forecasts for assets free of charge as shown in Table 6.12, and
- adopt the regulatory tax allowance shown in Table 6.8.

6.5.1 Reasons for our draft decision

We have provided a regulatory tax allowance for Hunter Water as detailed in Table 6.8. This is lower than that proposed by Hunter Water, largely as a result of our treatment of capital contributions. Our decisions around these items and also assets free of charge are outlined in detail below.

Table 6.8 IPART draft and Hunter Water proposed regulatory tax allowance ($million, $2015-16)

	2016-17	2017-18	2018-19	2019-20	Total
IPART draft decision	6.8	7.1	7.5	8.1	29.5
Hunter Water Proposed	8.4	8.3	8.1	8.2	32.9
Difference	*-1.6*	*-1.2*	*-0.6*	*-0.1*	*-3.4*
Difference %	*-18.5%*	*-14.0%*	*-7.7%*	*-1.2%*	*-10.4%*

Note: Totals may vary due to rounding.

Source: Hunter Water pricing proposal to IPART, June 2015, p 64 and IPART calculations.

Excluding revenue from grants and capital contributions from the regulatory tax allowance

Hunter Water mainly receives cash contributions through the Environmental Improvement Charge, the Clarence Town Levy (both to fund backlog sewerage works) and through developer contributions (for urban infill backlog sewerage works).

Cash contributions[117] that Hunter Water receives from third parties towards its capital expenditure are typically deducted from the RAB. This ensures that customers do not pay for a return on assets or regulatory depreciation for capital expenditure that Hunter Water has not funded.[118]

[117] Cash capital contributions also include grants.

[118] We note that in response to our Issues Paper, we received a submission (anonymous) seeking clarity as to whether funds received from environmental levies were actually spent on infrastructure. We consider Hunter Water's approach of having an explicit environmental levy increases transparency about the amount of funds raised, and at each price review we ensure that it is appropriately spent on infrastructure by deducting these amounts from its prudent and efficient actual capital expenditure when rolling its RAB forward to the base year of the price review.

However, forecast cash contributions are included as income in the tax allowance calculation to provide an agency an allocation of tax against that contribution. There are no tax adjustment for differences in actual historical cash contributions compared to those forecasts.

Under current ATO rules,[119] an agency is required to pay tax on cash contributions and grants. This means that only the amount net of tax can be applied to capital expenditure. Deducting the full amount of the cash contribution from capital expenditure and providing the agency a tax allowance for that cash contribution effectively converts a proportion of the RAB into cash.

Therefore, we have decided to deduct only the cash contribution amount net of tax from capital expenditure (ie, the RAB) and not include the cash contribution in the tax allowance calculation.

For Hunter Water's forecast cash contributions, we have applied the new approach (ie, deducted these contribution from the capital expenditure allowance net of tax liabilities). However, we have not applied the new approach to its actual cash contributions over the 2013 determination period. This is because Hunter Water provided forecasts for these contributions at the 2013 price review, and so a tax allowance has already been provided for in its 2013 Determination prices.

In Table 6.9 and Table 6.10 below, we present our draft decision and Hunter Water's proposed cash contributions. Our draft decision is also lower than Hunter Water's initial proposal because of a difference in the treatment of funding from the Housing Acceleration Fund (HAF). In its proposal, Hunter Water treated HAF funding ($21 million, $nominal) as a grant, where no repayment was required back to the NSW Government. However, it subsequently advised that it had received previous instruction from the NSW Government stating that the $21 million in HAF funding should be treated as an equity injection.[120] Therefore, we have not deducted these amounts from the RAB, so that Hunter Water is able to earn a return on and of capital from the expenditure funded by equity injections. This is consistent with the approach taken in the concurrent review of Sydney Water.

119 Section 21A *Income Tax Assessment Act 1936*.
120 Hunter Water correspondence, 15 January 2016.

Table 6.9 IPART's draft and Hunter Water's proposed cash contributions for the 2013 determination period ($million, $nominal)

	2012-13[a]	2013-14	2014-15	2015-16[b]	Total
IPART draft decision	7.8	7.0	14.8	7.0	36.7
Hunter Water Proposed	7.8	7.0	[c]15.5	14.8	45.2
Difference	*0.0*	*0.0*	*-0.7*	*-7.8*	*-8.5*
Difference %	*0.0%*	*0.0%*	*-4.5%*	*-52.5%*	*-18.7%*

a Cash contributions for 2012-13 are updated because at the time of the previous determination, these values were forecasts.

b Cash contributions for 2015-16 are forecasts.

c Hunter Water advised that it received $8.2m (of the $15.5m) for the Williamtown/Tomago wastewater transfer system from Newcastle Airport Limited and the Department of Defence.

Note: The difference of $0.7 million in 2014-15, and $7.8 million in 2015-16, $nominal, is due to treating HAF funding as an equity injection.

Source: Hunter Water Annual Information Return, September 2015.

Table 6.10 IPART's draft and Hunter Water's proposed cash contributions for the 2016 determination period ($million, $2015-16)

	2016-17	2017-18	2018-19	2019-20	Total
IPART draft decision (net of tax liabilities)	5.0	5.0	5.1	5.1	20.2
Hunter Water proposed	19.3	7.2	7.2	7.3	41.0
Difference	*-14.4*	*-2.2*	*-2.2*	*-2.2*	*-20.9*
Difference %	*-74.3%*	*-30.0%*	*-30.0%*	*-30.0%*	*-50.9%*

Note: Treating HAF funding as an equity injection contributes $12.2 million (or $12.5 million, $nominal) of the difference for 2016-17.

Source: Hunter Water Annual Information Return, September 2015.

Maintaining the notional gearing ratio of 60% and the cost of debt parameters used in the WACC when calculating the tax allowance

As outlined in our Issues Paper, Hunter Water proposed its tax allowance based on a notional gearing ratio of 60% and the cost of debt parameters in the WACC. However, it put the view that an entity's actual gearing ratio and actual average interest rate would be more suitable for determining the tax allowance, as this would better reflect the actual tax liability of the business.[121]

We acknowledge Hunter Water's argument, however, our aim in moving to a post-tax WACC and including a tax allowance as an explicit building block was to better estimate the tax liability of a similar well-managed privately owned business, and not reflect the actual tax liability of the business.[122] Therefore, we have not accepted Hunter Water's proposal and have maintained our

[121] In its price proposal Hunter Water quantified the effect of the change in approach on its tax allowance. It would result in a higher tax allowance of about $4 million ($2015-16) per year. Hunter Water pricing proposal to IPART, June 2015, p 64 and IPART calculations.

[122] IPART, *The incorporation of company tax in pricing determinations – Final Decision*, December 2011, p 1.

methodology and applied a notional gearing ratio (60%) and cost of debt (based on the parameters used in the WACC) when calculating Hunter Water's tax allowance.[123]

Adopting Hunter Water's forecasts for assets free of charge

Assets free of charge (AFOC) are assets that utilities receive for free, usually from developers. AFOC does not affect the RAB, and utilities do not earn a return on or of those assets. Utilities are required to pay tax equivalents on the value of AFOC. As such, we include forecast AFOC as revenue in the calculation of the regulatory tax allowance building block.

Table 6.11 below compares our forecasts from the 2013 price review with the actual level of AFOC received by Hunter Water over the 2013 determination period. It shows that actual AFOC received by Hunter Water was greater than its forecast (which we accepted) by an average of around $4.8 million per annum. This means that, all other things being equal, Hunter Water's tax obligations were around $1.4 million per annum (30% x $4.8 million) higher than forecast.

Table 6.11 Comparison of our 2013 forecast and actual AFOC between 2012-13 and 2014-15 ($million, $2015-16)

	2012-13[a]	2013-14	2014-15
Forecast	19.1	19.0	19.0
Actual	22.0	22.9	26.6
Difference (Actual – Forecast)	2.9	3.9	7.6

a 2012-13 was a budget year in the 2013 price review.

Note: Totals may not add due to rounding.

Source: Hunter Water Financial Model, 2013 Final Report and Determination; Hunter Water AIR/SIR, September 2015.

We note that Hunter Water's forecast for AFOC over the 2016 determination period (about $17.8 million on average) is less than its actual AFOC received over the current period (about $23.8 million), and marginally less than its forecasts at the 2013 Determination (about $19.0 million).

Hunter Water advised that it is difficult to accurately forecast AFOC. It also indicated that it adjusted its forecasts for projected or known private network operator activity. That is, a number of new development areas that would have previously had assets delivered by developers and then handed over to Hunter Water, are now expected to be serviced by private network operators, licensed under the WIC Act (eg, the Huntlee development area).[124]

123 IPART, *The incorporation of company tax in pricing determinations – Final Decision*, December 2011, p 2.

124 Hunter Water supplementary information, 15 January 2016.

Given the expected increase in WIC Act licensee activity, our draft decision is to accept Hunter Water's lower forecasts as being reasonable (shown in Table 6.12 below).

Table 6.12 IPART's draft and Hunter Water's proposed AFOC ($million, $2015-16)

	2016-17	2017-18	2018-19	2019-20
Hunter Water proposed	18.4	18.0	17.6	17.2
IPART draft decision	18.4	18.0	17.6	17.2

Note: Totals may not add due to rounding.

Source: Hunter Water Annual Information Return, September 2015.

7 Forecast water sales and customer numbers

Once we have determined the revenue requirement for the 2016 determination period, the next step in our approach is to decide on Hunter Water's forecast water demand and customer numbers, and its forecast chargeable sewerage volumes. These forecasts are used in calculating the water and sewerage price levels required to recover the required revenue.

It is important that the forecasts are reasonable. If they differ markedly from Hunter Water's actual water sales volumes and customer numbers over the determination period, the determined prices will result in Hunter Water significantly over- or under-recovering its required revenue. If the forecasts are lower than actual sales, customers will pay higher than efficient prices. If they are higher than actual sales, Hunter Water may not earn sufficient revenue to recover its efficient costs.

7.1 Forecast water sales volumes

Draft decision

14 We have decided to adopt Hunter Water's forecast water sales volumes, as shown in Table 7.1.

Table 7.1 IPART's draft decision on proposed water sales (ML)

	2015-16 (base year)	2016-17	2017-18	2018-19	2019-20
Residential	36,844	36,890	36,951	37,025	37,118
Non-residential	17,776	17,889	18,426	18,880	19,172
Total	54,621	54,779	55,376	55,906	56,290

Note: 2015-16 figures are included for comparison. Totals include consumption from exempt properties and may not add due to rounding.

Source: Hunter Water pricing proposal to IPART, June 2015, p 25 and IPART calculations.

7.1.1 Reasons for IPART's draft decisions on sales volumes

We undertook a high level review of the methodology and key assumptions underpinning Hunter Water's customer numbers and demand forecasts.[125] We consider that Hunter Water's forecast sales volumes are reasonable because:

- Hunter Water adopted a new demand forecasting model for the 2013 Determination known as the Integrated Supply-Demand Planning (iSDP) model. We accepted Hunter Water's demand modelling approach and forecasts at the 2013 Determination.[126]
- This same model was used for the Lower Hunter Water Plan (LHWP) and was used by Hunter Water in its June 2015 pricing proposal for the 2016 determination period.[127]
- Hunter Water's demand modelling approach has been previously externally peer reviewed. The Metropolitan Water Directorate commissioned a review in 2013 of the model prior to its use in the development of the LHWP.[128]
- The model has performed reasonably well – eg, over the current determination period, the variation in forecast and actual demand is about 0.2% in total.
- In response to our Issues Paper, we did not receive any submissions that objected to Hunter Water's proposed forecasts.

Actual water sales over the 2013 determination period

In the 2013 Determination, we adopted forecast water sales proposed by Hunter Water.[129] The model used to develop those forecasts has performed reasonably well over the current period. As Table 7.2 shows, the net level of variation between total actual and forecast sales over the 2013 determination period is expected to be around 304 ML or 0.2%.

However, the annual variance over the period ranged from 6.3% higher (2013-14) to 3.0% lower (2014-15). Hunter Water attributes the variation to the following factors:

- Actual water sales in 2013-14 were higher than forecast due to relatively warm and dry conditions.

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125 We engaged a consultant, Jacobs, to assist with our review of Hunter Water's demand and customer number forecasts. Much of the supplementary information used in our analysis in this chapter was provided to us by Hunter Water on a commercial-in-confidence basis. Jacobs, *Review of Demand Forecasts – Hunter Water*, January 2016 (Commercial-in-Confidence).

126 IPART, *Hunter Water Corporation's water, sewerage, stormwater drainage and other services - Review of prices from 1 July 2013 to 30 June 2017 - Final Report*, June 2013, p 88.

127 Hunter Water pricing proposal to IPART, June 2015, pp 23-24.

128 Hunter Water pricing proposal to IPART, June 2015, p 24.

129 IPART, *Hunter Water Corporation's water, sewerage, stormwater drainage and other services - Final Report*, June 2013, p 88.

- Water sales in the subsequent two years were lower than projections due to a return to average weather conditions and consumption savings associated with the implementation of Water Wise rules and increased uptake of water efficient appliances.[130]

Table 7.2 Variance between IPART determined and actual water sales over the 2013 determination period (ML)

	2013-14	2014-15	2015-16[a]	Total
Residential				
IPART 2013 Determination	37,671	37,743	37,823	113,237
Hunter Water actual/projected	40,246	37,146	36,844	114,236
Non-Residential				
IPART 2013 Determination	20,784	19,459	18,498	58,741
Hunter Water actual/projected	21,915	18,354	17,776	58,045
Total				
IPART 2013 Determination	58,454	57,203	56,321	171,978
Hunter Water actual/projected	62,161	55,500	54,621	172,282
Variance	3,707	-1,703	-1,701	304
% Variation	6.3%	-3.0%	-3.0%	0.2%

a Values for 2015-16 are estimates.

Note: Totals include consumption from exempt properties and may not add due to rounding.

Source: Hunter Water pricing proposal to IPART, p25 and Appendices June 2015, p A.1; Hunter water's annual information return, June 2015 and IPART, *Hunter Water Corporation's water, sewerage, stormwater drainage and other services - Review of prices from 1 July 2013 to 30 June 2017 - Final Report*, June 2013, p 85.

Water consumption per customer

Table 7.3 lists average water consumption per customer for residential and non-residential customers, based on Hunter Water's actual customer and sales volumes for 2013-14 to 2014-15 and its forecasts from 2015-16 onwards. The table shows that average water usage per residential customer is projected to continue to decline. However, average annual water use per non-residential customer is forecast to decline in 2016-17 and then gradually increase over 2017-18 to 2019-20.

Table 7.3 Hunter Water's average actual and forecast water sales per customer (kL)

	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Residential	181	162	161	160	158	156	155
Non-Residential	1,794	1,528	1,414	1,404	1,427	1,444	1,448
Total Average	264	232	226	224	223	223	221

Source: Hunter Water's Annual Information Return, June 2015 and IPART calculations.

[130] Hunter Water pricing proposal to IPART, June 2015, p 22.

Central Coast bulkwater transfers

Hunter Water has a water supply arrangement with Gosford and Wyong Councils (the Central Coast Councils) for the supply of potable drinking water. The amount transferred in any given year is dependent on weather conditions in each region. Due to improvements in storage levels in the Central Coast, Hunter Water forecasts that no **net** bulk water transfers will be made over the 2016 determination period.[131] That is, Hunter Water expects any bulk water transfers from Hunter Water to the Central Coast Councils will be offset by transfers from the Central Coast Councils to Hunter Water.

7.2 Forecast customer numbers

Forecasts of customer numbers are used in calculating the water, sewerage and stormwater drainage service charges as part of setting prices to recover the required revenue for each service.

Draft decision

15 We have decided to adopt Hunter Water's forecast water customer numbers, sewerage customer numbers and stormwater customer numbers as shown in Tables 7.4, 7.5 and 7.6.

Table 7.4 IPART's draft decision on billable water connections

	Unit	2015-16	2016-17	2017-18	2018-19	2019-20
Residential[a]						
Houses	No	185,327	187,229	189,130	191,032	192,933
Multi premises[b]	No	42,306	43,325	44,345	45,365	46,384
Total residential	No	**227,633**	**230,555**	**233,476**	**236,397**	**239,319**
Non-Residential						
Total 20mm individual	No	**5,817**	**5,900**	**5,983**	**6,066**	**6,148**
Multi premises[b]	ME	529	536	544	551	559
25mm & above	ME	14,656	14,865	15,074	15,284	15,491
Total ME[c]	ME	**15,185**	**15,401**	**15,618**	**15,835**	**16,050**

a Includes 'vacant land' and 'other'.

b Multi premises are premises where there are two or more properties. Flats and units are examples of residential multi premises.

c ME represents meter equivalents.

Note 1: Totals may not add due to rounding.

Note 2: The figures in this table include exempt properties. This is necessary to ensure that other customers do not cross-subsidise exempt properties. Our policy for State Owned Corporations (SOC) is that the funding of Community Service Obligations (CSOs), such as exempting certain properties from service charges, is a matter between the NSW Government and each SOC.

Source: Hunter Water pricing proposal to IPART, June 2015, p 26.

[131] Hunter Water pricing proposal to IPART, June 2015, pp 27-28.

Table 7.5 IPART's draft decision on billable sewerage connections

	Unit	2015-16	2016-17	2017-18	2018-19	2019-20
Residential[a]						
Houses	No	174,574	176,168	177,758	179,344	180,926
Multi premises[c]	No	42,867	43,915	44,964	46,014	47,065
Total residential	No	**217,441**	**220,083**	**222,722**	**225,358**	**227,991**
Non-Residential						
Total 20mm individual	No	**5,063**	**5,164**	**5,267**	**5,371**	**5,476**
Multi premises[c]	ME	424	432	441	449	458
25mm & above	ME	7,082	7,223	7,367	7,513	7,660
Total ME[b]	ME	**7,506**	**7,655**	**7,808**	**7,962**	**8,118**

a Includes 'vacant land' and 'other'.

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

c Multi premises are premises where there are two or more properties. Flats and units are examples of residential multi premises.

Note 1: Totals may not add due to rounding.

Note 2: The figures in this table include exempt properties.

Source: Hunter Water pricing proposal to IPART, June 2015, p 26.

Table 7.6 IPART's draft decision on billable stormwater properties

	2015-16	2016-17	2017-18	2018-19	2019-20
Residential					
Stand-alone residential	48,308	48,368	48,428	48,488	48,548
Multi premises (strata units)	15,722	15,917	16,112	16,307	16,502
Non-Residential					
Small property (<1,000m^2) or low impact	1,999	1,999	1,999	1,999	1,999
Medium property (<1,001 - 10,000m^2)	908	908	908	908	908
Large property (<10,001 - 45,000m^2)	73	73	73	73	73
Very large property (>45,000m^2)	12	12	12	12	12

Note: The figures in this table include exempt properties.

Source: Hunter Water pricing proposal to IPART, June 2015, p 27.

7.2.1 Reasons for our draft decision

We consider that Hunter Water's forecast customer numbers are reasonable, given historical trends and population forecasts. We note the following:

- Hunter Water forecasts an annual rate of growth for residential water and sewerage customers of 1.3% and 1.2%, respectively. Both these growth rates are higher than forecast population growth of around 1%. Given the trend towards smaller average household sizes, we found this to be a reasonable assumption, noting that the rate of dwelling formation in Hunter Water's service area has been above the rate of population growth for some time.[132]
- These annual growth rates are slightly lower than the forecasts used for the 2013 determination period (around 1.4% per annum for both water and sewerage).[133]
- Given that the stormwater service area is limited to established areas of Hunter Water's service area:
  - It is reasonable that the rate of growth in the number of residential stormwater customers is lower than that of water and sewerage customers. Increases in the number of residential stormwater customers would be expected to come from infill development in existing urban areas.
  - It is a reasonable assumption that there will be no growth in the number of non-residential stormwater properties, as most infill development is residential in nature.

Impact of competition on consumption and connection forecasts

Hunter Water indicated that urban water competition within its area of operation has emerged in the form of developers' use of private suppliers of water and sewerage services. That is, some developers are using private operators, who are licensed under the WIC Act, to provide water, sewerage and/or recycled water services to greenfield urban developments.

These WIC Act licence holders would be expected to purchase wholesale potable water and, in some instances, sewerage services from Hunter Water, to on-sell to their own retail customers. Nevertheless, Hunter Water has not adjusted its demand and customer number forecasts for the 2016 determination period as a result of possible competition. According to Hunter Water, this is due to the lead times involved in planning, construction and securing WIC Act licences.[134] As Hunter Water anticipates that it will provide wholesale water to these private operators, it will have information on the impact of private operators on its growth projections, and will use this information to update future forecasts.[135]

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132 IPART analysis, based on data in Hunter Water's 2015 Annual Information Return.
133 IPART analysis, based on data in Hunter Water's 2012 Annual Information Return.
134 Hunter Water pricing proposal to IPART, June 2015, p 27.
135 Hunter Water pricing proposal to IPART, June 2015, p 27.

7.3 Forecast sewerage volume

Some non-residential properties connected to Hunter Water's sewerage network are liable for a sewerage usage charge, if the volume of sewage discharged is above a certain allowance (the discharge allowance). The volume above the allowance is called the chargeable sewerage volume. The chargeable sewerage volume for a non-residential property is calculated by multiplying the metered water consumption by a property-specific discharge factor.[136]

Draft decision

16 We have decided to:

- increase the discharge allowance for non-residential customers from 50 kL to 120 kL per year, with a 17.5 kL per year transition, as shown in Table 7.7, and
- adopt the forecasts for sewerage chargeable volumes as shown in Table 7.8.

Table 7.7 Sewerage discharge allowance for non-residential customers (kL per year)

	2015-16	2016-17	2017-18	2018-19	2019-20
Hunter Water proposed	50.0	75.0	100.0	125.0	150.0
IPART's draft decision	50.0	67.5	85.0	102.5	120.0

Table 7.8 Non-residential chargeable sewerage volumes (kL per year)

	2015-16	2016-17	2017-18	2018-19	2019-20
Hunter Water proposed	5,672	5,606	5,549	5,499	5,458
IPART's draft decision	5,672	5,646	5,622	5,600	5,582

Source: IPART calculations based on data provided by Hunter Water.

7.3.1 Reasons for our draft decision

Sewerage discharge allowance

Hunter Water proposed[137] increasing the discharge allowance from the current level of 50 kL per year to 150 kL per year in 2019-2020, with a 25 kL per year transition. We have decided to limit the increase from 50 kL per year to 120 kL per year by 2019-20, with a 17.5 kL per year transition. This is to ensure the non-residential discharge allowance will be in parity with the deemed residential discharge allowance by 2019-20, which is explained in Chapter 8.

[136] A discharge factor is the estimated percentage of incoming water used by a property (as measured by the property's water meter) which is discharged to the sewerage network.
[137] Hunter Water pricing proposal to IPART, June 2015, p 83.

Non-residential chargeable sewerage volumes

Hunter Water forecast chargeable sewerage volumes by estimating non-residential sewerage volumes above the discharge allowance.

We have adjusted Hunter Water's forecast non-residential chargeable sewerage volumes to reflect our adjustment to the sewerage discharge allowance. This is because lowering the discharge allowance, compared with Hunter Water's proposal, means that there would be more chargeable sewerage volumes.

7.4 Demand volatility adjustment mechanism

Draft decision

17 We have decided to consider at the next determination of Hunter Water's prices:

- an adjustment to the revenue requirement and prices to address any over or under-recovery of revenue over the 2016 determination period due to material differences between the level of water sales over the period and the forecast water sales used in making this determination.
  a. Unlike previous determinations, we have not specified a 'deadband' of water sales variability within which such an adjustment would not be considered.
  b. At the 2020 Determination, we will consider whether and how best to make a revenue adjustment based on the circumstances at the time.

7.4.1 Reasons for our draft decision

We recognise there is some uncertainty around Hunter Water's water sales forecasts. Therefore, there is merit in applying a demand volatility adjustment at the next (2020) determination of Hunter Water's prices if necessary. This is important for both protecting customers from potential over-recovery over the 2016 determination period, resulting from excess sales, and protecting Hunter Water from under-recovery if it sells less than expected over this period.

While our decisions in this 2016 Determination cannot bind a future Tribunal, this demand volatility adjustment could be implemented by comparing the forecast and actual water demand over the 2016 determination period and adjusting the revenue requirement over the next determination period, as decided by the Tribunal at that time.

The key difference between the mechanism flagged in previous price reviews and our draft decision here is that we have not defined a material variation in sales to be ±10%. The 2013 Determination included a mechanism to adjust Hunter Water's revenue to address the risk to the business and its customers 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. In 2013, we defined a material variation as more than 10% (+ or -) over the whole determination period and noted that only the impact of variation outside of this 10% variation level could be adjusted for.[138]

We now consider there is merit in allowing IPART to consider whether and how best to make a revenue adjustment based on the circumstances at the time. This mechanism accords with our approach taken to the determination of Essential Energy's water prices in Broken Hill,[139] where we did not define the materiality threshold, but rather left this open to our discretion at the next price review to allow us to take into account the circumstances around any significant discrepancy between forecast and actual sales volumes.

Hunter Water claimed that the threshold level of the deadband trigger is too insensitive, and proposed we reconsider the threshold.[140]

Under the mechanism flagged at the 2013 Determination, the business needs to manage all under- or over- recovery risks within the deadband range. Removing reference to a specific deadband allows us to consider the specific reasons for relevant and material variation, and could effectively decrease or increase the 'deadband'. That is, under our draft decision, the volatility mechanism can be more targeted and effective, which addresses Hunter Water's concerns that the current deadband is too insensitive.

138 IPART, *Review of Hunter Water Corporation's water, sewerage, stormwater drainage and other services – Final Report*, June 2013, pp 90-91.

139 IPART, *Essential Energy's water and sewerage services in Broken Hill – Final Report,* June 2014, pp 43-46.

140 Hunter Water, Response to Issues Paper, October 2015, p 6.

8 Prices for water, sewerage and stormwater services

This chapter sets out our draft prices for services that are provided to the majority of Hunter Water's customers. The draft prices for Hunter Water's other services are presented in Chapter 9.

Currently, residential customers pay the following charges for water, sewerage and stormwater services:

- **Water –** a per kL consumption-based water usage charge and a standard (fixed) water service charge.
- **Sewerage –** a (fixed) sewerage service charge[141].
- **in some cases[142], stormwater -** a fixed stormwater service charge, that is different for standalone and multi-premise customers (ie, houses and flats/units).

Non-residential customers pay the following charges for these services:

- **Water –** a per kL consumption-based water usage charge (same as residential customers except for large water users) and a meter size-based water service charge.[143]
- **Sewerage**[144] **–** a per kL consumption-based sewerage usage charge above a discharge allowance (ie, this is the point beyond which non-residential customers start being charged the sewerage usage price), and a meter-based sewerage service charge.
- **in some cases, stormwater -** a fixed stormwater service charge based on the size of the property.[145]

141 Currently, residential sewerage service charges vary between houses and flats/unit.
142 Only properties located in the catchments of Hunter Water's stormwater drains pay stormwater charges.
143 Standalone 20mm meter non-residential customers and non-residential customers in mixed developments pay the same standard (fixed) water service charge as residential customers.
144 Some non-residential customers also face load-based trade waste charges. We outline these charges in Chapter 9.
145 Some non-residential properties may have been assessed as being low impact and pay a low impact charge.

Furthermore, sewerage customers (other than pensioners) pay an Environmental Improvement Charge.[146]

8.1 Water usage charges

Draft decision

18 We have decided to:

- set Hunter Water's maximum water usage charge at $2.22 per kL in real terms over the 2016 determination period
- not introduce a cost pass-through mechanism for alternative sources of water in times of relative water scarcity, and
- continue with location-based water usage charges for customers that consume in excess of 50,000 kL per year and are located in particular zones of Hunter Water's area of operations (as shown in Table 8.1).

8.1.1 Reasons for our draft decision

Water usage charges

We have accepted Hunter Water's proposal to maintain the current maximum water usage charge of $2.22 per kL in real terms over the 2016 determination period.[147]

Our decision to accept Hunter Water's proposed water usage charge balances a number of considerations. Retaining the current maximum water usage charge ensures price stability for customers. Further, it continues a price structure which is supported by stakeholders:

- Stakeholders consider that higher (variable) usage charges, and, as a corollary, lower (fixed) service charges, are more equitable and enable customers to have greater control over their bills.[148]
- Hunter Water's recent customer engagement surveys found strong customer support for maintaining 'controllability' of water bills (using price as way of encouraging customers to limit water use) by making more of their bill variable and less fixed.[149]

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146 Hunter Water http://www.hunterwater.com.au/Resources/Documents/Fact-Sheets/Customer-Charges/Customer_Charges_May15-Version-2.pdf, accessed on 11 February 2016.

147 This differs from the water usage charge of $2.24 kL stated in Hunter Water's pricing proposal (June 2015, p 4), because the appropriate inflation information was not available when Hunter Water finalised its proposal.

148 Public Interest Advocacy Centre submission to IPART Issues Paper, October 2015, p 6; Total Environment Centre submission to IPART Issues Paper, October 2015, p 4.

149 Hunter Water submission to IPART Issues Paper, October 2015, p 7.

That said, allowing Hunter Water to recover a relatively high proportion of its fixed costs through variable charges means it bears revenue risk.[150] This means that there is potential for revenue downside (and upside) if actual demand varies from forecast demand. We note that there are measures, other than price, to manage this risk (ie, the demand volatility mechanism discussed in Chapter 7).

We generally aim to set the water usage charge with reference to estimates of the Long Run Marginal Cost (LRMC) of water supply, since this promotes efficient water usage and investment decisions. However, at this stage, any estimate of LRMC would be highly uncertain. The Lower Hunter Water Plan (LHWP) does not specify Hunter Water's next supply augmentation. In its submission to the Issues Paper, DPI Water noted that, in the case of the lower Hunter, the identification of potential new supply options is at a very preliminary stage.[151] It outlined that supply augmentation will be considered in the next review of the LHWP, which is due for completion in 2019-20. This will enable a LRMC estimate to be available for the next price review. We will work with Hunter Water to develop an agreed methodology for estimating LRMC in order to inform the next price review.

No uplift in water usage price to recover costs of alternative sources of water (during time of water scarcity)

We have decided not to apply a cost pass-through mechanism to Hunter Water's water usage charges to recover the costs of alternative sources of water during times of water scarcity. At this stage, the circumstances where a cost pass through mechanism might apply are not met.

Scarcity pricing for water

Scarcity pricing would lead to the price of water varying inversely with storage levels (availability) to reflect the marginal value of water under prevailing conditions. When water is scarce, prices would ration its use for the most valuable purposes, such as drinking and sanitation. As water becomes more abundant, prices would decrease and water would be used for less valuable purposes.

Since it would send a scarcity signal directly to customers, scarcity pricing may be used to ameliorate, if not avoid, water restrictions. Water restrictions are effective tools in reducing water consumption and are generally supported by the community. However, restrictions are blunt instruments and may create welfare losses relative to efficient scarcity prices.[152]

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150 Hunter Water indicated that, for a typical household, a variable charge (ie, the water usage charge) generally comprises over 90% of their annual water bill (Hunter Water submission to IPART Issues Paper, October 2015, p 7.

151 DPI Water submission to IPART Issues Paper, October 2015, p 5.

152 OECD, *Water Security for Better Lives* , 2013, p 79.

Not only would scarcity pricing send appropriate signals about when to use or conserve existing water sources, it could also indicate when and how much to invest in new sources of supply. A scarcity price increase for sustained periods could signal insufficient investment in capacity to meet demand pressures (eg, from population growth). This would encourage efficient investment in supply augmentations.

Hunter Water's drought-response measures

The LHWP sets out a range of drought-response measures for Hunter Water. These supply and demand measures include water transfers from the Central Coast, additional groundwater pumping and, in the case of an extreme drought, temporary desalination.

A cost pass-through mechanism would enable the additional costs associated with these measures to be passed through to customers (eg, via introducing an 'uplift' to the water usage price). This would make Hunter Water's drought response costs more transparent. It would also send a signal to customers about the marginal costs of responding to increased water scarcity.

Several stakeholders support such a mechanism in principle.[153] Hunter Water thought that changes in prices in response to drought may encourage customers to undertake additional water conservation measures.[154] DPI Water noted that passing through the costs of drought response measures may help reinforce their timely delivery (according to the LHWP) and signal water scarcity to customers during these rare events.[155]

The Sydney Water 2016 Draft Determination includes a cost pass-through mechanism that enables Sydney Water to increase the water usage charge to recover the additional variable costs it incurs when the Sydney Desalination Plan (SDP) is operating. Since the SDP's operation is currently tied to water storage levels, the usage charge pass through creates a scarcity signal.[156]

While the LHWP includes provision for desalinated water to be a measure for Hunter Water in the case of an extreme drought, it does not currently meet IPART's criteria in relation to a cost pass-through mechanism (see Box 8.1 below), particularly in relation to clearly defined ex-ante efficient costs. The temporary desalination units have not yet been built, and robust estimates of the efficient operating costs are not currently available.[157]

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153 Hunter Water submission to IPART Issues Paper, October 2015, p 7; DPI Water submission to IPART Issues Paper, October 2015, pp 6- 7.

154 Hunter Water submission to IPART Issues Paper, October 2015, p 7.

155 DPI Water submission to IPART Issues Paper, October 2015, pp 6- 7.

156 Under the SDP's current operating rules, the SDP is required to operate at full capacity when dam levels drop to 70% and must continue to do so until they rise to 80%.

157 Hunter Water is currently at the concept design stage (eg, assessing technical studies, environmental approvals and procurement options). It anticipates it will take 18 months or more to complete the costings and proposed procurement arrangements (Hunter Water, public hearing, transcript, 2 November 2015, p 18).

Box 8.1 Circumstances when cost pass-through mechanisms may apply

Cost pass-through mechanisms are generally limited to situations where:

- a trigger event (to activate the cost pass-through) can be clearly defined at the time of the price determination
- there is provision to approve or determine the resulting efficient cost before it is passed through to customers (under the IPART Act, the costs to be passed through must be specified in the price determination)
- it is clear the regulated business cannot influence the likelihood of the trigger event or the resulting cost
- it is clear that a cost pass-through will result in prices that are more reflective of efficient cost, and
- the costs would have a potentially material impact on the regulated business.

The LHWP identified other measures that Hunter Water would use in response to a drought such as groundwater pumping and transfers from the Central Coast.

In particular, the LHWP provided for an increase in the capacity of the pipeline to transfer water to the Central Coast and a modification of Hunter Water's network to enable more water to be transferred from the Central Coast to the lower Hunter.[158] This highlights the importance of ensuring that the pricing arrangements in relation to this drought response measure are efficient (see section 9.5).

The next review of the LHWP should provide more certainty about Hunter Water's future supply augmentation. Further, our proposed review of the prices charged for the Central Coast water transfers (see Chapter 9) may also provide the information necessary to develop a cost-pass through mechanism for the next determination. In light of the outcomes of these processes, we will seek to apply a cost-pass through mechanism for Hunter Water's drought-response measures at the next pricing review.

[158] NSW Government, *Lower Hunter Water Plan*, 2014, p 2.

Location-based water usage charges

Our draft decision is to accept Hunter Water's proposal to maintain location-based water usage charges for major industrial and commercial customers that:

- consume in excess of 50,000 kL per year, and
- are in the location-based pricing zones (see Table 8.1 below).

Table 8.1 IPART draft decision on water usage prices for that portion of consumption in excess of 50,000 kL/year ($/kL, $2015-16)

	2015-16	2016-17	2017-18	2018-19	2019-20	Total Change
Base usage	2.22	2.22	2.22	2.22	2.22	0.0%
Dungog	1.67	1.79	1.79	1.80	1.79	7.2%
Kurri Kurri	2.20	2.19	2.19	2.20	2.20	0.0%
Lookout	2.03	2.07	2.07	2.07	2.07	2.0%
Newcastle	1.98	2.02	2.02	2.02	2.02	2.0%
Seaham-Hexham	1.72	1.84	1.84	1.84	1.84	7.0%
South Wallsend	2.08	2.11	2.11	2.11	2.11	1.4%
Tomago-Kooragang	1.67	1.79	1.79	1.80	1.79	7.2%
All other areas	2.22	2.22	2.22	2.22	2.22	0.0%

Note: Hunter Water's location based pricing model deducts from the water usage price, operating costs per kL, to derive the implied capital related costs per kL. The implied capital related costs are then adjusted for each location-based pricing zone. Therefore, we have updated Hunter Water's proposed charges to reflect our draft decision to maintain the maximum potable water usage price at $2.22/kL ($2015-16), and our draft decisions on efficient operating expenditure. Hunter Water's proposal was based on a water usage price of $2.24/kL because the appropriate inflation information was not available when Hunter Water finalised its proposal.

Source: Hunter Water pricing proposal to IPART, June 2015, p 77 and IPART calculations.

Some stakeholders have expressed concerns about the appropriateness of offering a 'discount' to eligible large-volume users. The Total Environment Centre considers it diminishes the resource conservation signal conveyed by usage charges. This, in turn, undermines demand management, and reduces incentives for large volume users to adopt effluent reuse.[159]

In response, we note that differentiated pricing for larger industrial customers is a common feature of infrastructure pricing generally. These customers may pay different charges depending upon their location (ie, the part of the network to which they are connected) and/or how they use the network (ie, the nature of their demand). This is typically driven by differences in the cost of supply and efforts to minimise distorting demand.

To the extent that these location-based prices reflect the costs of supply, then they are not necessarily subsidies nor inefficient. However, where these prices are not cost-reflective, then they represent a cross-subsidy from the broader customer base to the customers that pay these location-based prices.

[159] Total Environment Centre submission to IPART Issues Paper, October 2015, p 4.

We do not currently have detailed information on Hunter Water's cost of supply for specific locations, so we are unable to analyse the appropriateness of its location-based discounts. However, we note that:

- It appears that locations closer to water sources/treatment plants have a higher discount. This is consistent with Hunter Water's assessment that locations close to the water source use less of the distribution system and hence should contribute less to the capital related costs covered by usage prices.[160]
- The calculation of Hunter Water's location based prices are asymmetric, in that the price for each location does not exceed the postage stamp price. Hence, locations that would otherwise be paying more than the postage stamp price (according to Hunter Water's approach) are being cross-subsidised by other customers.
- It is not clear why the location based prices only apply to water usage in excess of 50,000 kL per year for each location. If the prices reflect the costs of supply, then it would be expected that the location based price would apply regardless of the amount of water actually used.

In view of the above points, we recommend that Hunter Water, in advance of the next price review, consider the merits of the location-based prices and its pricing approach to large non-residential customers generally. This should consider the impacts on all customers (ie, those customers that pay location-based prices and the broader customer base) of alternative pricing approaches. Consultation with customers should be a key part of this review, including the provision of information on the varying costs of supply to different customers.

Our draft decision (discussed in Chapter 2) to allow Hunter Water and large non-residential customers to opt out of IPART determined water and sewerage prices by voluntarily entering into unregulated pricing agreements provides an opportunity for Hunter Water to better understand customer preferences. This can also inform the development of Hunter Water's pricing proposal for the next review.

[160] Hunter Water pricing proposal to IPART, June 2015, p 75.

8.2 Sewerage usage charge

We set a sewerage usage charge and discharge allowance for Hunter Water's non-residential customers.[161] The sewerage usage charge applies to non-residential customers who are deemed[162] to have discharged more than the discharge allowance to the sewerage network.[163] The discharge allowance is currently set at 50 kL per year for non-residential customers.[164]

Draft decision

19 We have decided to:

- set a maximum non-residential sewerage usage charge of $0.67 per kL in nominal terms over the 2016 determination period
- not introduce an explicit residential sewerage usage charge, and
- decrease the deemed sewerage usage allowance for residential customers from 150 kL to 120 kL per year.

8.2.1 Reasons for our draft decision

Non-residential sewerage usage charge

We have accepted Hunter Water's proposal to maintain the sewerage usage charge at $0.67 per kL in nominal terms (see Table 8.2).[165] This means that the usage charge would fall in real terms over the 2016 determination period. This provides a degree of stability in pricing for customers, and is consistent with moving sewerage usage charges towards the short run marginal cost of supply (SRMC).

[161] Residential customers are also charged a discharge allowance that is embodied in their sewerage service charges. Hunter Water pricing proposal to IPART, June 2015, p 82.

[162] The discharge is calculated through the application of a discharge factor to their water consumption.

[163] For example, the cost of discharging 50 kL is paid for by non-residential customers through their sewerage service charge, and amounts discharged in excess of 50 kL per year are paid for explicitly through the sewerage usage charge.

[164] The discharge allowance embodied in the sewerage service charge for a house is currently 150 kL per year. Hunter Water pricing proposal to IPART, June 2015, p 82.

[165] Hunter Water pricing proposal to IPART, June 2015, p 83.

Table 8.2 Draft sewerage usage charge ($nominal)

	2015-16	2016-17	2017-18	2018-19	2019-20
Hunter Water proposed					
Usage charge ($/kL)	0.67	0.67	0.67	0.67	0.67
IPART draft decision					
Usage charge ($/kL)	0.67	0.67	0.67	0.67	0.67

Source: Hunter Water pricing proposal, June 2015, p 83.

In the 2013 Determination, we stated that the sewerage usage charge should be set with reference to, but not necessarily equal to, the utility's SRMC of collecting, transporting, treating and disposing of domestic strength effluent.[166] This was because a usage charge set on this basis would improve cost-reflectivity and send appropriate price signals to the market.

In our concurrent review of Sydney Water's prices, Sydney Water has put forward a preference to move towards pricing based on the Long Run Marginal Cost (LRMC) of providing sewerage services and is seeking an in-depth review of the issue before 2020. In the Draft Report for that review, we have acknowledged there are arguments for and against SRMC versus LRMC sewerage pricing, and that we consider maintaining the current usage price is a satisfactory holding position.

Residential sewerage usage charge

We have decided not to introduce an explicit residential sewerage usage charge for the 2016 Determination. Currently, residential customers pay a fixed service charge for sewerage services, which embodies a deemed sewerage discharge allowance of 150 kL per year.[167, 168]

Our approach reflects feedback, received during our concurrent Sydney Water review, that implementation of an explicit residential sewerage usage charge would require detailed consideration, given discharges are not metered, as well as appropriate community consultation.[169] These practical difficulties with introducing a sewerage usage charge are also applicable to Hunter Water.

166 IPART, *Hunter Water Corporation's water, sewerage, stormwater drainage and other services – Final Report*, June 2015, p 94.

167 Hunter Water previously levied a residential sewerage usage charge until it was removed at the 2009 Determination (IPART, *Review of prices for water, sewerage, stormwater and other services for Hunter Water Corporation – From date of Gazettal – Final Report,* July 2009, p 5).

168 Houses currently have 150 kL of deemed sewerage usage embodied in their service charges, whereas flats/units are implicitly deemed 108.75 kL, as they currently only pay 72.5% of the sewerage service charge applicable to houses.

169 Sydney Water submission to IPART Issues Paper, October 2015, p 56.

However, we acknowledge that a residential sewerage usage charge would give residential customers more control of their bills and more closely reflect the impactor pays principle. For these and other reasons, the Total Environment Centre supported a sewerage usage charge.[170]

Residential discharge allowance

As mentioned above, residential customers currently have a deemed sewerage discharge allowance of 150 kL per year embodied in their service charges. This was introduced at the 2013 Determination and was based on our estimate of average residential discharges from the 2012 Sydney Water price review.

Our draft decision is to update this value for Hunter Water, and thus reduce it to 120 kL per year. This is calculated by multiplying the average residential water usage of about 160 kL per year for Hunter Water's residential customers with a discharge factor of 75%. We consider a discharge factor of 75% to be appropriate for Hunter Water's residential customers and have also introduced this when calculating their service charges (see Section 8.3 below).

Non-residential discharge allowance

Hunter Water proposed to increase the non-residential discharge allowance from the current 50 kL per year to 150 kL per year by 2019-20, in equal increments. This is in line with our intention at the 2013 Determination, where we considered that the discharge allowance should be increased to 150 kL per year for equity with residential customers.[171]

As previously mentioned in Chapter 7, our draft decision is to increase the non-residential discharge allowance from the current 50 kL per year to 120 kL per year by 2019-20, in equal increments (shown in Table 8.3 below). This approach maintains our intentions from the 2013 Determination and ensures a consistent approach across residential and non-residential customers. The increase to 120 kL per year, rather than 150 kL per year, reflects our decision to update the residential discharge allowance.

Table 8.3 IPART draft and Hunter Water proposed non-residential discharge allowance (kL per year)

	2015-16	2016-17	2017-18	2018-19	2019-20
IPART draft decision	50.0	67.5	85.0	102.5	120.0
Hunter Water proposed	50.0	75.0	100.0	125.0	150.0

Source: Hunter Water pricing proposal, June 2015, p 83; and IPART calculations.

[170] Total Environment Centre submission to IPART Issues Paper, October 2015, pp 5-6.

[171] IPART, *Hunter Water Corporation's water, sewerage, stormwater drainage and other services – Review of prices from 1 July 2013 to 30 June 2017 - Final Report,* June 2013, p 98.

8.3 Price structures: water and sewerage service charges

Draft decision

20 We have decided to:

- maintain flats and units paying a proportion (72.5%) of the sewerage service charge applicable to houses
- set by 2019-20, water and sewerage service charges for residential and non-residential customers on a 20mm meter equivalent basis, where residential dwellings are deemed to each be one 20mm meter equivalent customer
- separate the implicit connection and usage components of the sewerage service charge, and
- apply a 75% discharge factor to the connection portion of the residential sewerage service charge.

8.3.1 Reasons for our draft decision

Not equalising sewerage service charges for apartments with that of houses

Hunter Water proposed to increase the sewerage service charge for apartments by about $115 (or 26.6%) so that by 2019-20 they would be equalised with the service charge applicable to houses.[172] Customers in apartments currently only pay 72.5% of sewerage service charge for houses, but pay the same as houses for water service charges.[173]

In response to our Issues Paper, several stakeholders raised concern over Hunter Water's proposed increases in service charges.[174] PIAC made particular comment about the increases for apartments, and recommended that we equalise the sewerage service charge for these customers over two determination periods.

We note that under our draft decisions, service charges would increase due to Hunter Water's higher efficient costs (notional revenue requirement) compared with the 2013 Determination. However, we note stakeholders' concerns about increasing service charges and the additional impact that equalisation of sewerage service charges would have on apartments.

Our draft decision is not to accept Hunter Water's proposal due to stakeholders' concerns. Therefore, apartments would continue to pay 72.5% of the sewerage service charge applicable to houses for the 2016 Determination.

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172 Hunter Water pricing proposal to IPART, June 2015, p 84.

173 Hunter Water pricing proposal to IPART, June 2015, pp 74, 84.

174 In response to our Issues Paper, several stakeholders raised concern over Hunter Water's proposed increases in service charges: Public Interest Advocacy Centre, submission to IPART Issues Paper - Hunter Water, October 2015, pp 4-6; Total Environment Centre, submission to IPART Issues Paper – Hunter Water, October 2015, p 4; Elermore Glen Retirement Village, submission to IPART Issues Paper – Hunter Water, October 2015.

Rebasing water and sewerage service charges on a 20mm meter scale

Hunter Water did not object to rebasing water and sewerage service charges on a 20mm meter scale. However, it did raise concern that doing so would result in an additional impost on residential service charges that were already increasing under its proposal – particularly given that it had proposed to equalise the sewerage service charge for apartments with houses. Therefore, it proposed to consider the merits of this reform further when the transition to a common residential sewerage service charge was complete.[175]

We note that there is a currently an anomaly in Hunter Water's pricing structure where the charge per 20mm meter for a non-residential customer with multiple 20mm meters is greater than the charge applicable to a non-residential customer with a single 20mm meter (see Table 8.4 below).

Table 8.4 Differences in 20mm non-residential service charges in 2015-16 ($2015-16, $ per meter)

	Standalone 20mm	Multiple 20mm	*Variation*
Water	$17.75	$18.54	*4.5%*
Sewerage (100% discharge factor)	$593.58	$1,179.58	*98.7%*
Sewerage (75% discharge factor)	$445.19	$884.69	*98.7%*

Note: Under our draft decision, all of the above customers would pay the 20mm meter based service charges for water and sewerage by 2019-20, and discharge factors would apply to the sewerage service charges.
Source: IPART analysis.

Our draft decision is to rebase water and sewerage service charges to 20mm meter equivalents by 2019-20. We have decided not to introduce the reform immediately in 2016-17 due to stakeholders' concerns about the impact of increasing service charges on customers' bills.[176] Therefore, we have gradually increased residential service charges over 2016-17 to 2018-19 to mitigate bill impacts when services charges are rebased in 2019-20. This involves:

- changing the current base on which non-residential meter-based charges are set from a 25mm meter to a 20mm meter equivalence
- increasing the service charges for residential customers and stand-alone 20mm meter non-residential customers gradually over the 3-years to 2018-19, then
  - for water services, deeming all residential dwellings (regardless of type) to have a 20mm meter in 2019-20, to ensure that apartments and houses are still charged at the same rate, equal to stand-alone non-residential 20mm meter customers[177]

[175] Hunter Water pricing proposal, June 2015, pp 84-85.
[176] As mentioned previously, in response to our Issues Paper several stakeholders raised concern over Hunter Water's proposed increases in service charges: Public Interest Advocacy Centre, submission to IPART Issues Paper - Hunter Water, October 2015, pp 4-6; Total Environment Centre, submission to IPART Issues Paper – Hunter Water, October 2015, p 4; Elermore Glen Retirement Village, submission to IPAR Issues Paper – Hunter Water, October 2015.
[177] Non-residential occupancies in mixed multi-developments are also deemed to have a 20mm meter to ensure that they are charged the same as residential dwellings.

- for sewerage services, applying the 20mm meter charge to houses, but continuing to charge apartments 72.5% of the total sewerage service charge applicable to houses.

We consider rebasing is consistent with our price structure principles and current charging regime:

- Residential customers would continue to pay a common water service charge – ie, apartments and houses would continue to be charged at the same rate for water (however, the charge would reference a 20mm meter by 2019-20). Although we note that for sewerage service charges, we have maintained the current proportion of apartments only paying 72.5% of the charge applicable to houses.
- Standalone non-residential customers with a single 20mm meter or mixed multi-developments would continue to pay the same service charges as a house (however, the charge would reference a 20mm meter by 2019-20, and different discharge factors would apply for the sewerage service charge, depending on the customer).
- All other non-residential customers would continue to pay water and sewerage service charges according to their meter size (non-residential occupancies within a common metered property would still share the meter-based service charge).

We received a submission from an owner of a commercial strata unit indicating that Hunter Water's proposed service charges make no distinction between different sized units (such as the number of rooms, potential number of occupants, etc). It argued that Hunter Water's proposed charges are not equitably based and that charges should reflect the actual demand for services.[178]

We agree with the submission that charges should reflect the actual demand for Hunter Water's services and hence the efficient costs imposed on Hunter Water. However, we consider that Hunter Water's proposed charging arrangements for non-residential customers based on meter size connections to be appropriate for commercial strata units. We consider that meter connections for these customers (along with discharge factors for sewerage pricing) are currently the best available proxy for the costs they impose on Hunter Water's network.

[178] P.Sullivan submission to IPART Issues Paper – Hunter Water, October 2015.

Separation of the implicit connection and usage components of the sewerage service charge

Residential and non-residential sewerage service charges must include some allowance for sewerage discharge to the sewerage network. As mentioned previously:

- all residential discharge is included in the service charges (now 120 kL per year for houses), and
- each non-residential customer's discharge up to the discharge allowance is included in the service charge.

We have decided to separate out the implicit usage charge for residential and non-residential customers. This removes the anomaly in usage charging where non-residential customers with large meters pay too much for sewerage discharges, as a result of the multiplication of the sewerage service charge per meter. An example of this is provided in Box 8.2.

Box 8.2 Implicit discharge component included in non-residential sewerage service charges

To illustrate why the costs of up to 120 kL per year sewerage usage should be deemed and explicitly added to sewerage service charges, we provide the following hypothetical example.

We assume a high use commercial customer with a 80mm meter water connection, water usage of about 20,000 kL per year, and a discharge factor of 85% (ie, it would discharge 85% or 17,000 kL of its water usage as sewerage each year).

The sewerage service charge implicitly recovers the costs of up to 120 kL of discharge not recovered through the sewerage usage charge. However, under current arrangements, this level of sewerage usage is scaled up according to the customer's meter size, eg in 2019-20:

$$\text{service charge} = \text{df} \times \left(\frac{\text{meter size}}{20}\right)^2 \times (\text{20mm connection} + 120\ \text{kL})$$

$$= 0.85 \times \left(\frac{80}{20}\right)^2 \times (\text{20mm connection} + 120\ \text{kL})$$

$$= 0.85 \times [(16 \times \text{20mm connection}) + (16 \times 120\ \text{kL})]$$

$$= 0.85 \times [(16 \times \text{20mm connection}) + 1{,}920\ \text{kL}]$$

$$= 0.85 \times 16 \times \text{20mm connection} + 1{,}632\ \text{kL}$$

Therefore, in this example, the high use commercial property implicitly pays for 1,632 kL of sewerage usage through the service charge after the discharge factor is applied. In total, this customer pays for 18,512 kL (17,000 kL–120 kL+1,632 kL) of sewerage usage, which is 1,512 kL more than it actually discharges.

Under our draft decision, the costs associated with up to 120 kL of implicit sewerage usage would be explicitly added to the sewerage service charges as the final step in calculating these charges. We do this by:

- removing up to 120 kL per year from the applicable charges (ie, for residential customers removing 120 kL at $0.67/kL from the applicable service charges, and for non-residential customers removing the discharge allowance as shown in Table 8.3 at $0.67/kL from the 20mm meter charge)[179]
- calculating meter based service charges for larger meter sizes on the remaining service charge, and
- adding back up to 120 kL per year to all service charges (ie, for houses adding the 120 kL at $0.67/kL to the applicable service charges; and for non-residential customers adding the discharge allowance as shown in Table 8.3 at $0.67/kL to the meter based service charges).

Formulaically, our approach to calculating service charges is generally[180]:

$$\text{service charge} = \frac{\text{meter size}^2}{20\text{mm}^2} \times (20\text{mm meter charge}) \times \text{df} + \text{implicit usage}$$

$$\text{where implicit usage} = \text{up to 120kL discharge x \$0.67/kL}$$

This change would increase service charges to residential and 20mm non-residential customers, and decrease service charges for customers with large meters (the larger a customer's meter, the greater the decrease to their service charge).

Apply a 75% discharge factor to the connection portion of the residential sewerage service charge

We have decided that a discharge factor of 75% would be applied to residential service charges. This ensures consistency in the treatment of residential and non-residential customers, where the latter currently have a discharge factor applied to their sewerage service charges (for connections other than a stand-alone 20mm meter).

[179] The sewerage usage charge of $0.67/kL is set in $nominal. Therefore, for the purposes of modelling prices we have applied an estimate of inflation to calculate the discharge allowance in $2015-16.

[180] For residential customers (house), the sewerage service charge would be calculated with reference to a deemed 20mm meter by 2019-20. Flats and units would then continue to pay 72.5% of the total service charge applicable to houses.

While this was not an issue when residential and non-residential bills were set on different bases, it would be inequitable to continue this approach following the rebasing of water and sewerage service charges on a 20mm meter scale by 2019-20. This approach would result in a reduction in residential sewerage service charges.[181]

Applying a discharge factor of 75% provides consistency with our approach in rebasing sewerage service charges for Sydney Water (we also introduced a discharge factor of 75% for residential customers), and we note that there are other water utilities that also apply a discharge factor of 75% to residential customers.[182]

8.4 Price levels: water and sewerage service charges

The preceding discussion outlines our decisions on water and sewerage service charges. Each of our decisions has associated impacts:

- **Rebasing service charges by 2019-20** – gradually shifts costs from non-residential customers to residential (and 20mm standalone non-residential) customers.
- **Increasing the discharge allowance to 120 kL per year for non-residential customers** – shifts costs from residential customers to non-residential customers.
- **120 kL usage charge implicit in sewerage service charges** – shifts costs from non-residential customers with larger meters to non-residential customers with smaller meters and residential customers.
- **Residential discharge factor** – shifts costs from residential (and 20mm standalone non-residential) customers to non-residential customers.

We were also mindful that the first year (2016-17) of the 2016 determination period would have been the final year of the 2013 determination period, if IPART had not agreed to Hunter Water's request to bring forward the new determination by one year. Under the 2013 Determination, a typical residential water and sewerage bill (185 kL per year) would have faced a zero increase in real terms in 2016-17. Therefore, we have applied only a small real increase in prices in the first year and then higher increases in subsequent years, such that a typical residential water and sewerage bill (185 kL per year) would increase by 1% in real terms (ie, excluding the effects of inflation) in 2016-17 and then 2.9% per year thereafter.

The impact of our draft decisions are discussed below.

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[181] It would also reduce the service charge for 20mm non-residential customers as they face the minimum of either the 20mm equivalent charge multiplied by their own discharge factor or the residential service charge with a 75% discharge factor.

[182] For example, South East Water applies a discharge factor of 75% to houses.

Draft decision

21 We have decided to:

- set the maximum water service charges as shown in Table 8.5, and
- set the maximum sewerage service charges as shown in Table 8.6.

8.4.1 Reasons for our draft decision

Our draft water service charges are outlined in Table 8.5 below. These are based on the analysis undertaken in the preceding sections and the impacts are as follows:

- Residential and non-residential 20mm customers on a stand-alone meter would experience an increase of 469% in their water service charge. This compares with Hunter Water's proposal to increase these customers' charges by about 231%.
- Other non-residential customers would see about a 445% increase in their water service charge.

The larger increases in the service charges, compared to Hunter Water's proposals, are a combination of higher efficient costs and our decision to apply a smaller increase to prices in 2016-17 compared with the latter years.[183]

[183] If we applied a different price path, eg set prices such that revenues matched costs in each year of the determination period, the total increase in the residential water service charge would have been 313% over the 4-year period. The increase in efficient costs are largely reflected in the service charges, because our draft decision is to keep the water usage charge constant in real terms.

Table 8.5 Draft water service charge ($/year, $2015-16)

	2015-16[a]	2016-17	2017-18	2018-19	2019-20	% Change 2016-20
Hunter Water proposed						
Residential						
Houses	17.75	17.14	30.92	44.82	58.72	230.8%
Apartments	17.75	17.14	30.92	44.82	58.72	230.8%
Non-residential						
- 20mm meter stand-alone	17.75	17.14	30.92	44.82	58.72	230.8%
- 20mm meter[b]	18.54	19.85	35.75	51.74	67.68	265.0%
- 25mm meter	28.97	31.01	55.86	80.84	105.75	265.0%
- 40mm meter	74.17	79.39	143.01	206.94	270.72	265.0%
- 100mm meter	463.55	496.18	893.80	1,293.40	1,692.00	265.0%
IPART draft prices						
Residential						
Houses	17.75	25.28	48.86	73.79	101.00	469.0%
Apartments	17.75	25.28	48.86	73.79	101.00	469.0%
Non-residential						
- 20mm meter stand-alone[c]	17.75	25.28	48.86	73.79	101.00	469.0%
- 20mm meter[b]	18.54	29.99	54.19	78.05	101.00	444.8%
- 25mm meter	28.97	46.86	84.67	121.95	157.81	444.7%
- 40mm meter	74.17	119.96	216.76	312.20	404.00	444.7%
- 100mm meter	463.55	750	1,355	1,951	2,525	444.7%

a 2015-16 prices were not available when Hunter Water finalised its pricing proposal. The prices for 2015-16 have been updated to reflect actual inflation and prices.

b Charge applicable per 20mm meter if there are multiple 20mm meters, or if it is a common 20mm meter.

c Under the 2013 Determination, 20mm meter standalone non-residential customers paid the residential service charges. By 2019-20, our draft decision would see them charged the same as other non-residential customers with 20mm meters.

Source: Hunter Water's pricing proposal to IPART, June 2015, p 74; and IPART calculations.

Our draft sewerage service charges are outlined in Table 8.6 below. These are based on the analysis undertaken in the preceding sections and the impacts are as follows:

- There would be a 4.2% increase in sewerage service charges for residential customers.
- Non-residential customers (except customers on a 20mm standalone meter) would see a minimum decrease of 32.2% in their sewerage service charge (assuming a 100% discharge factor).

Table 8.6 Draft sewerage service charge ($/year $2015-16)

	2015-16[a]	2016-17	2017-18	2018-19	2019-20	% Change 2016-20
Hunter Water proposed						
Residential						
Houses	593.58	589.22	575.51	562.08	549.07	-7.5%
Apartments	430.35	441.91	479.59	515.24	549.07	27.6%
Non-residential						
- 20mm meter stand-alone	593.58	589.22	575.51	562.08	549.07	-7.5%
- 20mm meter	1,179.58	1226.64	1221.55	1220.11	1213.63	2.9%
- 25mm meter	1,843.09	1,916.63	1,908.67	1,906.42	1,896.30	2.9%
- 40mm meter	4,718.30	4,906.57	4,886.20	4,880.44	4,854.53	2.9%
- 100mm meter	29,489.36	30,666.08	30,538.72	30,502.72	30,340.80	2.9%
IPART draft prices						
Residential[c]						
Houses	593.58	597.00	604.93	612.2	618.45	4.2%
Apartments	430.35	432.82	438.57	443.84	448.38	4.2%
Non-residential						
- 20mm meter stand-alone[d]	593.58	597.25	617.83	637.15	654.82	10.3%
- 20mm meter	1,179.58	1,168.12	1,008.93	902.27	800.32	-32.2%
- 25mm meter	1,843.09	1,800.37	1,545.96	1,373.93	1,209.53	-34.4%
- 40mm meter	4,718.30	4,540.12	3,873.09	3,417.77	2,982.76	-36.8%
- 100mm meter	29,489.36	28,144.12	23,922.21	21,026.27	18,259.84	-38.1%

a 2015-16 prices were not available when Hunter Water finalised its pricing proposal. The prices for 2015-16 have been updated to reflect actual inflation and prices.

b Charge applicable per 20mm meter if there are multiple 20mm meters, or if it is a common 20mm meter.

c The service charge for a house has the 75% residential discharge factor applied and the 120 kL deemed discharge allowance (for indicative purposes this has been calculated by converting the nominal sewerage usage price of $0.67/kL to $2015-16 by assuming 2.5% inflation per year). The charge for apartments is then calculated by taking 72.5% of the charge for houses.

d Under the 2013 Determination a 20mm meter standalone non-residential customers paid the residential service charge. By 2019-20, our draft decision would see these customers charged the same as other non-residential customers with 20mm meters. For modelling purposes we have applied an average discharge factor of 80% (the current average discharge factor for customers with common 20mm meters and multiple 20mm meters). Therefore, they're shown to have a higher increase compared with houses. From 2016-17 onwards they would actually be charged according to a discharge factor assigned by Hunter Water.

Note: Our non-residential charges for 20mm meter and higher have been presented assuming a 100% discharge factor and have the increasing discharge allowance to 120 kL per year added to it (similar to residential customers, for indicative purposes it has been calculated by converting the nominal sewerage usage price of $0.67/kL to $2015-16 by assuming 2.5% inflation per year). Customers will be charged according to their discharge factor (applied to the base charge excluding the discharge allowance) and so their actual bill impact will differ from the table above.

Source: Hunter Water's pricing proposal to IPART, June 2015, p 84; and IPART calculations.

8.5 Environmental Improvement Charge

Hunter Water levies an annual Environmental Improvement Charge (**EIC**) on properties in its area of operation connected to, or for which a connection is available to, the sewerage system.[184] This charge contributes to the cost of providing sewerage to sewerage backlog areas. These costs are also partly funded through State Government Community Service Obligation payments.[185]

In November 2014, the NSW Government announced that the township of Wyee, South West of Lake Macquarie, was to be connected to Hunter Water's sewerage network. The costs of providing this connection would be funded through the EIC levied on Hunter Water's sewerage customers (contributing $23.6 million) and $2.4 million by the Government.[186]

Draft decision

22 We have decided to set the Environmental Improvement Charge at $38.37 per annum in real terms.

8.5.1 Reasons for our decision

We have accepted Hunter Water's proposal to extend the EIC, beyond the original sunset date of 30 June 2019, at $38.37 per annum ($2015-16) in real terms over the determination period. The extension of the EIC beyond its sunset date is to cover the costs of providing backlog sewerage services to Wyee (see Table 8.7).

Table 8.7 Draft Environmental Improvement Charge ($2015-16)

	2015-16	2016-17	2017-18	2018-19	2019-20
Hunter Water proposed					
Environmental Improvement Charge	$38.37	$38.37	$38.37	$38.37	$38.37
Annual change		*0.0%*	*0.0%*	*0.0%*	*0.0%*
IPART draft decision					
Environmental Improvement Charge	$38.37	$38.37	$38.37	$38.37	$38.37
Annual change		*0.0%*	*0.0%*	*0.0%*	*0.0%*

Source: Hunter Water pricing proposal to IPART, June 2015, p 86; and IPART calculations.

[184] Schedule 5 of the 2013 Determination of Hunter Water's prices provides for the EIC to not apply where the property is:
(1) located in an areas not services by the sewerage system or an area where a scheme to provide a point of connection has not been approved for funding by the NSW Government; or
(2) owned and occupied by an Eligible Pensioner.

[185] Hunter Water pricing proposal to IPART, June 2015, p 85.

[186] Hunter Water pricing proposal to IPART, June 2015, Appendix J, p J1.

This represents a continuation of our approach from the 2013 Determination.[187] That is, the EIC is set to recover some of the costs of providing sewerage to areas the NSW Government considers are a high priority for connection to Hunter Water's sewerage network.

Our view in the 2013 Determination was to abolish this charge in 2019.[188] However, we consider it is appropriate to extend the EIC beyond this date, given the NSW Government's announcement in relation to Wyee.

Funding of backlog sewerage services

Our review of the EIC charge has raised the issue of who should pay for backlog and/or priority sewerage services.

As noted in our review of Sydney Water's operating licence, completed in May 2015, in relation to the funding of the costs associated with connecting priority areas to sewerage networks:

> There are a number of alternative mechanisms available to the Government to ensure the remaining areas of the PSP are serviced - if this is its intent...All options require a determination of who should be paying for such schemes: the taxpayer, the whole of Sydney Water's customer base or just the beneficiaries of the schemes.[189]

There are currently differences in how the costs of providing backlog sewerage services are allocated between taxpayers, the whole of Hunter Water's customer base and/or the 'impactors' or 'beneficiaries' of the schemes. The basis and responsibility for these decisions regarding cost allocation are neither clear nor consistent, which could lead to inequitable and/or inefficient outcomes.

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187 IPART, *Hunter Water Corporation's water, sewerage, stormwater drainage and other services – Review of prices from 1 July 2013 to 30 June 2017 - Final Report,* June 2013, p 121.

188 Hunter Water advised that the NSW Government considered the EIC should be in place until 2019, in order to cover the additional areas the NSW Government added to its priority sewerage program in 2009. Hunter Water submission to IPART's Issues Paper for the 2013 Determination, September 2012, p 118.

189 IPART, *Sydney Water Corporation Operating Licence: End of Term Review – Report to the Minister,* May 2015, p 17.

Historically, who pays for the provision of backlog sewerage services has been directly or indirectly determined by:

- Local Government, given local councils regulate private sewer infrastructure[190]
- NSW Government, given it has often provided some funding towards projects[191] and can direct IPART to include the costs of specified activities within regulated prices and charges (through a 16A Direction under the IPART Act)
- Hunter Water, given it sets its priorities for growth expenditure and the provision of backlog sewerages services, and
- IPART, given it determines maximum prices for the provision of specific services.

Generally, across a range of services, IPART has favoured a funding approach based on a hierarchy where:

- preferably the impactor should pay (with the impactor being the party that created the need to incur the cost)
- if that is not possible, the beneficiary should pay (direct beneficiaries before indirect beneficiaries) – although the impactor and the beneficiary can sometimes be one and the same, and
- as a last resort, taxpayers should pay.

If taxpayers are to pay (in the form of a State Government Community Service Obligation), we recommend the Government consider competitively procuring the provision of the services rather than oblige Hunter Water to provide them in the first instance. This would involve the Government seeking proposals from 'the market', including Hunter Water and other utilities (such as WIC Act licensees), to provide the services. This is consistent with recommendations regarding the provision of CSOs that we have made in other forums.[192]

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190 Under the under *Local Government Act 1993*, the *Water Management Act 2000* and the *Protection of the Environment Operations Act 1997.*

191 For example, NSW Government is providing $6000 per lot as part of the Wyee scheme, consistent with what it has provided Sydney Water for each lot it connects under its Priority Sewerage Program. Sydney Water's 2014-15 annual report notes that "The NSW Government determines and prioritises these areas. The government contributes $6,000 a lot, for each property to be able to connect to the wastewater service." It is worth noting that the Government contribution typically covers a minority of the costs with the majority of costs recovered through either general sewerage charges, or specific levies.

192 For example, see: IPART, submission to the Competition Policy Review Issues Paper, June 2014, http://www.ipart.nsw.gov.au/files/sharedassets/website/trimholdingbay/iparts_submission_to_the_competition_policy_review_issues_paper_-_june_2014.pdf.

If impactors or beneficiaries are to fund (or partially fund) the service, the costs could be structured in such a way as to not be prohibitive to these customers. We note that this is currently the case for customers subject to the Clarence Town Levy (see Chapter 9) where direct beneficiaries are partially funding the connection costs to Hunter Water's network.

Using the Wyee example, customers in Wyee could be charged around $2,650 per year for 15 years to recover the sewerage provision costs.[193] When compared to the estimated $3,500 per year some residents of Wyee are currently paying for septic tank pumping[194], such a charge is not unduly onerous.

If the NSW Government considers the whole Hunter Water customer base should pay the sewerage provision costs, we consider it should issue a section 16A direction to that effect, to enhance transparency.[195]

We will further consider funding arrangements for backlog sewerage services in a later consolidated review of developer charges and backlog sewerage services, which we are planning to undertake in 2017-18. This will enable the issues to be considered holistically across all metropolitan water agencies.

8.6 Dual occupancy arrangements

A dual occupancy is where there are two dwellings owned by a single entity on a single property title (eg, house and a granny flat). Where Hunter Water can readily identify dual occupancies, they are currently charged as two separate properties. That is, each dwelling attracts a water service charge and a sewerage service charge.

Draft decision

23 We have decided that Hunter Water should charge dual occupancies based on the number of connections/meters to Hunter Water's water network.

193 This figure is calculated based on sewerage provision costs of $26 million, divided by the 1,000 lots the project is designed to provide sewerage services for (ie, $26,000,000/1,000 = $26,000 per lot). The net present value of a customer paying $2,650 per year for 15 years is $26,077 (using a discount rate of 5.8%, consistent with our pre-tax WACC (see Appendix E for a discussion of WACC)).

194 Minister for Natural Resources, Lands and Water; Minister for Western NSW, Media Release, *25-year wait for Wyee is finally over,* 13 November 2014.

195 Under section 16A of the IPART Act, the portfolio Minister for a government agency may direct IPART, when it makes a determination of the maximum price for a monopoly service provided by the agency, to include in the maximum price an amount representing the efficient cost of complying with a specified requirement imposed on the agency.

8.6.1 Reasons for our draft decision

In our concurrent review of Sydney Water's prices, Sydney Water proposed a single service charge for dual occupancies, so that they would be treated as one property.[196] This is because it has had difficulty identifying dual occupancies, with its awareness limited to customers that self-report by submitting development applications directly and other sporadic investigation (street walks and reports from neighbours). Sydney Water reported the administrative cost of identifying every dual occupancy is prohibitive.

In response to Sydney Water's proposal, we have decided to charge dual occupancies based on the number of meters servicing a dual occupancy that are connected to the water supply or sewerage network. Under our approach, each property in a dual occupancy would be charged individually where the dual occupancy is serviced by more than one individual or common meter(s). Where a single common meter services both properties in a dual occupancy, both properties would be charged together as a single metered property. Our approach recognises the difficulty in identifying dual occupancies, while seeking to maintain consistency with our pricing principle to charge each dwelling as a single customer (where possible).

Hunter Water did not raise dual occupancy charges in its proposal and these charges were not discussed in our Issues Paper. However, as the problems identified by Sydney Water in relation to this charging arrangement also apply to Hunter Water, there is merit in applying a consistent approach to pricing for dual occupancies.

We do not have information regarding the number of existing dual occupancy customers in Hunter Water's area of operations. This means that we cannot adjust customer numbers in our modelling for the draft determination to reflect the change in approach to pricing for dual occupancies, and therefore the customer numbers are likely to be overstated for the purpose of prices in this draft determination. However, any overestimation of customer numbers is likely to be small.

If Hunter Water is able to provide revised customers numbers which account for dual occupancy properties in advance of the Final Report, we will take this into account when setting final prices.

[196] Sydney Water pricing proposal to IPART, June 2015, pp 112-113.

8.7 Stormwater drainage charges

Only some of Hunter Water's residential and non-residential water and sewerage customers are within its stormwater area (and are therefore also its stormwater customers).[197] Local councils, rather than Hunter Water, are the main provider of stormwater services in Hunter Water's area of operations.

Draft decision

24 We have decided to:

- set stormwater drainage charges on a constrained area basis
- maintain the low-impact customer category for non-residential customers equal to the charge for houses
- introduce a low-impact customer category for residential customers equal to the charge for apartments, and
- set the maximum stormwater drainage charges as shown in Table 8.8.

8.7.1 Reasons for draft decision

Transition to area-based stormwater charges

We have decided to set stormwater charges on a constrained area basis, continuing the approach taken in the 2013 Determination. This is consistent with the approach to stormwater charging for the concurrent Sydney Water review. We consider area-based charging is the most equitable charging approach across customer categories and best reflects the impactor pays principle. A property's area is a reasonable and readily available indicator of its contribution to Hunter Water's stormwater costs. This means that customers with larger property areas impose higher costs on Hunter Water's stormwater network, than customers with smaller areas.

TEC supported an area-based approach to charging for stormwater.[198]

Hunter Water's current stormwater pricing structure comprises two residential service charges (ie, for houses and multi-premises) and land-area based prices for non-residential connections (comprising four land-area bands).

[197] According to Hunter Water, it provides stormwater drainage services to about one quarter of the customers which it also provides water services to (Hunter Water pricing proposal to IPART, June 2015, p 89).

[198] The Total Environment Centre supported area-based charging at the public hearing (Transcript, 2 November 2015, p 30).

Hunter Water proposed to keep the current price relativities between different customer categories broadly unchanged. Over the 2016 Determination, it proposed stormwater prices would increase in real terms for houses by about 6%, for flats and units by 4%, and for non-residential customers by 6%.[199]

We have considered the degree of cost-reflectivity within the current pricing structure and whether there is scope for future costs to be recovered on a more cost-reflective basis. This is important as the required revenue from stormwater charges is increasing over the 2016 determination period.

In order to assess the level of cost-reflectivity of the current pricing structure, we compared the percentage of revenue each customer category currently contributes to Hunter Water's stormwater costs to the percentage of the total billable property area it represents.

This comparison suggests that apartments and small non-residential customers may currently be paying more than their share of these costs, while non-residential customers with a large area base may be paying less, on a strict billable area basis.

As a result, we have decided to continue the transition toward area-based stormwater drainage charges by allocating the increase in the required revenue (from stormwater charges) across the existing customer categories in a way that recovers less revenue from residential and small non-residential customers and more revenue from customers with larger area bases.

As a result, residential and small non-residential customers would experience a smaller increase in charges (3.9%), compared with the increase in charges for non-residential customers (96.8%) (see Table 8.8).

[199] Hunter Water pricing proposal to IPART, June 2015, p 90.

Table 8.8 Draft prices for stormwater drainage services ($2015-16)

	2015-16	2016-17	2017-18	2018-19	2019-20	Total change
Residential						
Houses	71.86	72.56	73.27	73.97	74.67	3.9%
Multi premises or residential low impact	26.59	26.85	27.11	27.38	27.64	3.9%
Non-residential						
Small (<1,000m^2) or non-residential low impact	71.86	72.56	73.27	73.97	74.67	3.9%
Medium (1,001 - 10,000m^2)	129.91	153.87	182.24	215.85	255.66	96.8%
Large (10,001 - 45,000m^2)	826.21	978.58	1,159.05	1,372.81	1,625.98	96.8%
Very Large (>45,000m^2)	2,625.07	3,109.19	3,682.59	4,361.74	5,166.14	96.8%

Source: IPART calculations.

Low-impact customer category

While we consider land area (m^2) to be generally the best proxy for determining and allocating stormwater costs, there are instances where the contribution to costs of each property could be quite different. For instance, factors such as the proportion of impervious surface can determine the amount of stormwater discharged from a property.

The Total Environment Centre stated that charges should reflect the amount of stormwater a property contributes to the drainage system. That is, be linked to the total area of impervious surfaces on each property, as this determines stormwater runoff to a significant extent.[200]

The 2013 Determination included a low impact customer class for non-residential properties. This low impact charge, equal to the charge for houses, applies to properties that have relatively low impervious surface area, such as parks, sports fields and golf courses.

For the 2016 Determination, our draft decision is to maintain the low-impact charge for non-residential customers equal to the charge for houses; and to introduce a low-impact charge for residential customers equal to the charge for apartments (multi-premise charge).

[200] Total Environment Centre submission to IPART Issues Paper, October 2015, p 6.

Application for low impact charge category

It is important for customers to be able to access the low impact charge. For example, in a situation where a customer invests in significant on-site water retention facilities thereby reducing their property's contribution to the costs of managing stormwater.

Sydney Water has a process where non-residential customers can apply for the low impact discount (there is a simple 2-page form that is followed by Sydney Water's assessment). The assessment is at the cost of Sydney Water. We consider that Hunter Water should adopt this process for its residential and non-residential customers.

9 Prices for other services

Hunter Water provides a range of services other than water, sewerage and stormwater services for which we regulate its prices. These include:

- non-residential trade waste charges
- miscellaneous and ancillary charges
- bulk water charges to Gosford City Council and Wyong Shire Council
- the Clarence Town Sewerage Levy
- unfiltered water charges
- unmetered water charges, and
- major service connection charges.

This chapter sets out our draft decisions on these prices.

9.1 Summary of draft pricing decisions

Our draft decision is to accept Hunter Water's proposals for most of the prices below, subject to some adjustments based on updated information provided by Hunter Water. We have also made adjustments to Hunter Water's proposed prices where we found prices could better reflect Hunter Water's costs.

For some prices, we have said that we will undertake future reviews. These future reviews will provide an opportunity for consultation with affected stakeholders and ensure a consistent approach to pricing approaches across all metropolitan water agencies that we regulate. For example, we have maintained Hunter Water's bulk water charges to Gosford City Council and Wyong Shire Council pending the review of the Councils' prices to apply from 1 July 2017. We will also consider the major service connection charge as part of a later consolidated review of developer charges for metropolitan water utilities. In addition, while we have accepted Hunter Water's proposal for miscellaneous and ancillary services, we consider a more detailed review of particular charges would be worthwhile as part of the next determination (this will likely occur in 2020).

We received no comments on the prices below in stakeholder submissions (other than from Hunter Water). This reflects, at least in part, the incidental nature of these charges, that they tend to be levied on a small number of customers, and that they comprise a small proportion of Hunter Water's revenue.

9.2 Non-residential trade waste charges

Trade waste is defined as sewerage (or wastewater) from commercial and industrial customers in which the concentrations of pollutants exceed a domestic equivalent.[201] Hunter Water provides trade waste and tankering services to commercial and industrial customers where capacity and capability are available at sewerage treatment works.

Hunter Water currently levies the following trade waste charges, to reflect the higher costs and risks associated with treating trade waste discharges compared to domestic strength sewage:

- trade waste agreement and inspection fees
- trade waste high strength charges
- trade waste service charges, and
- tankering service charges (effluent delivered by truck to treatment plants).

Draft decision

25 We have decided to:

- Set the maximum trade waste prices for 2016-17 as presented in Appendix F, and for these charges to be indexed annually in line with changes in the CPI.
- Amend the trade waste pricing principles to clarify that charges should recover efficient costs, including corporate overheads.
- Deduct the trade waste revenue as set out in Table 9.1 from the notional revenue requirement.

9.2.1 Reasons for our draft decision

Trade waste charges

Our draft decision is to accept Hunter Water's proposal for trade waste charges, which involves:

- Maintaining the existing structure of its trade waste charges, and increasing the level of the charges in line with inflation.

[201] A domestic equivalent is a concentration or level that is the same as would be found in household sewerage discharge.

- Adding a new charge to vary the tankering service agreements to recover the costs of assessing the quality and quantity of waste discharged at sewerage treatment plants not included in the original agreement.

Hunter Water's trade waste charges were reviewed in detail at our request by Deloitte/Halcrow as part of the 2009 Determination.[202] This review found that Hunter Water's charges were consistent with IPART's trade waste pricing principles. Hunter Water's approach to determining trade waste prices has not changed since the 2009 Determination.

Our draft decision is that, based on an examination of trade waste input costs over the 2013 and 2016 determination periods, Hunter Water's proposal to increase charges according to the change in CPI is reasonable and consistent with IPART's 2013 Determination.[203] Moreover, the proposed new charge for the agreement variation fee for tankered waste is reasonable. The new charge reflects administrative costs and would be equal to existing charges for minor, moderate and major customers, which were introduced as part of the 2013 Determination.[204]

We have also updated our trade waste pricing principles to explicitly include corporate overheads (Box 9.1). We updated the principles in light of the fact that Sydney Water's proposed trade waste charges did not include corporate overheads.[205] Hunter Water's trade waste charges are in line with the updated principles as they already include an allocation of corporate overheads.

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202 Deloitte Touche Tohmatsu (Deloitte) /Halcrow, *Review of Hunter Water's miscellaneous and trade waste charges – Final report*, December 2008, pp 29, 62.

203 We engaged a consultant, Synergies Economic Consulting, to assist with our review of Hunter Water's trade waste prices. Much of the supplementary information on costs used in our analysis was provided to us by Hunter Water on a commercial-in-confidence basis. Synergies, *Trade waste charge review – Hunter Water*, January 2016 (Commercial-in-Confidence).

204 IPART, *Hunter Water Corporation's water, sewerage, stormwater drainage and other services – Review of prices from 1 July 2013 to 30 June 2017 - Final Report*, June 2013, p 131.

205 Sydney Water pricing proposal to IPART - Appendices, June 2015, p 16.

Box 9.1 IPART's trade waste pricing principles

As part of this determination we have updated our trade waste pricing principles (which were defined as part of our 2003 review of trade waste pricing) to explicitly identify corporate overheads. The change is intended to clarify that charges should recover all efficient costs, including corporate costs. The application of appropriate pricing principles to trade waste requires that:

- Standards for acceptance should be set on the basis of the capacity of current systems to transport, treat and dispose of the wastes, having regard to the health and safety of wastewater workers.
- Trade waste charges should cover the efficient costs to the water supplier of handling these wastes, including an allocation of corporate overheads.
- 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. The method of measurement should be reliable and the basis for setting charges should reflect costs incurred as far as possible.

Where environmental reasons are made for variations from the pricing principles detailed above then sufficient evidence needs to be available to justify these variations. The basis for calculating greater than cost charges where environmental justifications exist should also be justified.

Trade waste revenue

We deduct the trade waste revenue from the notional revenue requirement.

Our draft decision is to accept Hunter Water's proposed trade waste revenue of $2.1 million per year as being reasonable (Table 9.1). Trade waste revenue comprises less than 1% of Hunter Water's total forecast revenue in each year of the upcoming determination period.

Table 9.1 Revenue forecast for trade waste services ($2015-16)

	Average (previous period)	2016-17 to 2019-20
Hunter Water proposed ($million, per year)	2.0	2.1
IPART draft decision ($million, per year)		2.1

Source: Hunter Water, Annual Information Return, September 2015.

9.3 Miscellaneous and ancillary charges

Hunter Water levies miscellaneous and ancillary charges on a small number of customers for a number of non-contestable, one-off services. Hunter Water calculates these charges in accordance with our miscellaneous charges methodology, which requires that the charges recover:

- direct labour costs (hourly), including on-costs
- business unit overheads, and
- material costs, where incurred.

Draft decisions

26 We have decided to:

- Adopt Hunter Water's proposed miscellaneous and ancillary charges (with an adjustment to its 'metered standpipe hire triannual fee') as presented in Appendix G, and for these charges to be indexed annually in line with changes in the CPI.
- Deduct the revenue from miscellaneous and ancillary services from the notional revenue requirement as set out in Table 9.2.
- At the next price review, to investigate, on a proportionate basis, Hunter Water's miscellaneous and ancillary charges, including undertaking some targeted benchmarking of the costs of providing these services.

9.3.1 Reasons for our draft decision

Miscellaneous and ancillary charges

Hunter Water proposed a number of changes to its miscellaneous and ancillary charges, including increases to 19 charges, and decreases to six charges. It also proposed to discontinue four miscellaneous charges levied on customers, and seven development-related charges. Hunter Water stated in its proposal that it had reviewed its business processes for miscellaneous services, and proposed changes that seek to align costs with service delivery.

In our Issues Paper, we supported Hunter Water's third party certification initiative for developer works for design and construction activities, which will result in the discontinuation of five developer service charges. All discontinued charges along with the reason for discontinuation are outlined in Table G.2.

We engaged Synergies Economic consulting to undertake a high-level review of Hunter Water's proposed miscellaneous and ancillary charges.[206] Synergies examined a detailed breakdown provided by Hunter Water of the cost base for each proposed charge and found they generally reflected variation in Hunter Water's costs, including where prices increased or decreased substantively.[207] The volatility in Hunter Water's prices was largely due to changes in contract rates, and a reassessment of the average time taken to perform the process associated with some services. Moreover, there was no change since the 2013 Determination in Hunter Water's compliance with IPART's miscellaneous and ancillary pricing principles. Synergies also considered the discontinuation of some charges demonstrates that Hunter Water has sought efficiencies through different service delivery methods.

Overall, Synergies recommended approving Hunter Water's miscellaneous charges, with one adjustment for a calculation error in the 'metered standpipe hire triannual fee' (charge no. 15). Hunter Water proposed only charging a triannual fee and discontinuing its monthly fee, which would mean less staff time is required and a lower fee burden on customers. Synergies identified that the triannual fee needs to be adjusted to include asset recovery fees for four months instead of one. This change is reflected in Appendix G.

A targeted review at the next determination

A comparison of Hunter Water and Sydney Water charges for similar miscellaneous and ancillary services shows that Hunter Water's charges are generally higher than Sydney Water, in some cases significantly higher. There are a wide range of factors that could cause these differences such as the scope of the service provided, the processes and systems involved in its delivery, and the frequency with which it is provided.

The last extensive review of Hunter Water's miscellaneous and ancillary charges was conducted at our request by Deloitte/Halcrow as part of the 2009 Determination. The consultants found that, in general, Hunter Water's approach for calculating these charges was sound, and that where comparisons could be made, Hunter Water's prices were broadly similar to other NSW agencies.[208]

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[206] We engaged a consultant, Synergies, to assist with our review of Hunter Water's miscellaneous and ancillary prices. Much of the supplementary information on costs used in our analysis was provided to us by Hunter Water on a commercial-in-confidence basis. Synergies, *Miscellaneous and ancillary charges review – Hunter Water*, January 2016 (Commercial-in-Confidence).

[207] At our request, Synergies gave particular focus to the cost reflectivity of charges that were proposed to increase by at least 30% or decrease by at least 25% (in real terms).

[208] Deloitte Touche Tohmatsu (Deloitte) /Halcrow, *Review of Hunter Water's miscellaneous and trade waste charges – Final report*, December 2008, pp 29, 62.

However, since that review, disparities have emerged between Hunter Water's and Sydney Water's miscellaneous and ancillary charges. We therefore propose to undertake a targeted review of these charges as part of the next price review, including an element of benchmarking where possible, for example for processing times and rates for similar transactions.

The review would be conducted in a manner proportionate to the size of revenue from miscellaneous and ancillary services.

Miscellaneous and ancillary service revenue

We deduct the miscellaneous and ancillary service revenue from the notional revenue requirement.

Our draft decision is to accept Hunter Water's forecast annual revenue of $2.8 million from miscellaneous and ancillary services which is less than the average annual revenue from these services during the previous determination period (Table 9.2).[209] The forecast annual revenue is around $2 million less than average annual revenue over the previous three years. This is largely the result of the third party certification initiative. Forecast revenue from miscellaneous and ancillary services comprises 1% of Hunter Water's total forecast revenue in each year of the upcoming determination period.

Table 9.2 Revenue forecast for miscellaneous services ($2015-16)

	Average (previous period)	2016-17 to 2019-20
Hunter Water proposed ($million, per year)	4.8	2.8
Secretariat recommended ($million, per year)		2.8

Source: Hunter Water, Annual Information Return, September 2015.

9.4 Irregular and dishonoured payment fees - section 12A review

On 7 December 2015, we received a referral from the NSW Premier under Section 12A of the IPART Act to review Hunter Water's dishonoured and declined payment fees. We are not able to determine these fees under Section 11 of the IPART Act (unlike all other prices in this Draft Report). Section 11 only enables us to determine maximum prices for "government monopoly services". Dishonoured or declined payment fees[210] are not fees for the provision of a monopoly service. A copy of the referral and the terms of reference for review is at Appendix H.

[209] This has been updated to reflect Hunter Water's Annual Information Return, which had a larger estimate than Hunter Water's June 2015 public proposal ($2.6 million).

[210] Under clause 4.9.1 of the customer contract contained in Hunter Water's Operating Licence 2012-2017, if payment of an account is dishonoured or declined, Hunter Water will charge the relevant administrative fee set by IPART.

We received the referral under section 12A and the terms of reference for review on 7 December 2015 (see Appendix H).

IPART's draft recommendation

1 Under the Section 12A referral received on 7 December 2015, we recommend Hunter Water's proposed irregular and dishonoured fees as outlined in Appendix G.

9.4.1 Reasons for our draft recommendation

Hunter Water's proposed irregular and dishonoured fees (Table 9.3) were significantly higher than Sydney Water's proposed fee of $12.27 (adjusted to $12.50 to include corporate overheads in the Sydney Water Draft Determination). Synergies reviewed the cost calculations for both Hunter Water and Sydney Water and found that both:

- Presented the business process for dealing with dishonoured or declined payments, including specific steps for administration staff to undertake.
- Assigned an estimate of the time taken.
- Applied a labour rate to this time.
- Identified the system used to support this process.
- Used formulas for their miscellaneous charges that complied with IPART's cost-reflectivity principle.[211]

Table 9.3 Irregular and dishonoured payment fee determinations over time ($2015-16)

	2009	2013	2016 (draft prices)
Hunter Water			
Banking authority Irregular/dishonoured cheque	26.95	35.80	35.95
Direct debit decline	30.01	27.79	28.45
Australia Post Irregular/dishonoured cheque	45.36	41.15	40.95
Sydney Water			
Dishonoured or declined payment	23.63	12.27	12.50

Source: IPART Calculations.

[211] Synergies, *Miscellaneous and ancillary charges review – Sydney Water*, December 2015 (Commercial-in-Confidence); Synergies, *Miscellaneous and ancillary charges review – Hunter Water*, January 2016 (Commercial-in-Confidence).

We consider there is insufficient evidence to conclude that Hunter Water's fees are unreasonable simply because they are higher than Sydney Water's. The different charges appear to reflect differing payment agency costs and processes. In addition, Hunter Water's three charge structure improves cost reflectivity by recognising different charges imposed on Hunter Water by agencies for different payment types. As such, for our draft recommendation we have accepted Hunter Water's proposal.

Under the Section 12A referral mentioned above, on this specific referral, we intend to hold a public hearing between the draft and final pricing reviews which will deal with Hunter Water and Sydney Water dishonoured or declined charges concurrently, along with Sydney Water's late payment fee. This hearing will provide an opportunity to investigate the disparity further in forming our final recommendation in relation to these charges.

9.5 Bulk water charges to Central Coast Councils

Hunter Water has a water supply arrangement with Gosford City Council and Wyong Shire Council (Central Coast councils) under which either party can supply potable drinking water to the other under a water supply contract. The current agreement will remain in place until 2026.[212]

In its June 2015 pricing proposal, Hunter Water forecast no net bulk supply transfers would be made to the Central Coast during the 2016 determination period.[213]

For the separate 2013 determinations of Hunter Water and the Central Coast councils, we decided that the interchange price for this water should recover only the marginal costs of water supply for each utility. We based the interchange price on the higher of Hunter Water's or the councils' (Joint Water Supply) short-run marginal cost of supplying water, to ensure it covers both Hunter Water's and the councils' marginal costs. As a result, we set the price in line with the estimated short run marginal cost for the councils' of $0.60/kL ($2012-13), and provided for it to be maintained in real terms over the 2013 determination period.[214] The interchange price is currently $0.65/kL ($2015-16).

[212] IPART, *Hunter Water Corporation's water, sewerage, stormwater drainage and other services – Review of prices from 1 July 2013 to 30 June 2017 - Final Report*, June 2013, pp 123-125.

[213] Hunter Water pricing proposal to IPART, June 2015, p 28.

[214] IPART, *Hunter Water Corporation's water, sewerage, stormwater drainage and other services – Review of prices from 1 July 2013 to 30 June 2017 - Final Report*, June 2013, pp 123-125 and 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 47.

Draft decision

27 We have decided to maintain the current bulk water transfer price at $0.65/kL ($2015-16) indexed over the determination period, pending a wider review of bulk water prices to be charged by Hunter Water, Gosford City Council and Wyong Shire Council.

9.5.1 Reasons for our draft decision

Our draft decision is in line with Hunter Water's pricing proposal which suggested the price should be maintained because it is based on the councils' short-run marginal cost of supply, which will be reviewed as part of IPART's next determination of the Central Coast councils' prices.

The Lower Hunter Water Plan (LHWP) identifies the expansion of the pipeline between Hunter Water and the councils as a key long-term mechanism to balance water supply and demand across the basins. The LHWP also indicates that investment is being made to expand the capacity of the pipeline and there is potential for further investment in the future. It is therefore important that bulk water transfers are priced in a way that provides:

- Efficient signals for usage of the pipeline and efficient investment in alternative supply and demand management options.
- A consistent approach to pricing of water sold to different customers, such that there is both competitive neutrality[215] and signals for efficient retail entry.

Maintaining the price until the councils' cost of supply can be reviewed would also reduce unnecessary price fluctuations, which is desirable since the price has seen a number of changes over recent determinations (Box 9.2). As such, we will examine the interchange price as part of a wider review of bulk water prices to be charged by Hunter Water, Gosford City Council and Wyong Shire Council. This review will occur when we next review the councils' prices for their other water and sewerage services.

The bulk water price review will also draw on the determinations of the current wholesale price review which is due to be completed in December 2016. The wholesale price review will consider the form of wholesale pricing regulation. This has implications for bulk water charges, since under the LHWP, the Central Coast councils are essentially customers seeking a wholesale water service from Hunter Water (and vice versa).

[215] Competitive neutrality issues could arise if Hunter Water was to provide water to the councils at short-run marginal cost (under a Hunter Water determination) but to other customers (most likely privately owned water on-sellers in new developments) at a different price (potentially a retail-minus approach under the WIC Act).

Deferring our review of these charges to incorporate this additional information would facilitate consistency of prices between regions and enable further stakeholder consultation on these issues.

Box 9.2 IPART's historical approach to regulating the bulk water charge

The regulatory approach to bulk water charges and their resulting level has varied in recent determination periods:

- Prior to 2005, the charge was the subject of commercial negotiation and not regulated by IPART.
- The 2005 Determination set the charge on the basis of standard water usage charges less a small discount.
- The 2009 Determination reset the charge on the basis of the average cost of supply.
- The 2013 Determination reset the charge based on IPART's estimate of the higher of Hunter Water's and the Central Coast Council's short-run marginal cost with the fixed costs – return on and of capital invested in the pipeline – recovered through general charges.

Sources: IPART, 2005 Determination: Final Report, p121; IPART, 2009 Determination: Final Report, p 135; IPART, 2013 Determination: Final Report, p 125.

9.6 Clarence Town Sewerage Levy

Hunter Water charges customers in the Clarence Town area a special annual sewerage levy to contribute to the cost of providing the sewerage scheme for Clarence Town, completed in March 2012.[216] This levy is in addition to Hunter Water's standard sewerage charges. The current Clarence Town Sewerage Levy, set at the 2013 Determination, is $78.86 per annum.

Other sources of funding for the Clarence Town sewerage scheme include:

- Contributions from the NSW Government's Country Towns Water Supply and Sewerage Program.
- Revenue from the Environmental Improvement Charge (discussed in Chapter 8).

Draft decision

28 We have decided to set the Clarence Town Levy at $42.50 ($2015-16) per annum to be maintained in real terms until 30 June 2019.

[216] IPART, *Hunter Water Corporation's water, sewerage, stormwater drainage and other services – Review of prices from 1 July 2013 to 30 June 2017 - Final Report*, June 2013, p 122.

9.6.1 Reasons for our draft decision

Our draft decision is substantially lower than maintaining the levy of $78.86 in real terms, as proposed by Hunter Water in June 2015.[217] This reflects advice from Hunter Water that updating its modelling to incorporate actual figures for 2014-15 led to a reduction in the required levy to $42.50.[218] As per its original June 2015 proposal, Hunter Water proposed this levy remain in place until June 2019 as it expects to recover any outstanding costs of capital associated with the Clarence Town sewerage scheme by this time. We have accepted Hunter Water's proposal because:

- It is an ongoing funding arrangement that we approved in the 2009 Determination and maintained in the 2013 Determination.
- Hunter Water has not proposed to extend the levy beyond its sunset date.
- The proposed charge is small, applies to a very small number of Hunter Water's customers and represents a small amount of annual revenue.

9.7 Unfiltered water charges

Unfiltered water is water that has been disinfected, but not filtered at a water filtration plant. The unfiltered water charge is set to reflect the avoided cost of filtration. That is, an unfiltered water customer receives a discount to reflect the reduced water filtration costs Hunter Water incurs in providing unfiltered water.

Hunter Water currently supplies unfiltered water to 60 customers serviced by the upper Chichester Dam pipeline.

Draft decision

29 We have decided to transition to an unfiltered water charge at the potable water usage rate minus $0.19 kL over the determination period as outlined in Table 9.4.

9.7.1 Reasons for our draft decision

The unfiltered water charge is set to the standard water usage charge less an estimate of the avoided costs of water filtration. The 2015-16 charge for unfiltered water is $1.87/kL, compared to $2.24/kL for potable water. The price difference is attributed to the cost difference between unfiltered and drinking water, which is primarily the cost of treating the water at a water filtration plant. The avoided costs of filtration include the deferred investment in new water filtration plants.[219]

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217 Hunter Water pricing proposal to IPART, June 2015, p 81.

218 Hunter Water email to IPART, 14 January 2016.

219 IPART, *Hunter Water Corporation's water, sewerage, stormwater drainage and other services - Review of prices from 1 July 2013 to 30 June 2017 - Final Report*, June 2013, p 108.

Given the small quantity of water supplied to these customers, it is not expected that the supply of unfiltered water does not allow for deferral of any material capital expenditure.

Hunter Water's proposed increasing unfiltered water prices (shown in Table 9.4) – that is, reducing the discount for unfiltered water, based on its latest estimates of the cost of water filtration. We consider Hunter Water's cost estimates to be reasonable.

Table 9.4 Hunter Water's unfiltered water price ($/kL, $2015-16)

	2015-16	2016-17	2017-18	2018-19	2019-20	Total change
IPART draft decision	1.86	1.90	1.95	1.99	2.03	9.6%

The impact of the reduced discount on customers is to be managed through a transition to an unfiltered water charge at the drinking water usage rate ($2.22/kL in $2015-16 as outlined in Chapter 8) minus $0.19 kL over the 2016 determination period.

9.8 Unmetered water charges

Some residential and non-residential properties serviced by Hunter Water do not have water meters. These customers do not pay an explicit water usage charge. Rather, they are deemed a usage component that is added to their fixed water service charge. Hunter Water has advised it has four[220] unmetered customers – three of which are small commercial customers.[221]

Currently, Hunter Water charges these customers a service charge that implicitly includes two components:

- a water service charge equivalent to the residential service charge, and
- 180 kL of deemed water usage per year (ie, 180 kL multiplied by the water usage price).[222]

If the customers feel they consume less than the deemed amount they can have a meter installed. Hunter Water will provide the meter free of charge. However, the customer is responsible for the cost of installation.[223]

220 Hunter Water Corporation, Newcastle Public Hearing, 2 November 2011, Transcript, p 46.
221 Hunter Water email to IPART, 14 January 2016.
222 Hunter Water pricing proposal to IPART, June 2015, p 78.
223 IPART, *Hunter Water Corporation's water, sewerage, stormwater drainage and other services - Review of prices from 1 July 2013 to 30 June 2017 - Final Report*, June 2013, p 112.

Draft decision

30 We have decided to maintain the current approach to charging unmetered properties comprising a service charge and a deemed water usage component and set the water service charge:

- equivalent to the non-residential stand-alone 20mm meter charge; and
- based on 180 kL of deemed water usage per year.

9.8.1 Reasons for our draft decision

Three out of the four unmetered customers are commercial customers. We have therefore decided to set the water service charge equivalent to the non-residential stand-alone 20mm charge (which is the same as the residential charge under this draft determination).

For the same reason we initially favoured setting the deemed water usage component on the basis of average annual water usage of a 'typical' non-residential customer. However, identifying a 'typical' non-residential customer is problematic. Hunter Water's proposal includes some example customer types for the purposes of showing illustrative bill impacts.[224] These example customers include small shops located in Newcastle (annual assumed usage of 191 kL) and Cessnock (annual assumed usage of 64 kL). This demonstrates the potential variability of usage across similar types of non-residential customers.

We have therefore decided to maintain the deemed water usage component of the charge at 180 kL per year. Our draft decision for unmetered water prices is shown in Table 9.5.

Table 9.5 Hunter Water's unmetered charge ($per year, 2015-16)

	2015-16	2016-17	2017-18	2018-19	2019-20
IPART draft decision	417.35	424.88	448.46	473.39	500.60

9.9 Major service connection charges

There are a small number of existing properties located in areas serviced by Hunter Water's sewerage network, which are not connected to its network. These properties are typically non-residential and have an onsite sewerage treatment system.

[224] Hunter Water pricing proposal to IPART, June 2015, Appendix K.

Draft decision

31 We have decided to consider the major service connection charge as part of a later consolidated review of developer charges and backlog sewerage services for the metropolitan water utilities.

9.9.1 Reasons for our draft decision

Hunter Water proposed a methodology, based on IPART's 2000 developer charges determination (with some amendments), for calculating charges for connecting existing properties to its sewerage system rather than a specific price (or prices).

We have decided to consider the major service connection charge in a future consolidated review of developer charges and backlog sewerage services for metropolitan water utilities. This approach was supported by Hunter Water.[225] DPI Water submitted there may also be merit in considering other issues that impact efficient competition, such as the impact of existing cross subsidies and other barriers to entry for third party providers, how avoidable costs are estimated and included in prices, and recycled water pricing guidelines.[226]

This review is planned for 2017-18, after the current price reviews for Hunter Water and Sydney Water and the next price reviews for Gosford City Council and Wyong Shire Council are complete. The consolidated review will facilitate a consistent approach and consideration of issues, such as cost allocations, across metropolitan water utilities.

As part of the consolidated review, we will need to better understand and consider:

- Hunter Water's current practice for charging these customers and the numbers and types of customers requesting connection, and likely to request connection in the future.[227]
- The potential impact of Hunter Water's proposed methodology on different types of customers and the size of potential upfront connection charges.
- How customers in a similar situation are charged by other metropolitan water utilities.

225 Hunter Water response to Issues Paper, 6 October 2015, p 8.

226 DPI Water submission to IPART Issues Paper, p 4.

227 Existing properties which connect to Hunter Water's sewerage system are currently charged according to IPART's 2000 Developer Charges determination. Hunter Water email to IPART, 28 July 2015.

10 Recycled water pricing

Hunter Water currently supplies over 4,700 ML of recycled water for direct sale each year.[228] Its recycled water schemes can be funded in a number of ways:

- schemes delivered pursuant to Government direction are funded from the general Hunter Water customer base (ie, under section 16A of the *Independent Pricing and Regulatory Tribunal Act 1992* (IPART Act))
- schemes to service new development in growth areas of Hunter Water can be funded through contributions from developers (developer charges)[229] and by recycled water usage and service charges (**mandated schemes**), and
- commercial schemes can be funded by scheme customers under contractual arrangements (**voluntary schemes**).[230]

Table 10.1 shows the recycled water systems that Hunter Water operates.

Table 10.1 Hunter Water's recycled water schemes

Section 16A	Mandated schemes	Voluntary schemes
Kooragang Island (KIWS)[a]	Thornton North	The Vintage
	Gillieston Heights	Kurri TAFE
		Branxton (comprises 8 separate schemes)

[a] Regulatory Asset Base treatment of the avoided costs from this scheme is discussed in chapter 6.

Source: Hunter Water Annual Information Return, September 2015.

[228] Hunter Water pricing proposal to IPART, June 2015, p 4.

[229] In 2008, the then Government directed Sydney Water and Hunter Water to set their water and sewerage developer charges to zero, but this direction did not apply to recycled water developer charges. Source: IPART, *Review of prices for water, sewerage and stormwater and other services for Hunter Water Corporation – Final Report*, July 2009, p 190.

[230] Hunter Water pricing proposal to IPART, June 2015, pp 79-80.

Under our 2006 *Pricing arrangements for recycled water and sewer mining* (2006 Guidelines)[231], the starting point for pricing recycled water is that the full direct cost of each recycled water scheme should be recovered from users of that scheme, that is, we apply a **'user pays' principle**. The direct costs of the recycled water scheme include direct operating and capital costs and a share of any joint costs, such as corporate overheads. Therefore, recycled water costs should not generally be recovered from water and sewerage postage-stamp price customers.

The exceptions to the application of the user pays principle include:

- where a recycled water scheme may enable costs to be avoided or deferred elsewhere in the system or generate broader community benefits, or
- where the Government formally directs IPART to allow a portion of recycled water costs to be passed on to a water agency's broader customer base (through a direction under section 16A of the IPART Act).

In this chapter, we outline our approach to regulating prices for Hunter Water's recycled water schemes over the 2016 determination period.

Draft decision

32 We have decided to defer regulation of Hunter Water's recycled water prices until we have completed a broader review of our approach to regulating recycled water prices.

10.1 Reasons for our draft decision

Our approach to the pricing of recycled water differs from that outlined in Chapter 11 of our Issues Paper. Under our legislative framework, we are required to determine pricing for all of Hunter Water's recycled water services (both voluntary and mandated schemes).

Prices for all Hunter Water's recycled water services are to be determined

Section 11(1) of the IPART Act requires us to determine maximum prices for government monopoly services supplied by Hunter Water and other specified government agencies. The *Independent Pricing and Regulatory Tribunal (Water, Sewerage and Drainage Services) Order 1997* (Order) lists the services declared by the NSW Premier to be government monopoly services. Recycled water services are government monopoly services under paragraph 3(a) of the Order as they are "water supply services".

[231] IPART, *Pricing arrangements for recycled water and sewer mining – Sydney Water Corporation, Hunter Water Corporation, Gosford City Council and Wyong Shire Council - Final Report*, September 2006, p 63.

Hunter Water currently has two mandated schemes and ten voluntary irrigation schemes.[232] We have not previously set prices for any of these schemes.

In our 2006 Guidelines, we decided that we would not regulate prices for voluntary recycled water schemes because "users have alternative options to recycled water,"[233] as every recycled water customer is also supplied with drinking (potable) water and/or unfiltered water. However, we have now reconsidered this position as recycled water services are government monopoly services.

Price determination for recycled water to be deferred

We have decided to defer regulation of recycled water prices for all of Hunter Water's schemes until we have completed a broader review of our approach to regulating recycled water prices. Under the IPART Act, we have discretion as to the timing of our determinations, subject to limits. As a result, we can defer our determination for Hunter Water's recycled water services if we have a reasonable basis for doing so.[234]

We consider that we do not currently have sufficient information to set prices for Hunter Water's recycled water schemes. We intend to conduct a full review of our approach to recycled water pricing in 2017-18. This review would cover all metropolitan water utilities regulated by IPART.

Review of recycled water pricing

The upcoming review is the most appropriate forum to reconsider our approach to recycled water pricing. The review will also ensure any stakeholder concerns are addressed. For example, in response to our Issues Paper the Total Environment Centre submitted that recycled water customers should not pay higher total water charges for a given volume than if they were using potable water only. It argued that such an arrangement discourages the use of recycled water and fails to recognise the benefits of recycling to the broader community (which include reduced demand for potable water and reduced impacts for discharge of treated effluent).[235] This is in line with the 'fairness test' Hunter Water outlined in its proposal. Additionally, as part of the concurrent review of Sydney Water's prices, many stakeholders commented on a range of pricing and

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232 Hunter Water pricing proposal to IPART, June 2015, pp 79-80 and Annual Information Return, September 2015.

233 IPART, *Pricing arrangements for recycled water and sewer mining – Sydney Water Corporation, Hunter Water Corporation, Gosford City Council and Wyong Shire Council - Final Report*, September 2006, p 63.

234 In addition, section 13(6) of the IPART Act enables us to limit our determination of the price for a government monopoly service to a part or category of that service.

235 Total Environment Centre submission to IPART, October 2015, p 7.

regulatory issues around recycled water.[236] The Draft Report for the Sydney Water review provides details of the issues raised by stakeholders in relation to recycled water pricing.

10.2 Hunter Water's proposed charges appear reasonable

Hunter Water proposed the same recycled water charges for both of its mandated schemes, which are shown in Table 10.2 below. The proposed usage charge is about 13% less than the proposed potable water usage charge, and the proposed service charge is, on average, about 28% less than the proposed residential water service charge. Even though we are not determining these prices, we consider Hunter Water's proposed prices are reasonable. Hunter Water's proposed prices are below those that would be consistent with the 2006 Guidelines. However, as its recycled water business is ring-fenced, any losses from this lower price would not be paid for by the wider customer base.

Hunter Water's mandated schemes, which will supply recycled water for residential use, are not yet operational. Until the mandated recycled water schemes are commissioned in 2018-19, Hunter Water proposes to supply drinking water through the recycled water system but charge the proposed recycled water prices. This is intended to encourage appropriate behaviour and safeguard against inappropriate use from taps that will eventually provide recycled water. We accept that this is a reasonable approach.

[236] E2Design Lab and Permeate Partners called for recycled water to be priced at parity with potable water, while City of Sydney called for a level playing field between Sydney Water and other recycled water businesses. E2Designlab submission to IPART Issues Paper, October 2015, p 2; Permeate Partners submission to IPART Issues Paper, October 2015, p 2; and City of Sydney submission to IPART Issues Paper, October 2015, pp 7-8. We note the Total Environment Centre opposed Sydney Water's proposed relative increase in the recycled water price. Total Environment Centre submission to IPART Issues Paper, October 2015, p 6.

Table 10.2 Hunter Water recycled water prices ($2015-16)

		2016-17	2017-18	2018-19	2019-20
Thornton North (mandated)	Potable top-up	100%	100%	50%	0%
	Proposed price	Usage: $1.94/kL Service: $22.20	Usage: $1.94/kL Service: $22.20	Usage: $1.94/kL Service: $22.20	Usage: $1.94/kL Service: $22.20
	Price under guidelines	Usage: $2.22/kL Service: max $557	Usage: $2.22/kL Service: max $582	Usage: $2.22/kL Service: max $1,297	Usage: max $2.22/kL Service: max $2,052
Gillieston Heights (mandated)	Potable top-up	100%	100%	50%	0%
	Proposed price	Usage: $1.94/kL Service: $22.20	Usage: $1.94/kL Service: $22.20	Usage: $1.94/kL Service: $22.20	Usage: $1.94/kL Service: $22.20
	Price under guidelines	Usage: $2.22/kL Service: max $244	Usage: $2.22/kL Service: max $256	Usage: $2.22/kL Service: max $551	Usage: max $2.22/kL Service: max $862

Source: Hunter Water pricing proposal to IPART, June 2015, p 80 and IPART calculations.

10.3 Ring-fencing recycled water costs

As part of a price review, we require that recycled water costs (and revenues) are ring-fenced from the water agencies' regulated business. This is to ensure that recycled water costs are not recovered from other water and sewerage customers.[237]

The Draft Report for Sydney Water's 2016 determination period includes an adjustment to ring-fence the corporate costs associated with recycled water. An equivalent adjustment is not needed for Hunter Water as it has ring-fenced all costs associated with recycled water, including corporate costs. This means for the purpose of setting water, sewerage and stormwater prices, the efficient operating and capital expenditure allowances set in Chapter 4 and 5 are net of this amount (ie, they exclude all ring-fenced recycled water costs, including our allocation of corporate costs).

[237] There are two exceptions where we allow water agencies to recover recycled water costs from the broader customer base:
1. The agency claims (and we approve) avoided costs - costs that potable water and sewerage customers would have otherwise incurred, had the recycled water scheme not proceeded.
2. The Government formally directs IPART to allow a portion of recycled water costs to be passed on to a water agency's broader customer base (s16A Direction).

Overall, we are satisfied that Hunter Water's expenditure related to recycled water is appropriately ring-fenced. Our expenditure consultants, Jacobs, view was that the measures and ring fencing arrangements put in place are appropriate and sufficiently robust to ensure that expenditure related to recycled water is adequately ring fenced from its other products, which are price regulated.[238]

[238] Jacobs, *Hunter Water expenditure review – Final Report*, February 2016, p 96.

11 Implications of pricing decisions

This chapter outlines the impact of our pricing decisions on Hunter Water's customers. It also discusses the implications of our pricing decisions on other matters we must consider under section 15 of the IPART Act (see Appendix A). These include:

- Hunter Water's service standards
- Hunter Water's financial viability and shareholders
- general inflation, and
- the environment.

We are satisfied that the 2016 Draft Determination achieves an appropriate balance between these matters.

We note that in presenting bill impacts in this chapter, we generally present nominal dollar impacts – ie, bill impacts **including forecast inflation**. We estimate inflation to be 2% per annum in 2016-17 and 2.5% per annum over the rest of the 2016 determination period.

11.1 Bill structure and terminology

In our Issues Paper[239], and our Issues Paper for the Sydney Water review[240], we acknowledged customer confusion with the term 'service charge' as identified by Sydney Water in its own customer engagement.[241] The service charge is intended to recover the fixed costs associated with making the water, sewerage and stormwater services available to customers.

[239] IPART, *Review of prices for Hunter Water Corporation – Issues Paper*, September 2015, p 93.
[240] IPART, *Review of prices for Sydney Water Corporation – Issues Paper*, September 2015, p 133.
[241] Sydney Water pricing proposal to IPART - Appendices, June 2015, p 80.

We sought submissions about a new name for this charge. Sydney Water indicated a preference for the term 'availability charge'[242], which was our suggestion in the Issues Paper[243]. Hunter Water indicated it had previously used the term 'availability charge', but that this had led to some customer complaints about paying the availability charge following supply interruptions.[244]

Hunter Water advised that whatever name is chosen:

> … the term needs to capture the concept that the charge covers the full cost of having water and wastewater services available and on-line throughout the billing period, including periods of peak consumption and peak discharges.

It supported IPART's public consultation process as 'the best opportunity to canvass the views of customers as to an appropriate term for fixed service charges', but did not recommend any option.[245]

PIAC recommended replacing 'service charge' with 'fixed charge', 'water network charge' or 'distribution charge' and recommended that any changes to the service charge terminology be adopted consistently across water utilities.[246] EWON suggested the term 'daily supply charge' to encourage consistency across the energy and water sectors.[247]

We consider Hunter Water is best placed to engage with its customers to determine the term that best captures its customers' understanding of the purpose of the service charge.

11.2 Implications for customer bills

Hunter Water' customers currently receive bills, which comprise:

- fixed charges for water and sewerage, and
- usage charges for water and sewerage (the sewerage usage charge is only applicable to non-residential customers who are deemed to have discharged more than the discharge allowance).

242 Sydney Water submission to IPART Issues Paper, October 2015, p xii.
243 IPART, *Review of prices for Hunter Water Corporation – Issues Paper,* September 2015, p 93.
244 Hunter Water submission to IPART Issues Paper, October 2015, p 8.
245 Hunter Water submission to IPART Issues Paper, October 2015, p 8.
246 Public Interest Advocacy Centre submission to IPART Issues Paper (Hunter Water), October 2015, pp 6-7.
247 Energy and Water Ombudsman NSW submission to IPART Issues Paper (Hunter Water), October 2015, p. 2.

In addition, some customers pay a stormwater drainage charge - this is a fixed charge paid by customers if they are located in one of the stormwater drainage areas. This is to maintain the large trunk drains in Hunter Water's stormwater system.[248]

Furthermore, sewerage customers (other than pensioners) pay an Environmental Improvement Charge[249], as explained in section 8.5.

Hunter Water's customers in Clarence Town also pay a levy, known as the 'Clarence Town Levy'[250], as explained in section 9.6.

As part of this review, bills for residential and non-residential customers will change because we have changed the structure for some prices. As explained in Chapter 8, these changes are intended to ensure that customers who receive similar services in Hunter Water's network pay similar charges.

[248] Hunter Water http://www.hunterwater.com.au/Your-Account/Managing-Your-Account/Non-residential-Pricing--Charges/Stormwater-Drainage-Charges.aspx, accessed on 11 February 2016.

[249] Hunter Water http://www.hunterwater.com.au/Resources/Documents/Fact-Sheets/Customer-Charges/Customer_Charges_May15-Version-2.pdf, accessed on 11 February 2016.

[250] http://www.hunterwater.com.au/Your-Account/Managing-Your-Account/Residential-Pricing--Charges/Residential-Pricing--Charges.aspx, accessed on 11 February 2016.

Box 11.1 Understanding why bills have changed

Hunter Water's revenue requirements. The revenue which Hunter Water needs to provide its services has increased (as explained in section 3.2).

Increasing the sewerage discharge allowance for non-residential customers. For non-residential customers, we are increasing the annual discharge allowance over the 2016 determination period by 17.5 kL per year to 120 kL per year in 2019-20, after which it would remain at this level. This ensures consistent treatment between residential and non-residential customers and within categories of non-residential customers (eg, industrial customers and commercial customers).

Rebasing water and sewerage service charges. We are re-basing water and sewerage service charges so that they are all referenced to a 20mm meter by 2019-20. Generally, this results in a reduction in service charges for non-residential customers and an increase for residential customers.

To minimise bill impacts, we are gradually increasing residential service charges over the first three years and rebasing to a standard 20mm meter in 2019-20.

Changing the calculation of the sewerage service charges. We are separating out the implicit discharge allowance in the sewerage service charge for residential and non-residential customers. This would correct an existing discrepancy, where non-residential customers with large meters pay too much for sewerage discharge. We are also applying a discharge factor to residential customers. This has previously only applied to non-residential customers. This ensures consistent treatment between residential and non-residential customers and a reduction in residential sewerage service charges.

Altering the way we charge dual occupancies. We are charging dual occupancies based on the number of connections and/or meters to Hunter Water's network.

Stormwater charges. We have continued the transition towards area based stormwater charges, and therefore set charges to allocate a greater share of costs to properties with larger areas. This results in only a small increase to stormwater charges for stand-alone residential and small non-residential customers and customers in multi-premises properties, and larger increases for customers with medium, large and very large properties. We have also introduced a new low impact charge for residential customers, and maintained the low impact charge for non-residential customers.

11.2.1 Residential customers

Houses and apartments

All residential customers' water and sewerage bills would increase under our draft prices over the 2016 determination period. For 2016-17, we were mindful that it would have been the last year of the 2013 determination period (if Hunter Water's price determination had not been brought forward by one year, at its request), and water and sewerage bills for houses would have otherwise increased at the rate of inflation, and by 1.8% more than the rate of inflation for apartments.[251] Therefore, for residential customers, we have applied a smaller increase for 2016-17 compared with the remaining years.

Under our draft prices:

- A **typical household** consuming 185 kL per year would see its annual bill increase by $33 (or 3.1%) in 2016-17 from $1,060 to $1,093. This is $7 more than under Hunter Water's proposed prices. By 2019-20, a typical household would pay $1,284, which represents an increase of $223 in nominal terms over the 4-year period. Hunter Water proposed a nominal increase of $110 over this same period.
- A **typical apartment** consuming 150 kL per year would see its annual bill increase by $27 (or 3.2%) in 2016-17 from $819 to $846. This is about $9 lower than under Hunter Water's proposed prices. By 2019-20, a typical apartment would pay $1,011, which represents an increase of $192 in nominal terms over the 4-year period. Hunter Water proposed a nominal increase of about $265 over this same period. Under our draft prices, apartments would face a smaller increase than compared with Hunter Water's proposal mainly due to our decision to not equalise the sewerage service charges for apartments with houses.

Customers who pay **stormwater drainage** charges would also have an increase in bills:[252]

- A **typical household** consuming 185 kL per year which also receives a stormwater service from Hunter Water would see its annual bill increase by $234 (or 20.6%) over the four years. This is $111 more than Hunter Water's proposal, but is mainly due to the increases in the underlying water and sewerage charges, rather than the stormwater charge.[253]

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[251] Bills for apartments were to increase more than houses in 2016-17 under the 2013 Determination. This is because the sewerage service charge for apartments is currently (2015-16) 72.5% of the charge applicable to houses, but were due to increase to 75% in 2016-17. IPART, *Hunter Water Corporation's water, sewerage, stormwater drainage and other services – Final Report*, June 2013, p 12.

[252] Residential dwellings in Hunter Water's stormwater catchments pay Hunter Water stormwater charges in addition to sewerage and water charges. Customers in other areas pay these fees to local councils.

[253] Under our draft prices, a typical water and sewerage bill would increase by $113 more than proposed by Hunter Water by 2019-20. However, our draft stormwater charge for a house would increase less than Hunter Water's proposal by $2.

- A **typical apartment** consuming 150 kL per year would see its annual bill increase by $196 (or $23.1%) over the four years. This is $73 less than proposed by Hunter Water and is mainly due to our decision to not equalise the sewerage service charges for apartments and houses.

Table 11.1 Residential customers' water and sewerage bills ($nominal) – with inflation

	2015-16[a]	2016-17	2017-18	2018-19	2019-20	Total change
Using Hunter Water's proposed prices[b]						
House (185 kL)	1,060	1,087	1,113	1,141	1,171	110
Annual change		*2.5%*	*2.4%*	*2.6%*	*2.6%*	*10.4%*
Apartment (150 kL)	819	855	929	1,006	1,084	265
Annual change		*4.4%*	*8.7%*	*8.3%*	*7.7%*	*32.3%*
House (185 kL) with stormwater	1,132	1,162	1,191	1,222	1,255	123
Annual change		*2.6%*	*2.5%*	*2.7%*	*2.7%*	*10.8%*
Apartment (150 kL) with stormwater	846	883	958	1,036	1,115	269
Annual change		*4.4%*	*8.5%*	*8.1%*	*7.6%*	*31.8%*
Using IPART's draft prices						
House (185 kL)	1,060	1,093	1,153	1,216	1,284	223
Annual change		*3.1%*	*5.5%*	*5.5%*	*5.5%*	*21.0%*
Apartment (150 kL)	819	846	898	953	1,011	192
Annual change		*3.2%*	*6.1%*	*6.1%*	*6.2%*	*23.4%*
House (185 kL) with stormwater	1,132	1,167	1,230	1,296	1,366	234
Annual change		*3.0%*	*5.4%*	*5.4%*	*5.4%*	*20.6%*
Apartment (150 kL) with stormwater	846	873	926	982	1,042	196
Annual change		*3.2%*	*6.0%*	*6.0%*	*6.1%*	*23.1%*

a 2015-16 prices were not available when Hunter Water finalised its pricing proposal. The bills for 2015-16 have been updated to reflect actual inflation and prices.

b These figures were not included in Hunter Water's proposal, and have been calculated by IPART.

Note: Inflation is estimated to be 2% in 2016-17 and 2.5% per annum over the rest of the 2016 determination period. 185 kL/year is average usage for a house, 150 kL/year is average usage for an apartment. The above bills also include the applicable Environmental Improvement Charge.

Source: Hunter Water Price Submission Summary, June 2015, p 3, and Hunter Water pricing proposal, June 2015 pp 92-93 and IPART analysis.

Pensioners

Hunter Water provides rebates for to pensioners, and the amount is linked to movements in water and sewerage bills. In 2014-15, this rebate was $271.[254] Pensioners are also exempt from the Environmental Improvement Charge.

As shown in Table 11.2, an average pensioner in a house, consuming 150 kL per year, would have a water and sewerage bill of $692 in 2016-17, an increase of $22 in nominal terms from 2015-16, and $7 more than under Hunter Water's proposed prices. By 2019-20, they would pay $824 for water and sewerage in nominal terms. This is $154 more than the 2015-16 bill, and $85 more than under Hunter Water's proposed prices.

Pensioners that also receive a stormwater service from Hunter Water would also face an increase in their total water, sewerage and stormwater bill, as shown in Table 11.3. However, this is mainly due to the increase in the underlying water and sewerage bill, rather than increases in stormwater charges.

Table 11.2 Water and sewerage bills for pensioners ($ nominal) – with inflation

	2015-16[a]	2016-17	2017-18	2018-19	2019-20	Total change
Using Hunter Water's proposed prices						
Pensioner (house, 100 kL)	559	570	584	599	615	56
Annual change		*2.0%*	*2.5%*	*2.6%*	*2.6%*	*10.0%*
Pensioner (house, 150 kL)	670	685	702	720	739	69
Annual change		*2.2%*	*2.5%*	*2.6%*	*2.6%*	*10.3%*
Using IPART's draft prices						
Pensioner (house, 100 kL)	559	578	617	658	702	143
Annual change		*3.5%*	*6.7%*	*6.6%*	*6.6%*	*25.6%*
Pensioner (house, 150 kL)	670	692	733	777	824	154
Annual change		*3.2%*	*6.0%*	*6.0%*	*6.0%*	*23.0%*

a 2015-16 prices were not available when Hunter Water finalised its pricing proposal. The bills for 2015-16 have been updated to reflect actual inflation and prices.

Note: For the pensioner bill impacts we have assumed a pensioner in an owner occupied house. Inflation is estimated to be 2% in 2016-17 and 2.5% per annum over the rest of the 2016 period. The above bills do not include the Environmental Improvement Charge.

Source: Hunter Water Price Submission Summary, June 2015, p 3, and Hunter Water pricing proposal, June 2015, p 94 and IPART analysis.

[254] Hunter Water, pricing proposal to IPART, June 2015, p 98.

Table 11.3 Water, sewerage and stormwater bills for pensioners ($ nominal) – with inflation

	2015-16[a]	2016-17	2017-18	2018-19	2019-20	Total change
Using Hunter Water's proposed prices						
Pensioner (house, 100 kL) with stormwater	631	645	663	681	700	69
Annual change		*2.3%*	*2.7%*	*2.7%*	*2.8%*	*10.9%*
Pensioner (house, 150 kL) with stormwater	742	760	780	801	823	81
Annual change		*2.5%*	*2.6%*	*2.7%*	*2.7%*	*11.0%*
Using IPART's draft prices						
Pensioner (house, 100 kL) with stormwater	631	652	694	737	784	153
Annual change		*3.4%*	*6.3%*	*6.3%*	*6.3%*	*24.3%*
Pensioner (house, 150 kL) with stormwater	742	766	810	856	906	164
Annual change		*3.2%*	*5.8%*	*5.7%*	*5.8%*	*22.1%*

a 2015-16 prices were not available when Hunter Water finalised its pricing proposal. The bills for 2015-16 have been updated to reflect actual inflation and prices.

Note: For the pensioner bill impacts we have assumed a pensioner in an owner occupied house. Inflation is estimated to be 2% in 2016-17 and 2.5% per annum over the rest of the 2016 period. The above bills do not include the Environmental Improvement Charge.

Source: Hunter Water Price Submission Summary, June 2015, p 3, and Hunter Water pricing proposal, June 2015 p 94 and IPART analysis.

11.2.2 Non-residential customers

Under our draft prices, non-residential customers, other than those with a stand-alone 20mm meter, would see their water and sewerage bills decrease, excluding inflation. However, including inflation, some large businesses may face a small increase.

Small non-residential customers with a stand-alone 20mm meter would be likely to face an increase above inflation, but this will vary depending on their specific discharge factor.[255] Customers with a discharge factor greater than the residential discharge factor of 75%, eg 85%, would face a greater increase than residential customers, and those with a smaller discharge factor would face a lower increase. For example, a small businesses consuming 185 kL per year (similar to an average residential property), with a discharge factor of 85%, would face a nominal bill increase of about $256 (or 22.6%) over the 4-year period.

[255] If a customer on a stand-alone 20mm meter has a very low discharge factor (eg 30%) then they are likely to face a nominal decrease in their water and sewerage bill.

Other businesses would face varying impacts depending on their actual water consumption and meter connection. For example, those on a:

- 25mm meter with water usage of 300 kL per year, and a discharge factor of 85%, would face a nominal decrease in their water and sewerage bills of $259 (or 10.6%) over the 4-year period.

  The decrease for these customers is because the reduction in the sewerage component of their bill in nominal terms (resulting from our draft decision to rebase service charges, to change the approach in calculating the discharge allowance and to hold the sewerage usage charge constant at $0.67/kL in nominal terms) would offset the nominal increases in the water component of their bill (as the water usage charge would increase in line with inflation, and the water service charge would increase by more than inflation).

- 100mm meter with water usage of 40,000 kL per year, and a discharge factor of 60%, would face a nominal increase in their water and sewerage bills of $5,302 (or 4.3%) over the 4-year period. This is increase less than inflation and less than the increase they would have received under Hunter Water's proposed prices. Under Hunter Water's proposal, we estimate they would have received an increase of $13,923 (or 11.3%) in nominal terms over the 4-year period.

  The increase for these customers is because the water charges (usage and service), which are a large component of their bill (about $89,264 in 2015-16, or 73%), would increase by slightly more than inflation (about $11,050, or 12.4%), which would partly offset the nominal decrease in the sewerage component (about $5,749 or 17%).

We outline non-residential bill impacts in further detail below.

Small businesses

As discussed in Chapter 8, we have decided to rebase service charges by 2019-20. This means that some non-residential customers that were paying residential water and sewerage service charges[256] would be paying the service charge relevant to their meter size by 2019-20.

However, during 2016-17 to 2018-19 they would be paying the same base service charge as a house,[257] which would not be directly relevant to their meter size. This is because these customers currently pay the same service charge as a house, and to manage the impacts of rebasing on their service charges in 2019-20, we have gradually increased their base service charges[258] over the first three years of the determination period.

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256 As part of our 2012 Determination, we decided that a standalone non-residential customer with a 20mm meter should pay the residential service charge for both water and sewerage. IPART, *Review of price structures for metropolitan water utilities – Final Report*, March 2012, p 3.

257 That is, excluding the discharge factor.

258 Excluding discharge factors.

Also, non-residential bills are influenced by discharge factors applied to the meter based sewerage service charges. Hunter Water currently assigns discharge factors for non-residential customers, but not residential customers.[259] These discharge factors would apply to non-residential customers with a stand-alone 20mm meter from 1 July 2016.

As discussed in Chapter 8, we have applied a discharge factor of 75% to residential customers. Therefore, where the discharge factor is greater than 75% for non-residential customers with a stand-alone 20mm connection, they would be billed more than a residential customer (see Box 11.2).

[259] Hunter Water has five categories of discharge factors for its non-residential customers (excluding certain large industrial customers that may be required to have a dedicated meter installed to measure all wastewater discharge to the sewerage system). See Box 11.2.

Box 11.2 Setting discharge factors

The amount of wastewater (or sewerage) that a customer discharges into the wastewater system is calculated by multiplying the customer's water consumption by a discharge factor.

Hunter Water currently assigns discharge factors for non-residential customers, but not residential customers.

In 2014, we undertook a review of non-residential discharge factors. We decided to continue to allow regulated water utilities to determine the discharge factors. However, we recommended that water utilities be transparent in the process of setting discharge factors and communicate with customers via their websites:

- how the discharge factor affects customers' bills
- a list of discharge factors used for different businesses, industries or customer types, and
- the process, cost and information required for customers to seek assessment of their discharge factors.

We note that Hunter Water has a transparent process in assigning discharge factors and has five categories:

- 85% for customers where 'most, if not all metered water is discharged to the sewerage system' – typical enterprises include restaurants and hotels
- 60% for customers where 'a significant proportion of metered water is discharged to the sewerage system' – typical enterprises include a public swimming pool with showering/toilet facilities and external watering
- 35% for customers where 'around half of metered water is discharged to the sewerage system' – typical enterprises include licensed clubs with catering facilities and substantial external watering (eg, bowling greens)
- 10% for customers where 'a small proportion of metered water is discharged to the sewerage system' – typical enterprises include nurseries and market gardens, and
- 0% for customers not connected to its sewerage system.

For the 2016 determination period, we have introduced discharge factors for residential customers of 75%. In light of this decision, we consider it important that Hunter Water clearly communicate where the discharge factor is greater than 75% for non-residential customers with a 20mm connection (ie, small businesses).

Details of the changes we have made to sewerage charges including discharge factors are included in Chapter 8.

Sources: IPART conducted a review of discharge factors in 2014. In it, we decided to "maintain our current approach of using the discharge factors as set by the water utilities" IPART, *Discharge factors for non-residential customers,* December 2014, p3; http://www.hunterwater.com.au/Your-Account/Managing-Your-Account/Non-residential-Pricing--Charges/Sewer-Charges.aspx, accessed 24 February 2016.

Table 11.4 shows the bills under our draft prices for small businesses (assuming that these customers are on a standalone 20mm meter and consuming 185 kL water) using different discharge factors.

- A small business with a discharge factor of 85% (greater than the residential 75%) would face a nominal bill increase of $256 (or 22.6%) over the 4-year period.
- A small business with a discharge factor of 60% (less than the residential 75%) would face a nominal bill increase of $63 (or 5.7%) over the 4-year period. This business would get a relatively large decrease in 2016-17, as it gets charged according to a lower discharge factor of 60%, and then face steady increases in the remaining years as its base charge[260] becomes aligned with the standard 20mm meter charge[261] by 2019-20.

Table 11.4 Small business water and sewerage bills – stand alone 20mm meter with 185 kL water consumption per annum ($ nominal) – with inflation

	2015-16	2016-17	2017-18	2018-19	2019-20	Change 2016-20
85% discharge factor	1,132	1,188	1,252	1,318	1,388	256
Annual change		*4.9%*	*5.3%*	*5.3%*	*5.3%*	*22.6%*
60% discharge factor	1,101	981	1,037	1,095	1,164	63
Annual change		*-10.9%*	*5.7%*	*5.7%*	*6.3%*	*5.7%*

Note: Inflation is estimated to be 2% in 2016-17 and 2.5% per annum over the rest of the 2016 period. It is possible for a customer to face a decrease in their bill in nominal terms, if they have a very low discharge factor (eg, a 35% DF would result in a bill decrease of 13% in nominal terms over the four year period for a customer with 185 kL water usage per year). The above bills also include the Environmental Improvement Charge.

Source: IPART analysis.

[260] Excluding a discharge factor.

[261] Excluding a discharge factor.

Other non-residential customers (other than stand-alone 20mm meters)

Water and sewerage bills

Non-residential customers, other than those on a stand-alone 20mm meter, would see their water and sewerage bills increase by less than inflation – with some medium businesses facing decreases. However, the actual bill impact would depend on the customers' water usage and meter size. The reason is as follows:

- Our draft decision to rebase service charges by 2019-20, to change the approach in calculating sewerage discharges, and to hold the sewerage usage charge constant at $0.67/kL in nominal terms, means that the sewerage component of their bills would **decrease in nominal terms** overall.[262] Thus, by 2019-20, the sewerage component would comprise a smaller part of their total water and sewerage bill.
- However, the water usage charge would **increase in line with inflation** and the water service charge would **increase by more than inflation**. Thus, by 2019-20, the water component would comprise an increasing part of their total water and sewerage bill.
- Therefore, depending on the non-residential customer's water usage and meter connection size, the increasing water component of their bill (increasing by more than inflation) may offset the decreasing sewerage component of their bill (decreasing in nominal terms). This is more likely to occur for those customers with relatively large water usage and hence a large meter connection size.

We provide bill impacts for some non-residential customers in Table 11.5 below. For example:

- A non-residential customer on a 25mm meter with water consumption of 300 kL per year would face a decrease in their bill by $259 in nominal terms (or 10.6%) over the four years.
  - Under Hunter Water's proposal, we estimate that this customer would have faced an increase of $314 in nominal terms (or 12.9%) over the four years.

[262] There would be an increase in the Environmental Improvement Charge (EIC) in line with inflation, but this comprises a small component of the bill eg currently the EIC is $38.37 which is about 1.5% of a non-residential customers' water and sewerage bill with 300 kL per year usage and a connection of 25mm meters (and assuming a discharge factor of 85%).

- A non-residential customer on a 100mm meter, with water consumption of 40,000 kL per year, would face an increase in their bill of $5,302 in nominal terms (or 4.3%) over the four years. This is because the water component of their bill (comprised largely of water usage) would increase by more than inflation[263] (ie, by $11,050 or 12.4%), which more than offsets the decrease in the sewerage component of their bill (which would decrease in nominal terms by $5,749 or 17.0%).
  - Under Hunter Water's proposal, we estimate that this customer would have faced an increase of $13,923 in nominal terms (or 11.3%) over the four years.

Table 11.5 Non-residential water and sewerage bills ($nominal) – with inflation

	2015-16	2016-17	2017-18	2018-19	2019-20	Total change
25mm (300 kL)						
Water	695	727	785	844	905	210
Sewerage (85% DF)	1,742	1,732	1,536	1,405	1,273	- 469
Total bill	2,437	2,459	2,321	2,249	2,178	- 259
Annual change		***0.9%***	***-5.6%***	***-3.1%***	***-3.1%***	***-10.6%***
Water % of bill	*29%*	*30%*	*34%*	*38%*	*42%*	
Sewerage % of bill	*71%*	*70%*	*66%*	*62%*	*58%*	
40mm (2,000 kL)						
Water	4,514	4,651	4,869	5,093	5,321	807
Sewerage (85% DF)	5,154	5,071	4,567	4,230	3,892	-1,262
Total bill	9,669	9,722	9,436	9,322	9,213	- 455
Annual change		***0.6%***	***-2.9%***	***-1.2%***	***-1.2%***	***-4.7%***
Water % of bill	*47%*	*48%*	*52%*	*55%*	*58%*	
Sewerage % of bill	*53%*	*52%*	*48%*	*45%*	*42%*	
100mm (40,000 kL)						
Water	89,264	91,341	94,257	97,252	100,314	11,050
Sewerage (60% DF)	33,779	33,238	31,014	29,521	28,030	-5,749
Total bill	123,042	124,579	125,271	126,774	128,344	5,302
Annual change		***1.2%***	***0.6%***	***1.2%***	***1.2%***	***4.3%***
Water % of bill	*73%*	*73%*	*75%*	*77%*	*78%*	
Sewerage % of bill	*27%*	*27%*	*25%*	*23%*	*22%*	

Note: Inflation is estimated to be 2% in 2016-17 and 2.5% per annum over the rest of the 2016 period. The above bills also include the Environmental Improvement Charge.

Source: IPART analysis.

[263] Our estimate of inflation is 9.8% over the four years to 2019-20.

Water, sewerage and stormwater bills

We show in Table 11.6 below bill impacts for various non-residential customers for water, sewerage and stormwater bills, under our draft prices. For example:

- A non-residential customer on a 25mm meter with water consumption of 300 kL per year, and assuming a small property stormwater charge, would face a decrease in their bill of about by $249 in nominal terms (or 9.9%) over the four years.
  - Under Hunter Water's proposal, we estimate that this customer would have faced an increase of $326 in nominal terms (or 13.0%) over the four years.
- A non-residential customer on a 100mm meter with water consumption of 40,000 kL per year, and assuming a large property stormwater charge, would face an increase in their bill of about by $6,262 in nominal terms (or 5.1%) over the four years.
  - Under Hunter Water's proposal, we estimate this customer would have faced an increase of $13,923 in nominal terms (or 11.3%) over the four years.

Table 11.6 Non-residential water, sewerage and stormwater bills ($nominal) – with inflation

	2015-16[a]	2016-17	2017-18	2018-19	2019-20	Total change
25mm (300 kL)[a]	2,509	2,533	2,397	2,328	2,260	-249
Annual change		*0.9%*	*-5.4%*	*-2.9%*	*-2.9%*	*-9.9%*
40mm (2,000 kL)[b]	9,799	9,879	9,627	9,554	9,494	-304
Annual change		*0.8%*	*-2.6%*	*-0.8%*	*-0.6%*	*-3.1%*
100mm (40,000 kL)[c]	123,868	125,577	126,483	128,245	130,130	6,262
Annual change		*1.4%*	*0.7%*	*1.4%*	*1.5%*	*5.1%*

[a] We have assumed a small property stormwater charge.

[b] We have assumed a medium property stormwater charge.

[c] We have assumed a large property stormwater charge.

Note: Inflation is estimated to be 2% in 2016-17 and 2.5% per annum over the rest of the 2016 period. The above bills also include the Environmental Improvement Charge.

Source: IPART analysis.

11.3 Implications for Hunter Water's service standards

Under our draft determination, we expect Hunter Water to achieve both operating and capital efficiency savings. We are satisfied that Hunter Water can achieve these savings, and thus generate sufficient revenue to achieve service standards at or above those expected by customers and required under its operating licence.

Hunter Water is licensed under the *Hunter Water Act 1991* (NSW). The Act requires Hunter Water to hold an operating licence that is issued by the Minister and reviewed annually by IPART. This licence contains a number of standards that Hunter Water must meet, or risk facing penalties associated with a breach of licence conditions. Hunter Water's pricing submission identified the expenditure required for it to meet its obligations under both its operating and environmental licences. The operating licence also includes performance indicators against which Hunter Water's performance is reviewed as part of the annual audit of its compliance with the licence. During 2011-12, IPART reviewed Hunter Water's operating licence. The new licence commenced on 1 July 2012, and applies to 30 June 2017.

In its review of Hunter Water's operating and capital expenditure for this determination, Jacobs noted that Hunter Water performed well over the 2013 determination period. It maintained its service standards for water pressure, water continuity and sewerage overflow.[264] Jacobs found that Hunter Water's performance showed that it:

> …still has significant headroom against its performance targets, and that reduced capex expenditure in recent years has not yet resulted in a negative impact to performance.[265]

In addition, Jacobs noted that Hunter Water had developed processes to ensure continued compliance with its mandatory requirements, including those under its operating licence. These processes should provide well-considered projects that efficiently support the mandatory requirements. That said, Jacobs considered there was scope to improve Hunter Water's processes for linking capital projects to regulatory drivers.[266]

We have revised the output measures introduced in the 2013 determination to reflect the nature of the capital program over the 2016 determination period. These would assist us to identify how expenditure proposals would enable Hunter Water to meet its regulatory requirements. A list of output measures for Hunter Water (along with targets) is set out in Appendix C.

11.4 Impact on Hunter Water's financial viability and shareholders

We are satisfied our determination would not adversely affect the ability of Hunter Water to operate, maintain, renew and develop the assets required to deliver its regulated services over the 2016 determination period. Further, we are satisfied that this determination would enable Hunter Water to earn a reasonable rate of return on its assets.

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[264] Jacobs, *Hunter Water Expenditure Review*, Final Report, February 2016, p 34.
[265] Jacobs, *Hunter Water Expenditure Review*, Final Report, February 2016, p 34.
[266] Jacobs, *Hunter Water Expenditure Review*, Final Report, February 2016, p 29.

11.4.1 Rate of return

Our pricing decisions mean that Hunter Water is able to achieve at least the total notional revenue requirement over the 2016 determination period. Therefore, we expect that it would earn a real post-tax rate of return on its RAB of at least the target rate over the determination period. This varies from 4.6% to 5.0%, and is an average of 4.8% (see Table 3.1). This calculation is based on the assumptions we used in our modelling of the financial impacts of its pricing decisions, and depends on Hunter Water achieving the efficiency targets we have set in its operating expenditure and capital expenditure allowances.

11.4.2 Financeability

We have established a financeability test that we use to consider the effect of our regulated prices on the utility's financial sustainability.[267] We assess whether our decisions would enable the utility to raise finance consistent with an investment grade rated (Baa2) firm, over the regulatory period. We have also reviewed our approach to calculating the credit ratios we use in our financeability test, including Funds From Operations (FFO), Debt Gearing and FFO over debt.[268]

Table 11.7 shows Hunter Water's financial ratios based on prices presented in chapters 8 and 9. Table 11.8 shows our benchmark financial ratios.

Table 11.7 Financial ratios for Hunter Water's Draft Determination

Test	2015-16	2016-17	2017-18	2018-19	2019-20
FFO Interest Coverage	1.9	1.9	1.9	1.9	2.0
Net Debt/RAB[a]	47%	48%	47%	47%	46%
FFO to Net Debt	6%	6%	6%	6%	7%

[a] Regulatory Asset Base.

Source: IPART calculations.

[267] Our financeability test requires us to: construct financial statements for the regulated utility; use the utility's actual cost of debt and gearing levels to compute the financial ratios; compare the financial ratios against our Baa2 benchmark levels; make an overall assessment taking into account the financial ratios, financial statements and other relevant information which could affect financial sustainability. IPART, *Financeability tests in price regulation – Final Decision,* December 2013.

[268] IPART, *Financeability ratios – Final Decision*, April 2015.

Table 11.8 Financial Ratio Benchmarks (for water utilities)

	Credit Rating Range				
	A3	**Baa1**	**Baa2**	**Baa3**	**Ba1**
FFO Interest Cover	>2.9	2.3 - 2.9	1.7 - 2.5	1.4 / 1.5 - 1.7	<1.4 / 1.5
Debt / RAB	<60%	80-85%	60-91%	90-100%	>100%
FFO / Debt	>10%	>10%	6-10%	5-8%	<4%

Source: Kanangra Ratings Advisory Services advice to IPART, see IPART, *Financeability tests in price regulation — Final Decision*, December 2013, p 18.

Table 11.7 above shows that, overall, Hunter Water's ratios are projected to be consistent with a credit rating of Baa2 over the upcoming regulatory period. Our policy provides that more weight should be placed on the first two ratios, and that we do not expect a utility will meet every benchmark in every year of a determination period.

We note that in March 2015, Moody's assigned a baseline credit assessment of Baa2 to Hunter Water. Moody's expects Hunter Water's FFO/debt to be around 6% over the two years to 2017, and its FFO/interest to remain strong at around 1.9x-2.0x over the same period, which is consistent with our forecasts.[269]

11.4.3 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.

11.5 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. The Australian Bureau of Statistics (ABS) does not collect data on Hunter Water's water and sewerage prices. The national consumer price index (CPI) is based only on capital city prices, hence the change in Hunter Water's prices are unlikely to have a measurable effect on the national CPI.

[269] https://www.moodys.com/research/Moodys-assigns-first-time-A1-issuer-rating-to-Hunter-Water--PR_316521, accessed 12 January 2016.

However, within its area of operations, we expect that changes in Hunter Water's prices would have a similar effect on inflation as that of changes to Sydney Water's prices in Sydney.

Currently, water and sewerage costs in Sydney, contribute 0.82% towards Sydney's consumer price index (all groups, Sydney).[270] Assuming a similar contribution in the Lower Hunter, the average yearly increase in cost of about 2.5% for a typical household would have the effect of increasing inflation by 0.02 percentage points.[271]

11.6 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.

The Environment Protection Authority (EPA) regulates Hunter Water's activities including the discharge from its sewage treatment and recycling plants and reticulation systems.

Based on the advice of our consultants, as mentioned above in section 11.3, we consider that our draft decisions on prudent and efficient capital and operating expenditure would allow Hunter Water to continue to meet its environmental standards[272] over the 2016 determination period.

In addition to its general services, Hunter Water has provided sewerage services to unsewered areas identified by the government's Priority Sewerage Program.[273] This has been funded by an Environmental Improvement Charge (EIC) levied on Hunter Water's customers.

Hunter Water proposed that the Environmental Improvement Charge be extended to cover the costs of its proposed scheme to connect the township of Wyee to its sewerage network. Currently, existing properties are serviced by a mix of pump-out and on-site sewer systems that are expensive to maintain and have related social and health issues. These have a potential impact on the environment from odour and discharges.[274]

[270] Australian Bureau of Statistics, *Consumer Price Index 16th Series Weighting Pattern* (cat. no. 6471.0).
[271] 0.82% x 2.5% = 0.02%.
[272] As set by the Environment Protection Authority.
[273] Hunter Water, pricing proposal to IPART, June 2015, p 86.
[274] Hunter Water, pricing proposal to IPART, June 2015, p 87.

Appendices

A Matters to be considered under section 15 of the IPART Act

In making determinations, IPART is required under section 15 of 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 Consideration of section 15 matters by IPART

Section 15(1)	Report Reference
a) the cost of providing the services	Section 3.2 and Chapters 4 and 5 generally
b) the protection of consumers from abuses of monopoly power	Chapter 2
c) the appropriate rate of return and dividends	Chapter 6, Appendix E,
d) the effect on general price inflation	Section 11.5
e) the need for greater efficiency in the supply of services	Chapters 4 and 5
f) ecologically sustainable development	Chapters 5, 8 and 10 and section 11.6
g) the impact on borrowing, capital and dividend requirements	Section 11.4
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	Not applicable
i) need to promote competition	Chapters 2, 8, 9, and 10
j) considerations of demand management and least cost planning	Chapters 7 and 8
k) the social impact	Chapter 3 and 11
l) standards of quality, reliability and safety	Chapter 11

B Context for the review

To provide context for this review, the sections below outline Hunter Water's regulatory framework and the key developments in its regulatory environment since our 2013 Determination. These developments affect our decisions and form inputs into this review, and include other recent or ongoing IPART reviews and the Lower Hunter Water Plan.

At the same time as reviewing Hunter Water prices, IPART is also undertaking reviews of WaterNSW (Greater Sydney) and Sydney Water. Decisions made in these other price reviews may also impact on our decisions in this review.

B.1 Hunter Water's regulatory framework

Hunter Water is a State Owned Corporation (SOC), wholly owned by the NSW Government. Its roles and responsibilities are prescribed by the *Hunter Water Act 1991* (NSW) (the Hunter Water Act), the *State Owned Corporations Act 1989* (NSW) (SOC Act) and the operating licence issued to Hunter Water under Part 5 of the *Hunter Water Act 1991*.

Hunter Water's primary regulators are:

- **IPART (pricing)** is responsible for setting the maximum prices that Hunter Water can charge for its monopoly services.
- **IPART (licensing)** is also responsible for monitoring and reporting on Hunter Water's compliance with its operating licence, including its obligations in relation to customer service, water quality, and system performance.
- **NSW Environment Protection Authority (EPA)** is responsible for monitoring and regulating Hunter Water's environmental performance. It issues Environment Protection Licences under the *Protection of the Environment Operations Act 1997* (NSW) for Hunter Water's sewerage network, pumping stations and treatment systems.
- **NSW Health** is responsible for regulating the quality and safety of Hunter Water's drinking water.

- **DPI Water** regulates Hunter Water's water extractions from the natural environment. It administers Hunter Water's Water Management Licences under the *Water Act 1912* and the *Water Management Act 2000*. The Metropolitan Water Directorate (part of DPI Water) leads a whole-of-government approach to water planning for greater Sydney and the lower Hunter.
- **The Dams Safety Committee** is responsible for formulating measures to ensure the safety of dams, and maintaining surveillance of 'prescribed dams'.

In addition, the **Lower Hunter Water Plan** (LHWP) is an important element of Hunter Water's operating environment. The LHWP was released in January 2014, it outlines the mix of supply and demand management measures to ensure the region will have enough water now and in the future.

B.2 Other IPART reviews

We have recently completed or are concurrently conducting a number of reviews that may affect inputs to our approach for calculating Hunter Water's costs and prices. These include reviews related to Hunter Water's price structures and financing costs and financeability, and our reviews of Sydney Water and WaterNSW (Greater Sydney) prices. We will also be reviewing Hunter Water's Operating Licence with a new licence to commence on 1 July 2017.

B.2.1 Reviews related to Hunter Water's price structures

In 2012, we reviewed the structure of prices for Hunter Water and the other metropolitan water utilities we regulate.[275] As a result of this review, we established some general pricing principles to further improve the cost reflectivity of these prices, and to increase equity between customer groups. These principles were:[276]

- The water usage charge should be a standard charge for all customers based on the Long Run Marginal Cost (LRMC) of water supply.
- Residential water and sewerage service charges should be standard for all customers, unless there are material cost differences.
- The sewerage usage charge should apply to non-residential customers[277] and be set with reference to the Short Run Marginal Cost (SRMC) of supply.
- The total revenue collected from non-residential customers should reflect the costs incurred in servicing them, and customers imposing similar costs should pay similar charges.

[275] IPART, *Review of Price Structures for Metropolitan Water Utilities – Final Report*, March 2012.
[276] IPART, *Review of Price Structures for Metropolitan Water Utilities – Final Report*, March 2012, p 3.
[277] Generally, the sewerage usage charge would be applied above a particular discharge threshold.

In the 2013 Determination, we restructured some of Hunter Water's prices to be more in line with these principles. Since the 2013 Determination, we have conducted a further investigation related to the cost of providing water and sewerage services. We circulated a discussion paper to the metropolitan water utilities in November 2014 for comment. We also held a workshop in December 2014, which was attended by Sydney Water, Hunter Water, and Gosford City Council. In the discussion paper, we outlined a number of possible options for rebasing water and sewerage service charges to improve the cost reflectivity of these charges and address some current pricing anomalies.

We have also conducted a related review of the discharge factors used in determining sewerage prices for non-residential customers. We decided to maintain our current practice of adopting the discharge factors proposed by the regulated water utilities unless we identify a strong case to do otherwise during the price review process.[278]

B.2.2 Reviews related to Hunter Water's financing costs and financeability

Since the 2013 Determination, we have conducted several reviews that affect the way we determine a utility's financing costs and assess its financeability. These included reviews of our approach to:

- determining the WACC,[279] including the approach for estimating the cost of debt, the cost of equity, and the decision rule for choosing the WACC point estimate
- estimating the inflation adjustment used in determining the real post-tax WACC[280]
- estimating the debt margin parameter of the WACC[281]
- assessing the short-term financial sustainability of regulated utilities and elements of our financeability test,[282] and
- calculating the credit ratios we use in our financeability test, including Funds From Operations (FFO), Debt Gearing and FFO over debt.[283]

278 IPART, *Discharge factors for non-residential customers – Final Report*, December 2014.
279 IPART, *Review of WACC Methodology – Final Report*, December 2013.
280 IPART, *New approach to forecasting the WACC inflation adjustment – Fact Sheet*, March 2015.
281 IPART, *New approach to New Approach to estimating the cost of debt – Fact Sheet*, April 2015.
282 IPART, *Financeability tests in price regulation – Final Decision*, December 2013.
283 IPART, *Financeability ratios – Final Decision*, April 2015.

B.2.3 Review of Hunter Water's Operating Licence

Hunter Water's primary regulatory instrument is its Operating Licence.[284] The objective of the licence is to enable and require Hunter Water to provide services within its area of operations. Consistent with this objective, the licence sets out the obligations on Hunter Water to meet legislative requirements, comply with quality and performance standards, recognise the rights given to customers and consumers, and be subject to operational audits.

Hunter Water's current Operating Licence commenced on 1 July 2012 and will end on 30 June 2017.[285] In the first half of 2016, we will commence a review to recommend the terms and conditions of a new licence, to apply from 1 July 2017, to the Minister for Water. In undertaking this review, we will aim to ensure that licence conditions achieve the desired outcomes without imposing unnecessary compliance and administrative costs.

[284] IPART, *Hunter Water Corporation Operating Licence 2012-2017*, June 2012.
[285] IPART, *Hunter Water Corporation Operating Licence 2012-2017*, June 2012, p 1.

C Output measures

We require Hunter Water to report annually on progress against output measures.

This appendix outlines Hunter Water's output measures for the 2013 determination period. It also sets out the output measures we have set for the 2016 determination period.

C.1 Output measures for the 2013 determination period

These output measures were originally set for a 4-year period. As the request of Hunter Water, we have brought forward the review by 1-year. Hunter Water has adjusted the 4-year output measures to 3-year output measures.

Table C.1 Water services

Measure	Units	Target Output (4 years)	Adjusted output (3 years)[a]	Actual/ Projected (3 years)[b]	Variance (3 years)	Variance (%) (3 years)	Hunter Water's Comments
Renewal/ reliability of water distribution mains	km	21	15.8	15.2	-0.6	-4%	Lower output is due to slight increase in unit rate.
Trunkmains undergoing condition assessment	km	67	50.3	70	19.7	39%	Large package of assessments scheduled to commence mid 2015.
Replacement of critical trunkmains	km	3	2.3	0	-2.3	-100%	Focus has been on replacement of trunk valves and fittings. Two large sections of trunkmain are currently in design phase.
Water treatment plant upgrades (chemical storage systems)	systems	3	3	3	0	-	All systems in construction phase.
Water facilities high voltage upgrades	sites	28	28	28	0	-	All sites completed by January 2015.
Deferral of Grahamstown WTP Upgrade (Stage 3 - $11.15m)	-	Construction deferred to after 1/7/2018	Construction deferred to after 1/7/2018	Construction deferred to after 1/7/2023	5	-	Design work scheduled to commence in 2021.

a Target outputs (or activities) for linear assets were pro-rated over the truncated price period.

b Actual figure for 2013-14. Forecast figures for 2014-15 and 2015-16.

Source: Hunter Water pricing proposal to IPART - Appendices, June 2015, p B.1.

Table C.2 Sewerage services

Measure	Units	Target Output (4 years)	Adjusted output (3 years)[a]	Actual/ Projected (3 years)[b]	Variance (3 years)	Variance (%) (3 years)	Hunter Water's Comments
Renewal of non-critical sewermains	km	41	30.8	24.1	-6.7	-22%	Lower output is due to a slight increase in unit rate.
Critical sewermains undergoing condition assessment	km	82	61.5	60	-1.5	-2%	The critical sewer model was updated in 2014, so additional assessments will be delivered in 2014-15 and 2015-16.
Renewal/refurbishment of critical sewerage mains (cast iron program)	km	4.2	3.2	1.1	-2.1	-66%	Renewal scope reduced due to access difficulty and risk associated with the full scope of work. There have also been cost increases for gravity critical main and access hole renewals.
Sewerage facilities high voltage upgrades	sites	3	3	3	0	-	All sites delivered in 2014.

a Target outputs (or activities) were pro-rated over the truncated price period.

b Actual figure for 2013-14. Forecast figures for 2014-15 and 2015-16.

Source: Hunter Water pricing proposal to IPART - Appendices, June 2015, p B.2.

Table C.3 Mechanical and electrical assets

Measure	Units	Target Output (4 years)	Adjusted output (3 years)[a]	Actual/ Projected (3 years)[b]	Variance (3 years)	Variance (%) (3 years)	Hunter Water's Comments
Telemetry upgrades (water & sewerage)	sites	138	103	115	12	12%	Strategy updated in 2014 with accelerated rate of renewals scheduled for 2015-16.
Replacement of pumps (water & sewerage)	pumps	342	256	256	0	-	The decision to repair or replace pumps is determined by risk.
Replacement of switchboards (water & sewerage)	sites	40	30	30	0	-	A standardised switchboard has been developed to improve the process.

a Target outputs (or activities) were pro-rated over the truncated price period.

b Actual figure for 2013-14. Forecast figures for 2014-15 and 2015-16.

Source: Hunter Water pricing proposal to IPART - Appendices, June 2015, p B.3.

Table C.4 Stormwater drainage

Measure	Units	Target Output (4 years)	Adjusted output (3 years)[a]	Actual/ Projected (3 years)[b]	Variance (3 years)	Variance (%) (3 years)	Hunter Water's Comments
Rehabilitation of stormwater drainage channels	km	0.6	0.45	0.2	-0.25	56%	Minor renewals to date with longer section planned for 2016-17.

a Target outputs (or activities) were pro-rated over the truncated price period.

b Actual figure for 2013-14. Forecast figures for 2014-15 and 2015-16.

Source: Hunter Water pricing proposal to IPART - Appendices, June 2015, p B.3.

Table C.5 Corporate

Measure	Units	Target Output (4 years)	Adjusted output (3 years)[a]	Actual/ Projected (3 years)[b]	Variance (3 years)	Variance (%) (3 years)	Hunter Water's Comments
Replacement of customer meters (20mm)	meters	13,200	9,900	66,078	56,178	567	New strategy to replace a style of meter identified with a defective backflow device.

a Target outputs (or activities) for assets were pro-rated over the truncated price period.

b Actual figure for 2013-14. Forecast figures for 2014-15 and 2015-16.

Source: Hunter Water pricing proposal to IPART - Appendices, June 2015, p B.

C.2 Output measures for the 2016 determination period

Table C.6 Output measures for the 2016 determination period

Output (or activity) measure	Target Output
Water services	
Renewal/reliability of distribution mains	20 km
Trunk mains undergoing condition assessment	12 km
Critical trunk main replacement	3 km
Sewerage services	
Renew non-critical mains	36 km
Critical sewer mains undergoing condition assessment	55 km
Renewal/refurbishment of critical sewerage mains (cast iron program)	1.5 km
Mechanical and electrical assets	
Telemetry upgrades (water and sewerage)	250 sites
Switchboards replaced	40 sites
Replacement or refurbishment of pumps	430 pumps
Stormwater drainage	
Stormwater drainage channel rehabilitations	0.7 km
Corporate	
Replace customer meters 20mm	67,000 meters
Business processes	
Condition and risk based approach	For projects and programs exceeding $5 million ($2019-20), base forecast costs submitted to IPART on a condition and risk based asset management approach.

D Regulatory treatment of asset disposals

The purpose of this appendix is to outline our policy or framework for asset disposals.

The primary issues we considered in relation to asset disposals are:

- how and when to remove an asset from the RAB, given that it is no longer used to provide regulated services to customers, and
- whether the business should be provided an allowance in the revenue requirement to pay any capital gains tax resulting from the sale of an asset subject to capital gains tax.

From first principles, we consider the asset's identifiable **regulatory value** should be removed from the RAB. This is the value of the asset as it entered the RAB (if known), adjusted for the effect of depreciation and indexation. We also consider that the business should pay any tax obligations from the regulatory profit it retains.

This approach means the business bears the risk of any profits or losses arising from the sale of an asset, and customers are not affected. We consider this appropriate because although the asset was purchased by the business to provide regulated services to customers, the benefit customers received came from consuming the service, not owning the asset. Therefore, the impact of any profit or loss should lie entirely with the business (or shareholder).

However, data on the value of individual assets in the RAB and their original cost may be limited. This means that, in many cases, when an asset is sold we will be required to estimate its regulatory value.

We use different methods for estimating the regulatory value of assets when the original cost is unknown, depending on when the asset being disposed entered the RAB (ie, whether it is a pre or post line-in-the-sand[286] asset). We also distinguish between significant and non-significant assets.

[286] The year of Hunter Water's regulatory line-in-the-sand is 2000.

D.1 Significant asset write-offs

Definition: Assets that are not sold and if the book value of the disposed asset/s or class of assets accounts for more than 0.5% of the opening value of the RAB in the year in which the asset is disposed.

Treatment: These disposals will be dealt with separately, as and when the need arises.

D.2 Significant asset sales

Definition: (a) Assets that incur capital gains tax (ie, this includes all land sales), or (b) those where the receipts from sale from the asset or class of assets accounts for more than 0.5% of the opening value of the RAB in the year in which the asset is sold.

Treatment pre line-in-the-sand: Where the regulatory value of the asset as it entered the RAB is unknown, we will estimate its regulatory value based on:

- the ratio of the RAB to the depreciated replacement cost (DRC) at the time the RAB was established *multiplied by*
- the sale value of the asset.

We consider the RAB to DRC ratio is a good proxy for an asset's regulatory value because it represents the average value at which all assets were entered into the RAB at the line-in-the-sand (the DRC reflected the business' actual cost of the individual assets).

The RAB to DRC ratio is also used to determine the regulatory profit from which the business would pay any tax obligation.[287] Our treatment of pre line-in-the-sand assets will allow the businesses to retain a significant proportion of the proceeds from the sale of their assets, removing potential disincentives to sell assets surplus to requirements. It will also mean that customers will not continue to provide the business with a return on or of assets that have been sold, which will be reflected in lower prices.

Given the difficulty of unravelling what assets were operational (and therefore included in the RAB) and what were non-operational at the time the line-in-the-sand was drawn (and the initial RABs established), we consider that we should apply the RAB to DRC ratio to sales values of all pre line-in-the-sand assets.

[287] The regulatory profit would be calculated as 'sale value of asset x (1- RAB/DRC)'.

We set Hunter Water's RAB in 2000, the "line-in-the-sand".[288] To set the RAB at the 2000 line-in-the-sand, we calculated the economic value of Hunter Water's assets. This was based on the operating profit that Hunter Water was expected to achieve, and our estimate of the appropriate rate of return (the WACC).[289] In subsequent price determinations, we have rolled this RAB forward by adding all prudent and efficient capital expenditure, indexing for inflation, and deducting depreciation and asset disposals.

As the RAB at this point estimated the value of the business as a whole, it is not possible to identify which specific assets contributed to that RAB and in what proportion. However, if a business can make a convincing case that an asset was clearly non-operational at the line-in-the-sand, then, on an exception basis, we would not adjust the RAB for that asset sale.

Table D.1 sets out the RAB to DRC ratio for each metropolitan water business. These are the ratios that would be used to determine the regulatory value of assets acquired pre line-in-the-sand to be removed from the RAB.

Table D.1 RAB to DRC ratio for each metropolitan water business as at line-in-the-sand (2000)

	RAB at line-in-the-sand ($billion)	DRC value at line-in-the-sand ($billion)	RAB to DRC ratio
Sydney Water	5.3	12.5	0.42
Hunter Water	0.8	1.9	0.42
Gosford Council	0.2	0.5	0.42
Wyong Council	0.2	0.4	0.43
WaterNSW (formerly SCA)	0.6	1.7	0.39

Note: The RAB to DRC ratio has been calculated using unrounded numbers. In 2000, the book value was the DRC for each of the businesses, except for WaterNSW where we have used an estimated DRC. This is because the 2000 book value for SCA was based on an optimised deprival value rather than a DRC.

Source: IPART, *Sydney Water Corporation, Prices of water supply, sewerage and drainage services, Medium-term price path from 1 October 2000, p 20*; Sydney Water Annual Report 2000, p 39; IPART, *Hunter Water Corporation, Prices of water supply, sewerage and drainage services, Medium-term price path from 1 July 2000,* June 2000, p 11; Hunter Water Corporation, Annual Report 1999-2000, p 53; IPART, *Gosford City Council, Prices of water supply, sewerage and drainage services, Medium-term price path from 1 July 2000,* June 2000, p 10; IPART, *Wyong Shire Council, Prices of water supply, sewerage and drainage services, Medium-term price path from 1 July 2000,* June 2000, p 11; IPART, *Sydney Catchment Authority, Prices of water supply services, Medium-term price path from 1 October 2000, p 17.*

[288] IPART, *Hunter Water Corporation, Prices of water supply, sewerage and drainage services - Medium-term price path from 1 July 2000 – Determination No 3, 2000,* June 2000, p 11.

[289] It did not represent the accounting value of its physical assets. As the calculation used revenue from prices at the time, this ensured that there would be no price shocks to customers resulting from a return on capital calculation using a RAB based on physical asset values multiplied by WACC. See IPART, *Hunter Water Corporation, Prices of water supply, sewerage and drainage services - Medium-term price path from 1 July 2000 – Determination No 3, 2000,* June 2000, pp 10-11.

Treatment post line-in-the-sand: If an asset was acquired after the line-in-the-sand was drawn, then in principle it should be possible to estimate the value of the asset in the RAB (taking into account the effects of depreciation and indexation).

In practice, the available information will differ depending on the type of asset sold and when it was purchased. For example, the purchase cost of a parcel of land may be readily available. On the other hand, the cost of purchasing an old building, converting it to the required standard and maintaining it, may not be available.

We treat these disposals on a case-by-case basis, adopting the underlying principle that we will use our best estimate of the regulatory value of the asset. Some of the options that may be available to us include:

- tracking actual capex (actual purchase costs and improvements), where possible and practical to do so, and calculating the appropriate depreciation and indexation
- using an indexed tax value, or
- using an indexed book value, which may be appropriate for example for plant and equipment, where the book value is generally the depreciated historical cost.

D.3 Non-significant asset disposals (sales and write-offs)

Definition: Assets that do not incur capital gains tax (ie, this excludes all land assets) and where the book value of the disposed asset or class of assets accounts for 0.5% or less of the opening value of the RAB in the year in which the asset is disposed.

Treatment: Businesses regularly dispose of assets that have not reached the end of their book lives, for example computer equipment, vehicles or water meters. Some of these assets have market value and are sold, while others are simply written off and discarded. These 'normal' disposals are usually very small and have very little impact on the RAB.

We will treat these disposals differently, depending on whether they are sales or write-offs.

For **asset sales**, we will remove the receipt from asset sales from the RAB. We consider that this approach is simple to administer, particularly for disposals that represent a relatively small proportion of the utility's RAB (ie, less than 0.5%).

For **asset write-offs,** we will not deduct any value from the RAB, except as deemed necessary on a case-by-case basis. This reflects that our decisions on efficient and prudent capital expenditure will take into account the expected asset lives of classes of assets. Where an expenditure review has been undertaken, further adjusting the RAB by using the accounting treatment of asset write-offs risks double counting RAB deductions.

E Weighted average cost of capital

This appendix provides our consideration of the views submitted by Hunter Water on the WACC. In particular, Hunter Water raised the following concerns with aspects of our approach to calculating the WACC:

- **50:50 weighting on long-term and current WACC estimates:** Hunter Water proposed a 60:40 weighting between the long-term and current market data to calculate the cost of debt in the WACC.[290]
- **Equity beta**: Hunter Water proposed an equity beta value for the water industry of 0.7 in its pricing proposal. This is the midpoint of our standard range of 0.6 to 0.8 for the water industry. However, Hunter Water also noted that, for previous price reviews, it has submitted that there is a case for applying the upper bound of our range of equity beta values to recognise that Hunter Water faces water sales volume risks specific to its business.[291]

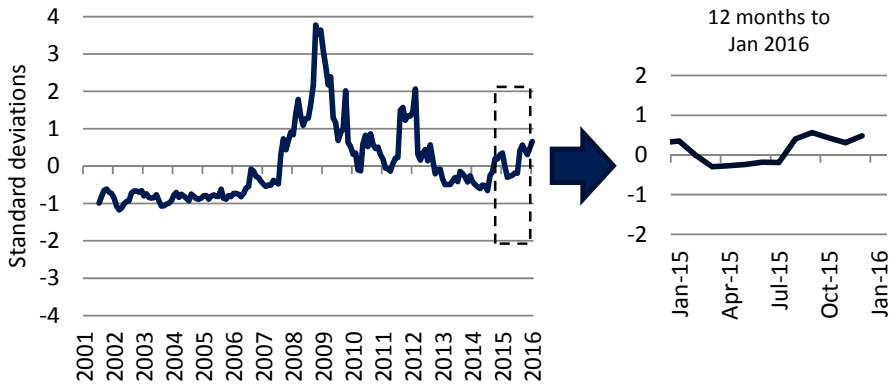
E.1.1 50:50 weighting on long-term and current WACC estimates

Our draft decision is to retain the existing 50:50 weighting of the long-term and current WACC estimates.

In accordance with our 2013 WACC methodology decision rule for selecting the WACC point estimate,[292] we have selected the midpoint WACC value within our range because the current uncertainty index threshold has not been exceeded (see Figure E.1). This has the effect of weighting the long-term and current WACC estimates to 50:50. We have consistently applied this decision rule in all of our WACC decisions since establishing the methodology.

[290] Hunter Water pricing proposal to IPART, June 2015, pp 62-63; Hunter Water's response to IPART Issues Paper, October 2015, p 5.
[291] Hunter Water pricing proposal to IPART, June 2015, Appendix G, p 3.
[292] IPART, *Review of WACC Methodology - Final Report,* December 2013, p 23.

Figure E.1 IPART's uncertainty index



Source: IPART analysis.

We conducted a major review of our WACC methodology in 2013. An important reform of our WACC review was to address the fall in the yield on 10-year Commonwealth Government bonds, which is the basis for our measure of the risk free rate.

As shown in Figure E.2, five years ago, yields were around 5% to 6%. Current levels are around 2% to 3%. We developed a WACC methodology that estimated the WACC using both 10-year averages and 40-day averages of market data, including the risk free rate. We also specified that if market conditions are relatively stable,[293] we would select the midpoint estimate. On the other hand, if market uncertainty exceeds our pre-defined threshold, we would consider whether we should depart from the midpoint of our WACC range.[294]

[293] That is, when the uncertainty index is within one standard deviation of long-term averages.
[294] IPART, *Review of WACC Methodology – Final Report*, December 2013, pp 2, 4.

Figure E.2 Yield on 10-year Commonwealth Government bonds

Data source: Bloomberg.

In its submission, Hunter Water noted it had previously advocated we "set the cost of debt with reference to a long-term average methodology, not by reference to short-term rates…business decisions involving infrastructure assets should take into account the asset lives of such investments."[295]

While our approach calculates two WACC values (one based on 10 years of market data and one based on 40 days of market data), both use a target term to maturity of 10 years.[296] We do not combine short-term and long-term bond rates. We made the decision to adopt a 10-year term to maturity in the 2013 review of the WACC after considering evidence that firms operating in a competitive market with long-lived assets would seek to raise debt with a maturity of 10 years or longer.[297]

Hunter Water indicates it now accepts the 50:50 weighting between the long-term and current WACC estimates, but considers it should be phased in for the next price review.[298] As such, Hunter Water proposes a 60:40 weighting between the long-term and current market data for the cost of debt for this price review.[299] Hunter Water notes that a 60% weighting on long-term debt would "align more accurately with Hunter Water's actual debt cost profile during the next price period."[300]

[295] Hunter Water pricing proposal to IPART, June 2015, p 62.
[296] IPART, *Review of WACC Methodology - Final Report,* December 2013, p 2.
[297] Ibid, p 13.
[298] Hunter Water pricing proposal to IPART, June 2015, p 63.
[299] Hunter Water pricing proposal to IPART, June 2015, pp 62-63; Hunter Water's response to IPART Issues Paper, October 2015, p 5.
[300] Hunter Water pricing proposal to IPART, June 2015, p 63.

We do not consider Hunter Water's actual debt funding strategy to be a relevant consideration when setting the WACC. In our 2013 final decision on our WACC methodology, we defined our objective when setting the WACC: "Our objective in determining the WACC for a regulated business will be to set a WACC that reflects the efficient cost of capital for a benchmark firm operating in a competitive market and facing similar risks to the regulated business."[301] Our approach is not aimed at replicating the actual cost of capital of any particular regulated utility. We therefore do not consider that the weighting should be adjusted for the purpose of better aligning the regulatory WACC with Hunter Water's actual cost of capital or financing strategy. This framework allows regulated utilities to pursue financing strategies of their choosing. It also ensures that customers do not pay for inefficient financing strategies.

We consider that pre-defining a WACC methodology enhances the transparency and predictability of our regulatory approach. Hunter Water also notes in its proposal that our new WACC methodology is more transparent and predictable:

> Hunter Water did not agree with all aspects of IPART's final decision but recognised that the revised WACC methodology was a significant improvement…the new IPART methodology sets out a predictable framework for calculating the WACC estimate, improves the robustness and accuracy of key WACC inputs and includes transparent decision rules should IPART exercise any discretion in the WACC calculation.[302]

E.1.2 Equity beta

We have maintained our standard equity beta range of 0.6 to 0.8. Our decision implies that Hunter Water faces the same level of systematic risk as a typical water agency.

Our current standard equity beta range for the water industry was developed on the basis of expert advice. For the 2011 price review for the Sydney Desalination Plant, we sought advice on a suitable equity beta value for the Australian water industry from SFG.[303] We commissioned a peer review of SFG's analysis by Professor Kevin Davis.[304] Based on this advice we revised our equity beta range for the water industry to 0.6 to 0.8 (midpoint value of 0.7). We have consistently applied this range (or midpoint value) in all subsequent water price reviews.

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301 IPART, *Review of WACC Methodology - Final Report,* December 2013, p 1.

302 Hunter Water pricing proposal to IPART, June 2015, p 61.

303 Strategic Finance Group, *Cost of capital parameters for Sydney Desalination Plant*, August 2011.

304 Davis, K., *Cost of capital parameters for Sydney Desalination Plant: by SFG Consulting: An initial review for IPART*, August 2011.

Hunter Water has proposed an equity beta of 0.7, consistent with the midpoint of our standard value of a range from 0.6 to 0.8 for the water industry. It notes that, for past price reviews, it has submitted that the upper bound may be more suitable, considering the water sales volume risks faced by the business. However, Hunter Water indicates it has taken a pragmatic approach for this review in proposing an equity beta of 0.7[305]

In relation to the water sales volume risks referred to by Hunter Water, we consider these risks are business-specific risks. We have therefore excluded them from any consideration of the equity beta. We have also considered whether these risks should be recognised through an alternative adjustment mechanism. We consider that any alternative adjustment for Hunter Water's situation is unnecessary. Although drought may lead to a relatively fast drop in Hunter Water's water storage levels[306], resulting in water restrictions and therefore lower water sales, Hunter Water's storages can also fill relatively quickly following rainfall.[307]

[305] Hunter Water pricing proposal to IPART, June 2015, Appendix G, p 3.

[306] Hunter Water has indicated that its water levels can drop faster than in most other major Australian urban centres during prolonged dry periods, because lower Hunter storages are small or shallow and have high evaporation rates (Hunter Water pricing proposal to IPART, June 2015, Appendix G, p 3).

[307] Lower Hunter Water Plan, January 2014, pp 17, 19.

F Non-residential trade waste prices

IPART's draft decision on trade waste charges is shown below. The charges are set in real terms and will increase with inflation in each year of the determination period.

Table F.1 Hunter Water's trade wastewater agreement and inspection fees ($2015-16)

	2015-16	2016-17 to 2019-20
Minor agreements		
Establish minor agreement (new agreements)	136.43	136.43
Existing minor agreement holders:		
Annual trade waste agreement fee	111.56	111.56
Inspection fee	118.57	118.57
Existing renew/reissue	100.76	100.76
Variation to minor agreement fee	107.36	107.36
Moderate agreements		
Establish moderate agreement (new agreements)	484.67	484.67
Existing moderate agreement holders:		
Annual trade waste agreement fee	815.53	815.53
Inspection fee	118.57	118.57
Existing renew/reissue	273.05	273.05
Variation to moderate agreement fee	107.36	107.36
Major agreements		
Establish major agreement (new agreements)	548.81	548.81
Existing major agreement holders:		
Annual trade waste agreement fee	454.18	454.18
Inspection fee	118.57	118.57
Existing renew/reissue	388.16	388.16
Variation to major agreement fee	107.36	107.36

Table F.2 Hunter Water's trade wastewater high strength charges for BOD/NFR ($2015-16)

Wastewater treatment works	2015-16 Base charge	2015-16 Incentive charge[a]	2016-17 to 2019-20 Base charge	2016-17 to 2019-20 Incentive charge[a]
			$/kg ($ 2015-16)[a]	
Belmont WWTP	1.34	3.99	1.34	3.99
Boulder Bay WWTP	1.80	5.41	1.80	5.41
Branxton WWTP	4.99	14.95	4.99	14.95
Burwood Beach WWTP	0.75	2.24	0.75	2.24
Cessnock WWTP	1.68	5.05	1.68	5.05
Clarence Town WWTP	14.25	42.75	14.25	42.75
Dora Creek WWTP	1.98	5.95	1.98	5.95
Dungog WWTP	3.13	9.41	3.13	9.41
Edgeworth WWTP	1.31	3.95	1.31	3.95
Farley WWTP	1.28	3.86	1.28	3.86
Karuah WWTP	14.28	42.84	14.28	42.84
Kearsley WWTP	2.69	8.08	2.69	8.08
Kurri Kurri WWTP	2.88	8.62	2.88	8.62
Morpeth WWTP	0.99	2.97	0.99	2.97
Paxton WWTP	7.90	23.69	7.90	23.69
Raymond Terrace WWTP	1.96	5.87	1.96	5.87
Shortland WWTP	1.51	4.53	1.51	4.53
Tanilba Bay WWTP	3.07	9.21	3.07	9.21
Toronto WWTP	1.62	4.85	1.62	4.85

a These charges apply where the concentration strength is greater than 350mg/L for BOD or NFR, whichever is the higher.

b These charges apply for loads beyond the load limit set the trade waste agreement.

Table F.3 Hunter Water's trade wastewater service variable quality charges ($/kg $2015-16)

	2015-16	2016-17 to 2019-20
Heavy metals:		
Burwood Beach WWTP catchment	23.40	23.40
All other catchments	38.59	38.59
Phosphorus >11mg/L ($/kg)	2.70	2.70
Sulphate formula ($/kg)	0.16 x (SO_4/2000)	0.16 x (SO_4/2000)

Table F.4 Hunter Water's tankering services charges ($2015-16)

	2015-16	2016-17 to 2019-20
Establish tankering agreement	209.44	209.44
Variation to agreement fee[a]	107.36	107.36
Renew agreement	133.67	133.67
Delivery processing fee	4.13	4.13
Portable toilet effluent ($/kL)	13.68	13.68
Septic waste ($/kL)	5.39	5.39
High strength waste ($/kL):		
Volume charge ($/kL)	3.48	3.48
High strength charges for BOD/NFR ($/kg)	See Table F.2	See Table F.2
Heavy metals ($/kg)	See Table F.3	See Table F.3
Phosphorus >11mg/L ($/kg)	See Table F.3	See Table F.3
Sulphate formula ($/kg)	See Table F.3	See Table F.3

[a] Hunter Water has introduced this new fee which represents a variation in the original tankering service agreement.

G Miscellaneous and ancillary charges

Our draft decision on Hunter Water's miscellaneous and ancillary services charges for the 2016 Determination is shown in Table G.1. These charges are set in real terms and will increase with inflation in each year of the determination period. Table G.2 below shows all discontinued charges and the reason for their discontinuation.

Table G.1 Charges for miscellaneous and ancillary services ($2015-16)

No	Charge title	Current charge 2015-16	New charge 2016-17	Change
1	Conveyancing certificate			
(a)	Over the counter	32.60	37.00	13.5%
(b)	Electronic	10.05	14.00	39.3%
2	Property sewerage diagram - up to and including A4 size (where available)	20.05	24.00	19.7%
3	Service location diagram			
(a)	Over the counter	26.35	26.65	1.1%
(b)	Electronic	15.75	16.50	4.8%
4	Meter reading - special reads and by appointment			
(a)	During business hours	25.75	26.50	2.9%
(b)	Outside business hours	106.00	107.00	0.9%
5	Billing record search statement			
(a)	Individual property	64.00	65.55	2.4%
(b)	Multiple properties	92.50	94.00	1.6%
6	Building over or adjacent to sewer advice	75.55	79.65	5.4%

No	Charge title		Current charge 2015-16	New charge 2016-17	Change
7	Water restriction and reconnection after restriction				
(a)	Restriction		NA	72.30	-
(b)	Water reconnection after restriction - during business hours		113.00	106.00	-6.2%
(c)	Water reconnection after restriction - outside business hours		137.00	126.00	-8.0%
8	Workshop flow rate test of meter				
(a)	Without strip test	20-25mm	169.00	203.00	20.1%
		32mm	237.00	248.00	4.6%
		40mm	242.00	251.00	3.7%
		50mm light	284.00	366.00	28.9%
		50mm heavy	354.00	366.00	3.4%
		65mm	359.00	366.00	1.9%
		80mm	416.00	487.00	17.1%
		100mm	496.00	565.00	13.9%
		150mm	562.00	671.00	19.4%
(b)	With strip test	20-25mm	235.00	297.00	26.4%
		32mm	304.00	342.00	12.5%
		40mm	304.00	345.00	13.5%
		50mm light	351.00	481.00	37.0%
		50mm heavy	421.00	481.00	14.3%
		65mm	423.00	481.00	13.7%
		80mm	484.00	602.00	24.4%
		100mm	564.00	680.00	20.6%
		150mm	621.00	787.00	26.7%
9	Application for water disconnection				
(a)	Application for water disconnection		70.95	114.00	60.7%
(b)	Application for recycled water disconnection		142.00	160.00	12.7%
10	Application for water service connection		77.20	126.00	63.2%
13	Application to assess water main adjustment		363.00	369.00	1.7%

No	Charge title		Current charge 2015-16	New charge 2016-17	Change
14	Metered standpipe hire security bond	20mm	326.00	331.00	1.5%
		32mm L	396.00	402.00	1.5%
		32mm H	874.00	887.00	1.5%
		50mm	874.00	887.00	1.5%
15	Metered standpipe hire – triannual fees	20mm	34.05	67.40[a]	97.9%
		32mm L	35.35	71.40[a]	102.0%
		32mm H	44.10	104.00[a]	135.8%
		50mm	44.10	104.00[a]	135.8%
16	Metered standpipe water usage fee		2.22/kl	2.24/kl	0.9%
18	Backflow prevention device fees				
(a)	Device test		334.00	328.00	-1.8%
(b)	Disconnection for noncompliance		NA	332.00	-
(c)	Reconnection after recification of noncompliance		NA	175.00	-
19	Major works inspection fee		10.25/m	10.45/m	2.0%
20	Statement of available pressure and flow		332.00	335.00[b]	0.9%
21	Application to connect/disconnect sewer services (for a special internal inspection permit)		77.20	57.05	-26.1%
22	Application to Connect/ Disconnect Water & Sewer Services (combined application)		77.20	58.35	-24.4%
23	Irregular & Dishonoured Payments				
	Banking authority irregular/dishonoured cheques		35.80	35.95	0.4%
	Direct debit decline		27.80	28.45	2.3%
	Australia Post irregular/dishonoured cheques		41.15	40.95	-0.5%
24	Request for Separate Metering of Units (per plan)		32.00	33.10	3.4%

No	Charge title		Current charge 2015-16	New charge 2016-17	Change
25	Unauthorised Connections		115.00	164.00	42.6%
26	Building Plan Stamping		12.55	18.15	44.6%
27	Determining Requirements for Building Over / Adjacent to Hunter Water Sewer or Easement		160.00	186.00	16.3%
28	Standpipe hire				
(a)	Application to Hire a Metered Standpipe		181.00	179.00	-1.1%
(b)	Breach of Standpipe Hire Condition	Breach 1	19.45	20.15	3.6%
		Breach 2	25.70	26.65	3.7%
		Breach 3 (step 1)	32.00	33.10	3.4%
		Breach 3 (customer fails to return)	32.00	33.10	3.4%
29	Meter Affixtures/ Handling Fee	Up to 50mm	89.00	50.60	-43.1%
		50mm or larger	89.00	79.90	-10.2%
30	Inspection of Non-compliant Meters		59.95	55.50	-7.4%
32	Connecting to or Building Over / Adjacent to a Stormwater Channel for a Single Residence		97.20	110.00	13.2%
33	Stormwater Channel Connection		344.00	350.00	1.7%
34	Hydraulic Design Assessment	Residential 25-40mm	242.00	243.00	0.4%
		Residential >40mm	289.00	291.00	0.7%
		Non-Residential 25-40mm	345.00	348.00	0.9%
		Non-Residential >40mm	378.00	381.00	0.8%

No	Charge title		Current charge 2015-16	New charge 2016-17	Change
35	Pump Station Design Assessment	Water Pump Station	4,642.00	4,713.00	1.5%
		Sewer Pump Station	5,112.00	5,190.00	1.5%
		Recycled Water Pump Station	4,642.00	4,713.00	1.5%
36	Application to Assess Sewer Main Adjustment		474.00	481.00	1.5%
38	Revision of Development Assessment Requirements		393.00	399.00	1.5%
39	Bond Application		1,792.00	1,819.00	1.5%
40	Bond Variation		259.00	262.00	1.2%
41	Development Assessment Application		474.00	481.00	1.5%
42	Application for Water or Sewer Main Extension		474.00	481.00	1.5%
45	Connect to Existing Water System - Major Works				
(a)	Valve shutdown		702.00	708.00	0.9%
(b)	Non-valve shutdown		299.00	302.00	1.0%
46	Insertion or Removal of Tee and Valve				
(a)	Valve shutdown and charge up		1,105.00	1,114.00	0.8%
(b)	Non-valve shutdown and charge up		691.00	696.00	0.7%
47	Application for Additional Sewer Connection Point		344.00	350.00	1.7%
48	Tee and Valve Connection		273.00	275.00	0.7%
50	Major works Inspection & WAE fee	Water Pump Stations	6,444.00	6,542.00	1.5%
		Sewer Pump Stations	8,729.00	8,862.00	1.5%
		Recycled Water Pump Stations	6,444.00	6,542.00	1.5%
51	Application to Assess Encroachment on Hunter Water Land, Easement Rights or Assets		415.00	415.00	0.0%

No	Charge title		Current charge 2015-16	New charge 2016-17	Change
52	Technical Services Hourly Rate		107.00	108.00	0.9%
53	Remote Application Fee		294.00	298.00	1.4%
54	Preliminary Servicing Advice		451.00	455.00	0.9%
55	Servicing Strategy Review				
(a)	Standard Review Process		1,149.00	1,167.00	1.6%
(b)	Additional Review Process		328.00	331.00	0.9%
56	Environmental Assessment Report Review		1,149.00	1,167.00	1.6%
58	Reservoir Construction Inspection & WAE Fee		Quote	Quote	-
59	Water cart tanker				
(a)	Inspection of a Water Cart Tanker		137.00	148.00	8.0%
(b)	Reinspection of Water Cart Tanker Due to Non Compliance		124.00	135.00	8.9%
61	Inaccessible Meter - Imputed Charge for Breach of Meter Reading Agreement		18.95	24.05	26.9%
62	Damaged Meter Replacement	20mm	64.55	65.05	0.8%
		25mm	107.00	108.00	0.9%
		32mm	149.00	150.00	0.7%
		40mm	177.00	179.00	1.1%
		50mm L	380.00	382.00	0.5%
		50mm H	433.00	436.00	0.7%
		65mm	529.00	533.00	0.8%
		80mm	664.00	669.00	0.8%
		100mm	691.00	696.00	0.7%
		150mm	1,182.00	1,191.00	0.8%
		250mm	4,346.00	4,037.00	-7.1%
		350mm	5,413.00	5,454.00	0.8%
63	Affix a Separate Meter to a Unit		59.95	55.50	-7.4%
64	Recycled Water Meter Affix Fee		38.65	49.25	27.4%

No	Charge title	Current charge 2015-16	New charge 2016-17	Change
66	Application for Recycled Water Service Connection – Domestic			
(a)	Pre-laid service	50.20	50.60	0.8%
(b)	Redevelopment	148.00	159.00	7.4%

[a] The recommended fee has been adjusted to reflect that asset recovery fees are no longer charged monthly, and so fees needs to increase to include asset recovery fees for four months instead of one.

Table G.2 Discontinued Charges

No	Charge title	Reason for discontinuation
Customer service charges		
15a	Standpipe hire monthly fees	Moved to a tri-annual billing cycle
17	Backflow device test	Incorporated into charge 18
31	Service requirement audit	Incorporated into charge 52
60	Inaccessible meter-reading agreement	Incorporated into charge 61
Development-related charges		
19	Major works inspection	This charge used to apply to four works types; water mains, gravity sewer mains, sewer rising mains and pressure sewer mains. Only sewer rising mains is retained as it is inspected concurrently with wastewater pump stations. All others discontinued.
37	Indicative developer charge	Service no longer required
43	Assessment of minor works	Replaced by third party certification
44a	Major works design review and contract preparation	Replaced by third party certification
44b	Major works design re-assessment	Replaced by third party certification
49	Minor works inspection	Replaced by third party certification
57	Recycled water inspection and work as executed	Replaced by third party certification

Source: Hunter Water price submission, pp 124-126.

H Terms of reference for late, dishonoured or declined payment fees

Premier of New South Wales

NSW GOVERNMENT

IPART
Doc No
File No

RECEIVED 10 DEC 2015 INDEPENDENT PRICING & REGULATORY TRIBUNAL

Reference: A1349407

Dr Peter Boxall
Chair
Independent Pricing and Regulatory Tribunal
PO Box K35
HAYMARKET POSTSHOP NSW 1240

Dear Dr ~~Boxall~~ Pete

Pursuant to section 12A of the Independent Pricing and Regulatory Tribunal Act 1992, I am writing to refer a periodic investigation and report on:

- the maximum late payment fee and dishonoured and declined payment fee to be charged by Sydney Water, and
- maximum dishonoured or declined payment fee to be charged by Hunter Water.

Each periodic review is to be conducted in accordance with the attached Terms of Reference. It is intended that, where possible, each review be conducted concurrent to IPART's investigation of Sydney Water's and Hunter Water's maximum prices for its water and sewerage services. Any late maximum payment fee or maximum dishonoured or declined payment fee specified by IPART is to apply from the commencement of the next determination period, anticipated to be commencing 1 July 2016, and for such other periods as determined by IPART.

If you require further information, please contact Laura Eadie, Director, Department of Premier and Cabinet, on 9228 5546.

Thank you for your assistance in this matter.

Yours sincerely

MIKE BAIRD MP
Premier

- 7 DEC 2015

GPO Box 5341, Sydney NSW 2001 ▪ P: (02) 9228 5239 ▪ F: (02) 9228 3935 ▪ www.premier.nsw.gov.au

Periodic review of a maximum late payment fee and dishonoured or declined payment fee for Sydney Water and dishonoured or declined payment fee for Hunter Water

Terms of Reference

I, Mike Baird, Premier of New South Wales, under section 12A of the *Independent Pricing and Regulatory Tribunal Act 1992* (IPART Act), refer the following matter to the Independent Pricing and Regulatory Tribunal (IPART) for investigation and report:

- the maximum late payment and dishonoured or declined payment fee for Sydney Water Corporation (Sydney Water),
- the appropriate terms and conditions under which a late payment fee should apply under Sydney Water's customer contract, and
- the maximum dishonoured or declined payment fee for Hunter Water Corporation (Hunter Water).

In conducting each review under these terms of reference, IPART is to specify:

1. the maximum late payment fee that Sydney Water may charge under its customer contract;
2. the maximum dishonoured or declined payment fee recommended to be charged by Sydney Water;
3. the maximum dishonoured or declined payment fee that Hunter Water may charge under its customer contract; and
4. the terms and conditions to apply to the charging of the late payment fee under Sydney Water's customer contract.

Background

Sydney Water

By clause 4.4.5 of the customer contract contained in Sydney Water's Operating Licence 2015-2020, Sydney Water has the provision to charge:

> "...a late payment fee, but only if a maximum late payment fee amount is specified by *IPART* as part of a review conducted by *IPART* under the *Independent Pricing and Regulatory Tribunal Act 1992* (NSW) ("IPART Act")."

IPART may specify the terms and conditions under which the late payment fee applies as part of the review, noting that Sydney Water cannot charge a late payment fee if:

- it has already agreed to a deferred payment date with a customer, or an arrangement to pay by instalments with respect to the overdue account balance; or
- the customer has entered into a payment arrangement with Sydney Water.

Under clause 4.11.1 of its customer contract, Sydney Water may charge a dishonoured or declined fee in an amount not exceeding the amount specified on its website, as amended from time to time.

Hunter Water

Clause 4.9.1 of the customer contract contained in Hunter Water's Operating Licence 2012-2017, provides that:

"If payment of your account is dishonoured or declined, we will charge you the relevant administrative fee set by IPART."

Matters for consideration

In undertaking an investigation under this referral, IPART should take into account the following considerations:

When reviewing the maximum late payment fee and associated terms and conditions for charging:

1. The maximum late fee should reflect the efficient costs associated with the late payment of bills.
2. The impact on different customer groups of any terms and conditions for the charging of the late payment fee under the customer contract.

In addition, IPART may take into account any other matters it considers relevant.

When reviewing the maximum dishonoured or declined payment fee:

1. The maximum dishonoured or declined fee should reflect the efficient costs incurred by the utility for dishonoured or declined payments.

In addition, IPART may take into account any other matters it considers relevant.

Consultation

In conducting a review under this referral, IPART will invite submissions from stakeholders.

Timing of periodic review

1. IPART is to conduct the investigation and report under this referral either:
    a. concurrently with its investigation of Sydney Water's and Hunter Water's maximum prices for the provision of water, sewerage, stormwater, trade waste (price review); or
    b. separately from a price review.

2. Where an investigation and report under this referral is conducted concurrently with a price review:
    a. the specified maximum fees are to apply from the date the determination commences in respect of that price review; and
    b. IPART must specify the relevant maximum fee(s) in the report prepared for the purposes of the price review (a copy of which is to be provided to the Premier).

3. Where an investigation and report under this referral is conducted separately from a price review, IPART must:
    a. set out the period during which the fees are to apply; and
    b. submit a report to the Premier once the review is completed.

Glossary

2009 Determination	*Review of prices for water, sewerage, stormwater and other services Hunter Water Corporation from 1 July 2009*, June 2009 (Determination No 4, 2009).
2009 determination period	The period commencing 1 July 2009 to 30 June 2013.
2013 Determination	*Review of prices for Hunter Water Corporation's water, sewerage, stormwater and other services from 1 July 2013*, June 2013 (Determination No 4, 2013).
2013 determination period	The period commencing 1 July 2013 to 30 June 2017.
2016 Determination	*Review of prices for Hunter Water Corporation's water, sewerage, stormwater and other services from 1 July 2016*, June 2016 (Determination No 4, 2016).
2016 determination period	The period commencing 1 July 2016 to 30 June 2020.
AFOC	Assets free of charge
Annual revenue requirement	The notional revenue requirement in each year of the determination period.
Central Coast councils	Gosford City Council and Wyong Shire Council
CPI	Consumer Price Index
Current determination period	The period from 1 July 2013 to 30 June 2017, as set in the 2013 Determination.
Determination period	Price limits (maximum prices) set by IPART for a given period.

DPI Water	Department of Primary Industries Water
DRC	Depreciated Replacement Cost
EBSS	Efficiency Benefit Sharing Scheme
ECM	Efficiency Carryover Mechanism
EIC	Environmental Improvement Charge
EPA	Environment Protection Authority
EPL	Environment Protection Licence
EWON	Energy and Water Ombudsman NSW
FFO	Funds From Operations
GL	Gigalitre
HAF	Housing Acceleration Fund
Hunter Water	Hunter Water Corporation
Hunter Water Act	*Hunter Water Act 1991* (NSW)
HWA	Hunter Water Australia Pty Ltd
IPART	Independent Pricing and Regulatory Tribunal of NSW
IPART Act	*Independent Pricing and Regulatory Tribunal Act 1992* (NSW)
iSDP	Integrated Supply Demand Planning
KIWS	Kooragang Industrial Water Scheme
kL	Kilolitre
LHWP	Lower Hunter Water Plan
LRMC	Long Run Marginal Cost (of supply)
ME	Meter Equivalent
ML	Megalitre

Notional revenue requirement	Revenue requirement set by IPART that represents the efficient costs of providing Hunter Water's monopoly services.
NPV	Net Present Value
PIAC	Public Interest Advocacy Centre
PSP	Priority Sewerage Program
RAB	Regulatory Asset Base
RBA	Reserve Bank of Australia
SDP	Sydney Desalination Plant
Section 16A directions	Ministerial directions pursuant to section 16A of the IPART Act.
SOC	State owned corporation
SOC Act	*State Owned Corporations Act 1989* (NSW)
SRMC	Short Run Marginal Cost (of supply)
Sydney Water	Sydney Water Corporation
Target revenue	The revenue Hunter Water generates from maximum prices set by IPART for that year.
Upcoming determination period	The period commencing from 1 July 2016.
WACC	Weighted Average Cost of Capital
WAPC	Weighted Average Price Cap
WIC Act	*Water Industry Competition Act 2006* (NSW)