IPART
New South Wales

Independent Pricing and Regulatory Tribunal

Review of prices for Hunter Water Corporation

From 1 July 2016

Water — Issues Paper
September 2015

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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 5 October 2015.

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:

Hunter Water Corporation 2016 price review
Independent Pricing and Regulatory Tribunal
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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.

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1 Introduction

The Independent Pricing and Regulatory Tribunal of NSW (IPART) has begun a review to determine the maximum prices Hunter Water Corporation (Hunter Water) can charge for the water supply, sewerage, and stormwater drainage services it provides to residential and non-residential customers in the Hunter region. As part of this review, we will also:

- determine prices for Hunter Water's trade wastewater and other miscellaneous services
- decide whether we should determine charges for Hunter Water's wholesale water and sewerage services, and
- monitor Hunter Water's recycled water prices, in line with our 2006 Guidelines.[1]

We will make a determination on these prices for a period of up to five years starting 1 July 2016 (the 2016 determination period).

Our current determination on Hunter Water's prices covers the period from 1 July 2013 to 30 June 2017. However, at the request of Hunter Water, we have brought this price review forward by 1-year, to align it with our Sydney Water Corporation (Sydney Water) price review.[2] Sydney Water and Hunter Water are the two largest metropolitan water utilities in NSW. Conducting these reviews concurrently will enable us to make our determinations based on the same financial market data, and will facilitate a comparison of the utilities' performance, where appropriate.

In conducting this review, we will be mindful of any price impact that bringing forward Hunter Water's price review might have on its customers in the first year that the new determination applies (which would have been the last year of the current determination), while having regard to Hunter Water's revenue requirements over the new determination period.

1 IPART, *Pricing arrangements for recycled water and sewer mining – Final Report*, September 2006.
2 IPART, Timing of IPART's price review for Hunter Water Corporation – Media Release, 14 July 2014.

This Issues Paper explains the process we will follow to conduct the review, the approach we will use to make our pricing decisions, and the key issues we will consider in making these decisions. It also sets out our preliminary views on some of these issues (where we have them). We invite all interested parties to make submissions in response to this paper.

All dollar figures quoted in this Issues Paper are in $2015-16, unless stated otherwise.[3]

1.1 Process for conducting the review

Our process for this review is slightly different to our previous water price reviews. It will still include public consultation and detailed analysis by IPART and expert consultants. However, we have decided to adopt a propose-response process.

In particular, we have reordered the review timetable so we received Hunter Water's pricing proposal[4] before we prepared this Issues Paper and engaged our expenditure consultant. This has several benefits. For example, it enables us to use the information in Hunter Water's pricing proposal to better identify the issues that require consideration by stakeholders and our consultant. It also allows Hunter Water to make its proposal without being potentially constrained by the topics raised in our Issues Paper.

We sent an information request to Hunter Water in November 2014, which contained information on the review process and our information requirements to assist it in preparing its submission. We received Hunter Water's pricing proposal on 30 June this year, and expect to engage our expenditure consultant in September. We now invite stakeholders to make submissions in response to this Issues Paper and Hunter Water's pricing proposal.[5] (Details on how to make a submission are provided on page iii at the start of the paper.) We will hold a public hearing to provide stakeholders with another opportunity to provide their views on Hunter Water's pricing proposal and key issues for this review.

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3 Prices and revenue for 2015-16 in Hunter Water's pricing proposal 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.

4 Hunter Water pricing proposal to IPART, June 2015.

5 In cases where there were minor differences between the numbers contained in Hunter Water's pricing proposal and its Annual Information Return (AIR), for the purposes of reporting information in this Issues Paper we have used the information in the AIR. The AIR is an excel document that utilities submit to IPART and contains more detailed business information.

We will consider all comments made in submissions and at the public hearing before making our draft decisions. We will then release a Draft Report and Draft Determination, and invite further comments from stakeholders and Hunter Water. We will consider all these comments before making our Final Determination and publishing our Final Report.

An indicative review timetable is set out in Table 1.1 below. We will update the timetable on our website as the review progresses.

Table 1.1 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
Hold Public Hearing	2 November 2015
Release Draft Report and Draft Determination	March 2016
Receive submissions to the Draft Report	April 2016
Release Final Report and Determination	June 2016

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

1.2 Hunter Water's pricing proposal for water, sewerage and stormwater drainage services

Proposed prices

Hunter Water states that under its pricing proposal most residential customers will see no increase in bills above the rate of inflation. For flats and units, customers will see bills rise progressively across the four years as the fixed sewer service charge increases. Under its proposal, Hunter Water states that most non-residential customers will see bills increase by no more than inflation.

Table 1.2 below lists Hunter Water's proposed prices for its most common water, sewerage and stormwater drainage services. This shows that the most substantial changes Hunter Water proposed are:

- Increases to its water service charges for residential and non-residential customers of more than 200% over the 4-year period. Hunter Water noted that while the increases are large in percentage terms, its fixed water service charge will remain the lowest water service charge in the country. Hunter Water attributes these increases to the need to recover its proposed costs.[6]

6 Hunter Water is proposing a real 2.8% average annual increase in its revenue requirement over the determination period for the water business, see Hunter Water pricing proposal to IPART, June 2015, p iii.

- Increases to its sewerage service charge for flats and units, and decreases in its sewerage service charge for houses. These changes will ensure all residential customers are transitioned to pay the same sewerage service charge by 2019-20.
- A 3-year extension of the annual Environmental Improvement Charge (EIC) to recover the costs associated with the priority sewerage program.
- Increases to its stormwater drainage charges to recover the increased costs of providing this service.

Table 1.2 Hunter Water's proposed charges for major services from 1 July 2016 ($2015-16)

Charge description	2015-16 current[a]	2016-17	2017-18	2018-19	2019-20	Total change
Water Usage						
Residential and Non-residential ($kL)[b]	2.24	2.24	2.24	2.24	2.24	0%
Water Service						
Residential						
Houses, flats and units	17.89	17.14	30.92	44.82	58.72	228%
Non-Residential						
Small customers (20mm meter stand-alone)	17.89	17.14	30.92	44.82	58.72	228%
Other (25mm meter equiv)[c]	29.20	31.01	55.86	80.84	105.75	262%
Sewerage Usage						
Non-residential ($kL)[d]	0.67	0.65	0.64	0.62	0.61	-8%
Sewerage Service						
Residential						
Houses	598.13	589.22	575.51	562.08	549.07	-8%
Flats and units	433.64	441.91	479.59	515.24	549.07	27%
Non-residential						
Small customers (20mm meter stand-alone)	598.13	589.22	575.51	562.08	549.07	-8%
Other (25mm metre equiv)[c,e]	1,857.22	1,916.63	1,908.67	1,906.42	1,896.30	2%
Environmental Improvement Charge	38.67	38.67	38.67	38.67	38.67	0%
Stormwater drainage						
Residential						
Houses	72.41	73.38	74.35	75.34	76.43	6%
Units	26.79	27.15	27.51	27.88	27.97	4%
Non-residential						
Small (1,000m^2 or less) or low impact	72.41	73.38	74.35	75.34	76.43	6%
Medium (1,001 to 10,000m^2)	130.89	132.62	134.39	136.17	138.14	6%
Large (10,001 to 45,000m^2)	832.55	843.56	854.80	866.18	878.68	6%
Very large (>45,0000m^2)	2,645.21	2680.19	2715.90	2752.07	2791.78	6%

a Hunter Water indicated that prices for 2015-16 are estimates and provided for comparative purposes only. This is because when it drafted its prices, the appropriate inflation information was not available.

b Different usage charges may apply to some large customers for water use in excess of 50,000 kL per year.

c This charge is for a 25 mm meter equivalent. Customers with a larger meter will pay a multiple of this charge depending on the size of the meter.

d This charge applies to the imputed volume of sewage in excess of the discharge allowance. In 2015-16 the discharge allowance is 50 kL per year.

e Charges are for a 100% discharge factor.

Source: Hunter Water Price Submission Summary, June 2015, p 4 and IPART calculations.

Bill impacts

The bill impacts of Hunter Water's pricing proposal for residential customers depend on how much water they use, whether they are a house or flat/unit customer, if they are liable for a stormwater drainage charge, and whether they are eligible for a pensioner concession. Hunter Water estimated that annual bills for houses are likely to increase in line with inflation over the 4-year period. However, for flats or units, customers would face a real increase in their bills due to the increase in both the water service and sewerage service charge.[7]

Table 1.3 shows some indicative annual residential bills for water and sewerage services under Hunter Water's pricing proposal.

Table 1.3 Indicative annual bills for residential customers under Hunter Water's pricing proposal ($ nominal per year)

Customer	2015-16 current	2016-17	2017-18	2018-19	2019-20
House 185 kL/yr					
Water and sewerage	1,069.09	1,086.65	1,112.51	1,141.06	1,170.52
Annual % increase		1.6%	2.4%	2.6%	2.6%
Water, sewerage and drainage	1,141.50	1,161.86	1,190.63	1,222.20	1,254.88
Annual % increase		1.8%	2.5%	2.7%	2.7%
Flat or unit (150 kL/yr)					
Water and sewerage	826.20	855.16	929.48	1,006.27	1,084.07
Annual % increase		3.5%	8.7%	8.3%	7.7%
Water, sewerage and drainage	852.99	882.99	958.38	1,036.29	1,114.95
Annual % increase		3.5%	8.5%	8.1%	7.6%
Pensioner house (100 kL/yr)					
Water and sewerage	563.37	570.32	584.28	599.32	615.02
Annual % increase		1.2%	2.4%	2.6%	2.6%

Note: Inflation is assumed to be 2.5% per year.

Source: Hunter Water Price Submission Summary, June 2015, p 3.

For non-residential customers, the bill impacts of Hunter Water's proposal depend on the nature of their business and their demand for water, sewerage, stormwater and trade waste services. Hunter Water estimated that, on average, annual bills for these customers would increase by less than 1% in real terms over the 4-year period (see section 8.9 for indicative bill impacts in nominal terms).[8]

7 Hunter Water pricing proposal to IPART, June 2015, p 85.
8 Hunter Water pricing proposal to IPART, June 2015, Executive Summary, p vi.

Cost drivers

Hunter Water proposed a revenue requirement of $1,156.2 million over the 4-year period from 2016-17 to 2019-20 (see Table 3.1). After adjusting for inflation, this is $12.6 million (or 1%) higher than the revenue allowed for in the 2013 Determination ($1,143.6 million)[9], which covered the 4-year period from 2013-14 to 2016-17.[10]

Hunter Water's proposal includes:

- a Weighted Average Cost of Capital (WACC) of 4.6%, which is the same as the WACC we used in making the 2013 Determination,[11] and
- forecast average water sales of 55.6 GL per annum for the four years from 2016-17, compared to the forecast average water sales of 57.2 GL per annum used in making the 2013 Determination, and actual average water sales of 58.8 GL per annum over the last 2 years.[12]

An outline of Hunter Water's proposal in relation to operating and capital expenditure is below. Further detail in relation to Hunter Water's proposed expenditure is contained in chapters 4 and 5.

Operating expenditure

Hunter Water's proposed operating expenditure is summarised in Table 1.4. It reported that its proposal represents:

- a real increase of $23.8 million (or cumulative increase of 4.7%), when compared with the base 2015-16 operating costs of $127.2 million extrapolated over the next four years, or[13]
- an average annual increase in operating costs of $5.9 million (or 1.2%).[14,15]

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9 According to our Final Report (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*, p 46) Hunter Water's Target Revenue was set at $1,054.4 million in $2012-13. This was subsequently increased by $3.4 million to make a CPI adjustment to IPART's reporting of the carbon cost allowance.

10 Hunter Water's revenue requirements are compared over four years. However, Hunter Water's determination has been bought forward from four years to three years.

11 Hunter Water pricing proposal to IPART, June 2015, p 62.

12 Hunter Water pricing proposal to IPART, June 2015, p 25, 85 and Appendix p A1 and IPART calculations.

13 The base 2015-16 operating costs of $127.2 million extrapolated over 4-years is calculated by multiplying the operating expenditure costs for its base year (2015-16) by 4 ie $127.17 million x 4 = $508.7 million. $23.8 million is calculated as ($128.9 million + $133.0 million + $134.8 million + $135.8 million) - $508.7 million. 4.7% is calculated as $23.8 million/$508.7 million.

14 Hunter Water has calculated the average annual increase of $6.0 million (or 1.2%) using its method of extrapolating the base 2015-16 operating costs over 4-years. However, if we calculate the yearly increases over 2015-16 to 2019-20, it is $2.2 million on average, or a cumulative 1.7% per year. $2.2 million is calculated as (135.82-127.17)/4 and 1.7% is calculated as (135.82/127.17)^(1/4)-1.

15 Hunter Water pricing proposal to IPART, June 2015, p 40.

Table 1.4 Hunter Water's proposed operating expenditure for the 2016 determination period ($ millions, $2015-16)

	2015-16	2016-17	2017-18	2018-19	2019-20
Water	43.7	43.8	44.3	45.1	45.4
Sewerage	44.3	44.2	47.2	47.1	47.8
Stormwater	1.3	1.3	1.4	1.4	1.4
Corporate	37.9	39.5	40.2	41.2	41.2
Total	**127.2**	**128.9**	**133.0**	**134.8**	**135.8**

Note: 2015-16 figures are forecasts. Totals may not add due to rounding.

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

Hunter Water indicated that the proposed increase in its operating expenditure reflects a $28.5 million increase in its operating costs, offset by $4.9 million in efficiency gains.[16] According to Hunter Water, the efficiency gains will be realised from reduced costs of maintenance contractors, workforce planning and preventative maintenance, civil maintenance and workforce rostering.[17]

Capital expenditure

Hunter Water's proposed capital expenditure is summarised in Table 1.5. The total proposed capital program of $387.7 million over the 4-year period represents average capital expenditure of around $96.9 million per year, which Hunter Water reports is in line with its actual average capital expenditure of around $95.4 million per year over the 2013 Determination.[18]

Hunter Water's 10-year capital expenditure plan projects $1 billion of expenditure, representing an expenditure level of about $100 million per year.[19]

Table 1.5 Hunter Water's proposed capital expenditure for the 2016 determination period ($ millions, $2015-16)

	2016-17	2017-18	2018-19	2019-20	Total
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**

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.

16 Hunter Water pricing proposal to IPART, June 2015, p 40.
17 Hunter Water pricing proposal to IPART, June 2015, p 43.
18 Hunter Water pricing proposal to IPART, June 2015, Executive Summary, p i.
19 Hunter Water pricing proposal to IPART, June 2015, p 51.

Customer engagement

In 2014, Hunter Water commissioned a survey of 400 customers to understand customer views on prices to inform its pricing proposal.[20] This survey was in addition to the ongoing engagement activities detailed in Hunter Water's pricing proposal. The survey results indicate that while most customers considered water bills to be value for money and more affordable than other utilities, the most common concerns about prices were bill levels overall, high fixed sewerage service charges and control over bills.

Hunter Water commented that control over bills continues to be a contentious issue, with the majority of customers feeling that they should have more control over their bill. Most customers would like more of the bill to be variable (ie, based on actual water use), because it helps encourage water conservation and manage affordability.[21]

1.3 Approach for making pricing decisions

To reach our decisions on water, sewerage and stormwater prices, we use an approach that involves the following six steps:

1. Decide on the length of the determination period and the approach for calculating Hunter Water's notional annual revenue requirement over this period.
2. Calculate the notional revenue requirement.
3. Decide on the form of regulation and other regulatory mechanisms to apply.
4. Decide on forecast sales volumes and customer numbers.
5. Decide on price structures and levels to generate the revenue requirement, in line with our decisions on the form of regulation and forecast sales and customer numbers.
6. Consider the implications of these prices to ensure they strike the right balance between matters we are required to consider.

To make our decisions on prices for the other services covered by this review, we propose to use separate approaches:

- For trade waste, ancillary and miscellaneous services, we will:
  - determine the efficient costs of providing these services and set prices to recover this revenue, and
  - subtract the target revenue from these services from the notional revenue requirement (as calculated in step 2 above).

[20] Hunter Water pricing proposal to IPART, June 2015, p 103.
[21] Hunter Water pricing proposal to IPART, June 2015, p 111.

- For wholesale water services, we will decide on whether we should determine charges for on-selling arrangements under this price determination and, if so, on what basis.
- For recycled water services, we will ensure that recycled water costs are ring-fenced from the notional revenue requirement and monitor the prices proposed for all mandated recycled water schemes. We will also assess the ongoing value of avoided costs from recycled water schemes.

1.4 Structure of this Issues Paper

The rest of this Issues Paper provides more information on this review, Hunter Water's pricing proposal, and our preliminary response to this proposal:

- Chapter 2 outlines context for the review, including key elements of Hunter Water's regulatory environment that may affect our decisions and inputs into this review.
- Chapter 3 to 7 discuss the issues related to the steps in our approach for setting water, sewerage and stormwater prices:
  - Chapter 3 covers the length of the determination period and the approach for calculating the 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 look at the issues related to setting prices for Hunter Water's services, including trade waste and ancillary and miscellaneous services.
- Chapter 10 and 11 address the issues related to wholesale water pricing and recycled water pricing.

Each of these chapters highlights the questions on which we particularly seek stakeholder comment. For convenience, these questions are also listed below. Stakeholders are also welcome to provide input on other issues related to this review.

1.5 List of issues for stakeholder comment

Form of regulation

Rate of return

Water sales and customer numbers

Water usage charge

Water service charges

Sewerage service charges

Sewerage usage charges

Miscellaneous and ancillary charges

Wholesale prices

Recycled water prices

2 Context for the review

This review will be conducted under section 11 of the *Independent Pricing and Regulatory Tribunal Act 1992* (NSW) (the IPART Act). In making our price determination, we will have regard to the requirements of section 15 of the IPART Act (see Appendix A).

To provide the 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 may affect our decisions and inputs into this review and include related 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.

2.1 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 wastewater 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, and outlines the mix of supply and demand management measures to ensure the region will have enough water now and in the future.

Pricing Implications of regulatory drivers

Hunter Water has outlined the pricing implications of different regulatory drivers for the next pricing period as shown in Table 2.1.

Table 2.1 Hunter Water's regulatory drivers

Area of regulation	Regulator Stakeholder	Regulatory instrument/s	Pricing implications ($2015-16)
Pricing, operations, service and standards, customer protection	IPART	Price determination, Operating Licence, Customer Contract	▾ Various asset renewals, rehabilitations and replacements with a gradual increase in expenditure due to asset classes reaching end of life
Obligations to shareholders	NSW Treasury	Statement of Corporate Intent	▾ Commence upgrade of customer information system ▾ Various efficiency and productivity improvement initiatives
Wastewater licences	Environment Protection Authority	Environment Protection Licences	▾ Capital works upgrades at three WWRP and design at three other ($48 million). Biosolids storage infrastructure upgrades ($6 million) ▾ Wastewater network dry weather overflow reduction program ▾ Complete current pollution reduction programs ▾ Opex implications include incremental electricity costs due to WWTP upgrades (eg. additional UV treatment at Burwood Beach WWTP)
Water extraction licences	DPI Water	Water Licence and approval package and Water Sharing Plans	Modifications at Seaham Weir for environmental flows and fish passage ($6 million)
Dam Safety	NSW Dams Safety Committee	Dams Safety Act 1978	▾ Balickera Tunnel geological stability works ($8 million) ▾ In-kind support for the committee is forecast to continue
Drinking Water quality	NSW Health IPART	Memorandum of Understanding Operating Licence	Grahamstown WTP ultraviolet disinfection ($47 million) and increased opex (electricity and chemicals)
Water planning for Lower Hunter	Metropolitan Water Directorate	Lower Hunter Water Plan	▾ Cost of work to implement the plan ▾ Costs of implementing, evaluating and reviewing the plan

Source: Hunter Water pricing proposal p 11 and p 35.

A key driver of Hunter Water's future capital and operating expenditure is its Environment Protection Licences. For example, Hunter Water has proposed capital expenditure of $48 million on upgrades at its wastewater treatment plants required to comply with these licences.[22]

Hunter Water reported that it has consulted with the EPA to determine the priorities for the proposed expenditures on wastewater and water projects.[23] We will assess the reasonableness of Hunter Water's proposed expenditure and the basis on which it has developed its proposal.

Of particular relevance to our current review of Hunter Water's prices will be:

- the operating and capital expenditure costs of implementing and reviewing the LHWP, and
- the impact of the LHWP on estimates of the Long Run Marginal Cost of water supply (ie, our reference point for setting water usage prices in past water price reviews). This is discussed further in Chapter 8.

In its proposal, Hunter Water stated that the NSW Government has approved in-principle the Metropolitan Water Directorate's ongoing costs for leading the monitoring, evaluation and reviewing the LHWP to be funded by Hunter Water and recovered from its customers through IPART determinations.[24] In the absence of a section 16A direction[25], to allow these costs to be recovered from Hunter Water's customers via prices, we would need to be satisfied that they are for the provision of Hunter Water's monopoly services and they represent the efficient costs of providing these monopoly services. That is, we will review the prudence and efficiency of this expenditure in determining whether these costs should be recovered from Hunter Water's customers.

In the 2016 determination period, Hunter Water has projected $4.2 million in operating expenditure for the LHWP, and has proposed that this expenditure be recovered from its customers through water prices.[26]

22 Hunter Water pricing proposal to IPART, June 2015, p 11.
23 Hunter Water pricing proposal to IPART, June 2015, p 50.
24 Hunter Water pricing proposal to IPART, June 2015, p 35.
25 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.
26 Hunter Water pricing proposal to IPART, June 2015, p 41.

2.2 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.

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.[27] 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:[28]

- 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[29] 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.

In the 2013 Determination, we restructured some of Hunter Water's prices to be more in line with these principles. For the 2016 Determination, we will consider whether there is any further need to restructure Hunter Water's prices.

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.

27 IPART, *Review of Price Structures for Metropolitan Water Utilities – Final Report*, March 2012.
28 IPART, *Review of Price Structures for Metropolitan Water Utilities – Final Report*, March 2012, p 3.
29 Generally the sewerage usage charge would be applied above a particular discharge threshold.

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.[30]

Chapter 8 discusses Hunter Water's pricing proposals and our response to these proposals in the context of these reviews.

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,[31] 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[32]
- estimating the debt margin parameter of the WACC[33]
- assessing the short-term financial sustainability of regulated utilities and elements of our financeability test,[34] and
- calculating the credit ratios we use in our financeability test, including Funds From Operations (FFO), Debt Gearing and FFO over debt.[35]

Chapter 6 discusses Hunter Water's proposal on the WACC and the financeability test.

Review of Hunter Water's Operating Licence

Hunter Water's primary regulatory instrument is its Operating Licence.[36] 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.

30 IPART, *Discharge factors for non-residential customers – Final Report*, December 2014.
31 IPART, *Review of WACC Methodology – Final Report*, December 2013.
32 IPART, *New approach to forecasting the WACC inflation adjustment – Fact Sheet*, March 2015.
33 IPART, *New approach to New Approach to estimating the cost of debt – Fact Sheet*, April 2015.
34 IPART, *Financeability tests in price regulation – Final Decision*, December 2013.
35 IPART, *Financeability ratios – Final Decision*, April 2015.
36 IPART, *Hunter Water Corporation Operating Licence 2012-2017*, June 2012.

Hunter Water's current Operating Licence commenced on 1 July 2012 and will end on 30 June 2017.[37] In the first quarter 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.

Reviews of Sydney Water and WaterNSW prices

Concurrent with this review, we are conducting price reviews for Sydney Water and WaterNSW (Greater Sydney area). In their pricing proposals, these utilities have proposed changes to their form of regulation. Form of regulation refers to the regulator's approach to regulating prices for monopoly services. This approach determines how risks and rewards are shared between the regulated business and its customers.

In the case of Sydney Water it has proposed introducing the following measures:[38]

1. **An Efficiency Benefit Sharing Scheme (EBSS),** applied to a portion of its operating and capital expenditure, to increase and equalise its financial reward, and therefore its incentives, for achieving cost savings during the regulatory period.
2. **A more expansive use of cost pass through mechanism** to allow it to pass on to customers the costs of uncertain and uncontrollable events incurred during the regulatory period.
3. **A weighted average price cap (WAPC)** to allow it to vary the types and levels of tariffs charged to customers during the regulatory period, subject to suitable pricing guidelines and, if necessary, side constraints.

WaterNSW has proposed an EBSS applied to a portion of its operating expenditure.[39]

Our Issues Paper for the Sydney Water price review (and, to a lesser extent, our Issues Paper for the WaterNSW price review) provides a detailed discussion of these proposed changes and our preliminary responses.[40]

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37 IPART, *Hunter Water Corporation Operating Licence 2012-2017*, June 2012, p 1.

38 Sydney Water pricing proposal to IPART, June 2015, p xxvi.

39 WaterNSW pricing proposal to IPART, June 2015, p 63.

40 See section 7.2 of IPART, *Review of prices for Sydney Water Corporation from 1 July 2016 – Issues Paper*, September 2015. See section 7.1 of IPART, *Review of prices for WaterNSW Greater Sydney area from 1 July 2016 – Issues Paper*, September 2015.

Our preliminary positions in relation to the proposed measures can be summarised as:

- we are open to considering a modified version of Sydney Water's proposed operating expenditure EBSS
- we are unlikely to adopt a capital expenditure EBSS at this time
- we do not consider there is a case to accept Sydney Water's proposal to broaden the application of cost pass through mechanisms at this time (we consider that a cost pass-through mechanism is appropriate in limited circumstances)
- 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.

A key factor in our consideration of any changes to the form of regulation is whether the potential benefits outweigh the risk and costs associated with these proposed changes. Where possible we will look at how the benefits could be enhanced and how the risks and costs could be mitigated.

Hunter Water has not proposed the above mechanisms or any changes to its form of regulation. However, if we decide to include them, in some way, in our determinations for Sydney Water and WaterNSW, we will consider whether to also apply them to Hunter Water in the 2016 Determination or whether to wait until a later determination and (in doing so) draw on the experience of applying these mechanisms to Sydney Water and WaterNSW.

The section below discusses the potential application of a modified EBSS and a WAPC to Hunter Water.

Efficiency Benefit Sharing Scheme

We set maximum prices that reflect our best estimate of the efficient costs required to deliver regulated services over the determination period. If the business is able to find efficiency savings in operating or capital expenditure, it has the option of passing these savings on to customers immediately through lower prices. However, it is not required to pass savings on immediately. Instead, it can keep the savings until we reset its prices and pass the savings on to customers in the next price determination.

Allowing the business to keep the savings provides a financial incentive for it to find and deliver efficiencies over the regulatory period. Ultimately, this benefits customers when revealed efficiency savings are passed through in the form of lower prices at the next determination period. The length of time that a business can hold efficiency savings depends on: the length of the price determination and when the saving is achieved during the regulatory period.

An EBSS is a mechanism that allows gains (or losses) to be held for a specified period of time, regardless of when they are achieved within the regulatory period (ie, it allows efficiency gains or losses to be carried over from one regulatory period to the next, subject to the holding period specified in the EBSS). Sydney Water proposed an EBSS to apply to a portion of its operating expenditure (opex EBSS) and to a portion of its capital expenditure (capex EBSS).[41] WaterNSW has also proposed an opex EBSS for its Greater Sydney bulk water price determination[42].

Sydney Water proposed an EBSS to address what it considers are problems with the current form of regulation:[43]

- **Insufficient incentive to pursue efficiency savings.** Because the holding period for efficiency savings is currently a maximum of four years (being the duration of the determination period).
- **A weakening incentive to realise efficiency gains over the determination period**. Because efficiency gains are currently passed through to customers at the end of the determination period, the incentive to implement permanent efficiency savings declines throughout the period.
- **Costly upfront expenditure reviews.** To the extent that the EBSS reveals the business' efficient cost, there will be less need for IPART to undertake costly upfront expenditure reviews.

41 Sydney Water pricing proposal to IPART, June 2015, p 256-257.
42 WaterNSW pricing proposal to IPART, p 63.
43 Sydney Water pricing proposal to IPART, June 2015, p 259-261.

As outlined above and in further detail in our Sydney Water Issues Paper, our preliminary view is that we will not adopt a capital expenditure EBSS at this time. However, we are open to considering a modified version of Sydney Water's proposed operating expenditure EBSS, which manages risks while retaining the incentive for the utility to deliver permanent efficiency savings.[44] Under the modified EBSS:

1. Only permanent efficiency savings would be rewarded, as the EBSS would only apply to incremental efficiency gains and losses that occur below the regulatory allowance. Specifically:
   - When actual expenditure falls below the allowance, the gain is rewarded. If actual expenditure subsequently increases back towards the allowance, the reward is clawed back.
   - If actual expenditure goes above the allowance, the loss is not included in the EBSS. If actual expenditure subsequently decreases towards the allowance, the gain is not included in the EBSS.
2. IPART would retain discretion to set future expenditure allowances based on all relevant information including revealed costs, expenditure reviews and additional efficiency targets – to ensure that costs are not shifted into a specific 'base year' to influence the setting of the allowance in the next regulatory period.

We will also consider the length of period that the water utility would be able to hold any efficiency savings under an EBSS. This is a key feature of the opex EBSS, as it determines the strength of the financial incentive to make efficiency savings and how these savings are shared between the business and its customers. Because we do not know the relationship between the holding period and the incentive to deliver efficiency savings, selecting an appropriate holding period is likely to require considerable judgement.[45] Sydney Water has proposed a five year holding period.[46] Alternative options include:

- a 4- ear holding period - matching the proposed length of determination period
- a 2-year holding period - the average of the current holding period, which falls from four years at the start of the determination period to zero at the end.

In deciding on the appropriate length of the holding period, we will consider all relevant factors, including what can be observed from competitive markets and what is likely to maximise long term benefits to customers.

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44 See section 7.2 of IPART, *Review of prices for Sydney Water Corporation from 1 July 2016 – Issues Paper*, September 2015.

45 This issue is discussed in detail in Appendix G of IPART, *Review of prices for Sydney Water Corporation from 1 July 2016 – Issues Paper*, September 2015.

46 Sydney Water pricing proposal to IPART, June 2015, p 259. Note this consists of a year when the efficiency savings are delivered plus an additional 4 year carry over period.

Another consideration is the complexity and administrative burden associated with an EBSS. Depending on its design and application, an opex EBSS could be a relatively complex mechanism. A benefit of the current form of regulation is that it is relatively light handed. IPART does not need to audit and confirm efficiency savings made by the water utility. Additional complexity may lessen transparency in the regulatory framework and lead to less engagement from other stakeholders including customers.

For this review, we will consider whether an EBSS should be applied to Hunter Water for the 2016 Determination period. In doing so, we will take into account our analysis and decisions in the concurrent reviews of Sydney Water's and WaterNSW's prices, as well as the views of stakeholders.

Weighted Average Price Cap

Under the current approach to setting prices, we determine maximum prices Hunter Water can charge for water supply, sewerage and stormwater drainage services. Hunter Water is able to charge a lower price than the maximum price determined by IPART if it receives approval from the Treasurer under section 18(2) of the IPART Act.

The application of a WAPC would give Hunter Water flexibility to set prices to individual customers or customer groups, subject to a cap on the weighted average of these charges.

Sydney Water argues that price flexibility can allow it to ensure that:

- its prices reflect the costs of providing services across different customer groups
- it can better match prices to customer preferences ('adding value').[47]

In addition, Sydney Water argues that price flexibility would also allow it to use prices to respond quickly to changing supply and demand conditions in the future.[48]

Box 2.1 shows Sydney Water's proposed WAPC formula. Sydney Water proposed that we set prices for the first year of the 2016 determination period (ie, 2016-17), before allowing it to transition to a WAPC for the remainder of the determination period. While individual prices can increase and decrease over the period, Sydney Water proposed that the weighted average across all prices not increase above the rate of inflation.[49]

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47 Sydney Water pricing proposal to IPART, June 2015, p xxv.

48 Sydney Water pricing proposal to IPART, June 2015, p xxv.

49 Sydney Water proposed that IPART set a price cap of zero in the upcoming regulatory period (ie, $K_t = 0$). Sydney Water pricing proposal to IPART, June 2015, p 249.

Box 2.1 Sydney Water's proposed WAPC formula

$$\frac{\sum_{i=1}^{n}\sum_{j=1}^{m} p_t^{ij} q_{t-1}^{ij}}{\sum_{i=1}^{n}\sum_{j=1}^{m} p_{t-1}^{ij} q_{t-1}^{ij}} \leq (1+K_t) * (1+CPI_t)$$

Where,

There are n tariffs, which each have m components and:

i = 1, … n

j = 1, … m

p_t^{ij} is the price proposed for component j of tariff i for year t.

p_{t-1}^{ij} is the price charged for component j of tariff i for year t - 1.

q_{t-1}^{ij} is the quantity of component j of tariff i sold in year t - 1.

K_t is the cap on the average increase in prices for each year t expressed as a weighted average percentage change.

CPI_t is the rate of inflation (change in the CPI index) for year t.

Source: Sydney Water pricing proposal to IPART, June 2015, p 249.

Our preliminary position is that we are open to a WAPC applied to a subset of Sydney Water's regulated services and customers. If a similar approach was to be applied to Hunter Water, this would involve:

- fixing maximum prices for the first year of the determination and setting a WAPC for the remainder of the determination period
- restricting the WAPC to large non-residential customers (ie, with a connection or connections greater than a 20mm meter equivalent or a particular usage threshold). This means the WAPC would not apply to residential and small non-residential customers, and
- developing a pricing strategy, and applying a combination of pricing principles and side constraints, where appropriate.

Alternatively, rather than side constraints, IPART could continue to set regulated prices but allow Hunter Water to offer (large non-residential) customer the choice to opt out of the set price cap and opt in to an alternative price combination offered by Hunter Water under a WAPC.

We consider that these types of WAPCs are more likely to, in the first instance, provide enhanced price flexibility that promotes improved cost-reflectivity and/or value for customers.

In considering the potential application of WAPC to Sydney Water and also possibly Hunter Water, we will consider a number of factors including:

- the experience in other jurisdictions and regulated industries
- factors present in the NSW urban water sector that could limit the flexibility and potential benefits of a WAPC, such as the policy of postage stamp pricing, current metering technology and level of competition
- interaction of the WAPC with other aspects of the regulatory framework – eg, any demand volatility mechanism (see chapter 7)
- the potential interaction of a WAPC with Hunter Water's pricing proposals, noting that Hunter Water currently applies differential pricing to its large non-residential customers[50]
- possible risks such as
  - the ability of the businesses to engage in price discrimination
  - opportunity for the business to act strategically to maximise revenue within the WAPC, or to impede competition
- ways to manages the risks such as:
  - restricting the WAPC to a subset of the businesses' regulated services and customers
  - the application 'side constraints' or alternatively the 'opt in, opt out option mentioned above
  - requiring the business to develop a pricing strategy stating what it intends to achieve through the WAPC and a robust set of pricing principles demonstrating how it intends to achieve these objectives
- any additional complexity and administrative burden
- implementation issues such as a partial or staged approach to introducing a WAPC. To the extent that a WAPC applies to only part of the customer base, there is a need to allocate costs between customers.

IPART seeks comments on the following

1 Should an Efficiency Benefit Sharing Scheme (EBSS) apply to Hunter Water for the 2016 Determination?

2 Should a Weighted Average Price Cap (WAPC) apply to a subset of Hunter Water's customers, such as large non-residential customers, for the 2016 Determination?

3 Should IPART's decisions on changes to Sydney Water's form of regulation (including decisions on an EBSS and WAPC) also apply to Hunter Water for the 2016 Determination?

[50] Hunter Water currently charges location-based water usage prices for non-residential customers that consume in excess of 50, 000kL per year (see section 8.2).

3 Length of determination period and approach for calculating revenue requirement

As Chapter 1 discussed, 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 notional annual revenue requirement over this period. The sections below outline Hunter Water's proposal and our preliminary response on each of these issues.

3.1 Length of determination period

For each water pricing review, we make a decision on the length of the determination period. In general, the determination period can have a duration of between one and five years, depending on the circumstances. However, we have typically favoured four years.

Hunter Water's proposal for length of the determination period

Hunter Water proposed a 4-year determination period, from 1 July 2016 to 30 June 2020. It stated that it:

- considers that a 4-year determination provides a reasonable balance in limiting the risks faced by the regulated entity while providing the benefits of price regulation and certainty to customers, and
- is subject to a degree of weather-related risk that is outside of its control, which could potentially have a significant effect on water supply and demand, and considers that a 4-year determination period allows for some inter-year averaging within that timeframe before IPART resets the forecasts and prices at the next determination.[51]

IPART's response on length of determination period

Our preliminary view is that a 4-year period is most appropriate for this Hunter Water determination. For our recent metropolitan water determinations, we have mostly opted for a 4-year period. In general, we consider that a 4-year determination period strikes an appropriate balance between providing certainty and incentives for efficiency gains to the utility, and limiting delays in customers benefitting from efficiency gains.

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

In making our draft decision on this issue, we will consider:

- The range of factors that typically influence the appropriate length for a determination period. These factors are outlined in Box 3.1.
- The merits of maintaining the alignment of determination periods across regulated water utilities. Like Hunter Water, Sydney Water and WaterNSW have proposed a 4-year 2016 determination period. If we accept the utilities' proposals, the determination periods for all three utilities will be aligned. The issues we will consider in relation to alignment are outlined in Box 3.2.

We also seek the views of stakeholders on the appropriate length of the determination period for Hunter Water, including any views on the merits of aligning determination periods across the large metropolitan water utilities.

Box 3.1 Factors we consider in deciding on length of determination period

In general, we consider the following factors when deciding on the length of the determination period:

- the confidence we can place in the utility's forecasts
- the risk of structural changes in the industry
- the need for price flexibility and incentives to increase efficiency
- the need for regulatory certainty and financial stability, and
- the benefits of aligning the determination with the term of the operating licence (where applicable).

Longer determination periods have several advantages over shorter periods. For example, a longer period provides greater stability and predictability (which may lower the utility's business risk and assist investment decision making), strong incentives for the utility to increase efficiency and reduced regulatory costs. However, longer determination periods also have disadvantages. These include increased risk associated with inaccuracies in the data used to make the determination, possible delays in customers benefitting from efficiency gains, and the risk that changes in the industry will impact the effectiveness of the determination.

Box 3.2 Issues associated with alignment of determination periods

There are four broad categories of issues potentially associated with the alignment of determination periods:

- **Methodological consistency.** There can be issues when agencies of a similar nature have determinations at different times. For example, at Hunter Water's request we have brought this price review forward by a year, to align its determination period with Sydney Water's. This will provide for more consistent regulatory decisions (eg, WACCs) for similar water utilities and facilitate a comparison of performance.
- **Organisational relationships / interactions.** Sydney Water purchases its bulk water from both WaterNSW and SDP. Therefore, Sydney Water's bulk water costs are determined by WaterNSW's and SDP's prices. If these utilities' determination periods are not aligned, we may need to use more complicated approaches to ensure Sydney Water's prices recover its bulk water costs, such as cost-pass-through mechanisms.
- **Common customer base.** Rural water customers in NSW receive services and common bills from two organisations: WaterNSW (Rural) and the DPI Water (formerly the NSW Office of Water). Customers may be confused about the distinct role of each organisation and the appropriate determination for a particular issue. Aligning pricing determinations may improve transparency and customers' understanding of prices.
- **Internal organisation and cost allocation issues.** There can be issues arising from an organisation's internal requirements. For example, in the next two years, we will make two separate price determinations for WaterNSW – one for its services in the Greater Sydney area (ex-SCA) and another, later determination for its rural functions (ex-State Water). Aligning the determination periods (or making a combined determination) may reduce regulatory costs and have other benefits.

IPART seeks comments on the following

4 What should be the length of this determination period?

5 Is alignment of Hunter Water's determination period with other utilities' determination period important? If so, which utilities and why?

3.2 Approach for calculating notional revenue requirement

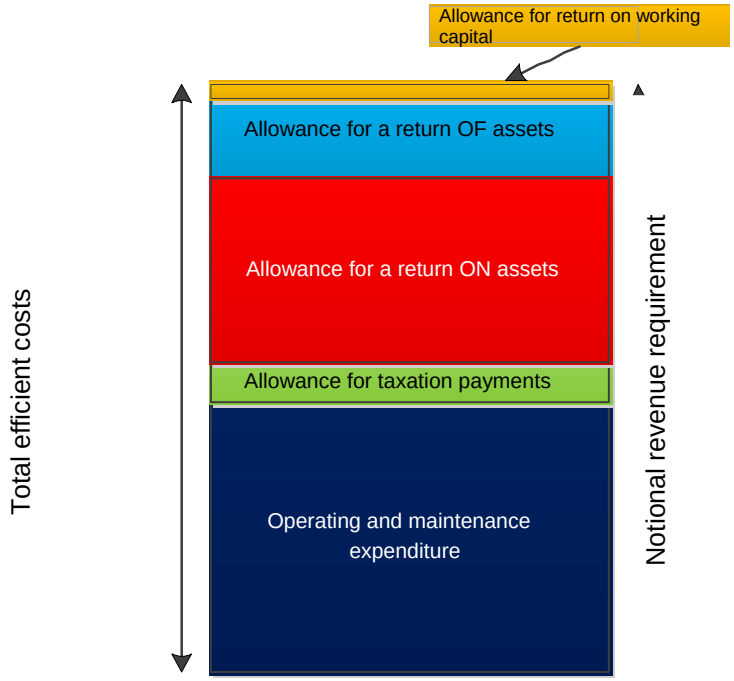
The notional revenue requirement represents our view of the total efficient costs of providing Hunter Water's regulated services to its customers in each year of the determination period. In general, we set prices to recover this amount of revenue.

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.
- **Meeting tax obligations**. We use a real post-tax WACC to calculate the allowances of a return on assets and regulatory depreciations, 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.
- A **return on working capital**, which represents the holding cost of net current assets.

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

Figure 3.1 Building block approach



Once we have calculated Hunter Water's notional revenue requirement, we decide on the approach we should use to convert this amount into prices. This involves deciding on the target revenue for each year – that is, the actual revenue we will expect Hunter Water to generate from prices and charges for that year. To make this decision, we consider 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.

Hunter Water's proposal on the revenue requirement

Hunter Water proposed a revenue requirement of $1,156.2 million over the 4-year period 2016-17 to 2019-20 (shown in Table 3.1 below). After adjusting for inflation, this is $12.6 million (or 1%) higher than the revenue allowed for in the 2013 Determination ($1,143.6 million),[52] which covered the 4-year period from 2013-14 to 2016-17.[53]

[52] According to our Final Report (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*, p 46) Hunter Water's Target Revenue was set at $1,054.4 million in $2012-13. This was subsequently increased by $3.4 million to make a CPI adjustment to IPART's reporting of the carbon cost allowance.

[53] Hunter Water's revenue requirements are compared over four years. However, Hunter Water's determination has been bought forward from four years to three years.

Table 3.1 Hunter Water's proposed notional revenue requirement over the 2016 determination period ($ millions, $2015-16)

	2013-14 to 2016-17[a]		Proposed 2016-17 to 2019-20	
Building Block	**Total cost**	**% of total**	**Total cost**	**% of total**
Operating expenditure	526.7[b]	46.1%	532.5	46.1%
Depreciation allowance	136.0	11.9%	138.6	12.0%
Return on Regulatory Asset Base	436.0	38.1%	446.4	38.6%
Return on working capital	3.9	0.3%	5.9	0.5%
Regulatory tax allowance	41.0	3.6%	32.9	2.8%
Total building block revenue	**1143.6**	**100%**	**1,156.2**	**100.0%**
Total revenue requirement (unsmoothed)[c]			1,132.9	
Total revenue requirement (smoothed)[d]			1,140.7	

a 2013-14 to 2016-17 figures represent those IPART used to set prices in the 2013 Determination, adjusted for inflation.

b Operating expense includes the CPI adjustment to IPART's reporting of the carbon cost allowance as referred to in footnote 52.

c Hunter Water reports that the unsmoothed revenue requirement includes a reduction for non-tariff revenue and excludes trade waste.

d Hunter Water reports that the smoothed revenue requirement includes: a reduction in non-tariff regulatory revenue, a smoothed return on the RAB building block over the 4 year period, and trade waste.

Source: Hunter Water pricing proposal to IPART, June 2015, pp 65-66 (Tables 7.6, 7.7 and 7.8) and IPART analysis.

Hunter Water estimated the revenue requirement separately for its water, sewerage and stormwater businesses. Table 3.2 shows Hunter Water's proposed real change in its revenue requirements for each business area. Its total revenue requirement is proposed to increase by 1% per year in real terms.

Table 3.2 Hunter Water's proposed real change in revenue requirements by business area

	Average annual increase
Water	2.8%
Sewerage	-0.6%
Stormwater	1.2%
Total revenue requirement	1.0%

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

Hunter Water indicated that it considers its proposed revenue requirement to be the minimum necessary to ensure it maintains an investment grade credit rating, and can provide services to the community that meet or exceed those required by its various regulators.[54]

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

IPART's response on revenue requirement

We will review Hunter Water's proposed revenue requirement by examining the building block allowances, and the key inputs to these allowances – including the efficient levels of operating expenditure, prudent and efficient levels of Hunter Water's past and forecast capital expenditure, the value of Hunter Water's RAB, the appropriate WACC, the appropriate asset lives and depreciation method. In addition to our own investigations, we will engage consultants to review the efficiency of Hunter Water's forecast operating expenditure and the prudence and efficiency of its past and forecast capital expenditure. We will also consider stakeholder comments on the proposed revenue requirement.

Taking account of all of the above, we will form our own view on the appropriate value for each allowance, and use these values to determine the notional revenue requirement. The issues we will consider are discussed in Chapters 4 to 6 of this Issues Paper.

Once we determine the notional revenue requirement, we will set the target revenue taking into consideration the impact on customers and the utility.

4 Allowance for operating expenditure

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 regulated services over the 2016 determination period.

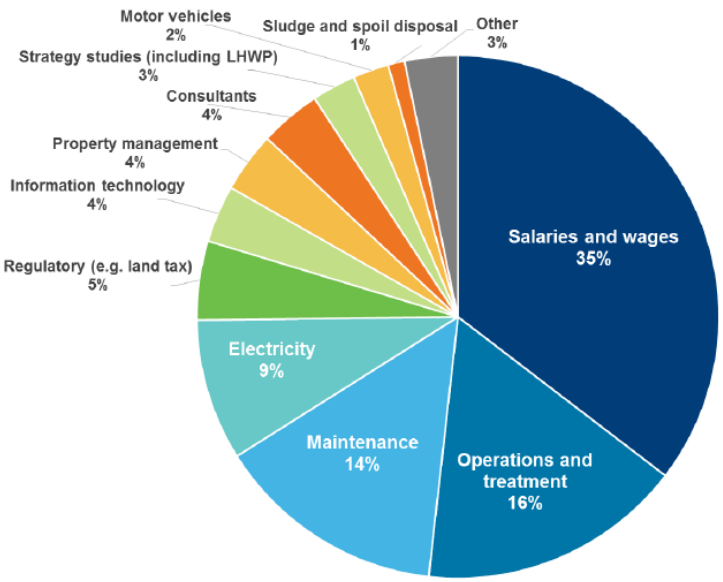
To decide how much operating expenditure is reflected in prices for the 2016 Determination, we will review Hunter Water's proposals and apply an efficiency test to proposed operating expenditure. This is to examine whether it represents the best and most cost effective way of delivering regulated services.

We will also apply the efficiency test to past operating expenditure in the current determination period to the extent necessary to assess the efficiency of the proposed operating expenditure.

In its pricing proposal, Hunter Water indicated that currently around 65% of its operating costs are non-labour costs - eg, operations and treatment, maintenance and electricity costs (see Figure 4.1 below).[55] It also reported that around 75% of these non-labour costs have been market-tested, and that the proportion of its operating expenditure that is outsourced is among the highest by large urban water utilities.[56]

55 Hunter Water pricing proposal to IPART, June 2015, pp 29-30.
56 Based on 2013-14 data, Hunter Water pricing proposal to IPART, June 2015, p 31.

Figure 4.1 Hunter Water's major operating cost components ($ millions, $2015-16)



Data source: Hunter Water pricing proposal to IPART, June 2015, p 30.

This chapter outlines Hunter Water's past operating expenditure, its proposed operating expenditure for the 2016 determination period, and our response to this proposal.

4.1 Hunter Water's past operating expenditure

Based on its pricing proposal, Hunter Water's past operating expenditure is expected to be $10.8 million or 2.0% lower than what we allowed for in making the 2013 Determination (Table 4.1). We have included our determined values as Hunter Water's actual value for 2016-17 to facilitate a 4-year comparison against the 2013 Determination.

Table 4.1 Past 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	128.0	131.6	132.1	135.0	526.7
Actual	122.1	131.6	127.2	135.0	515.9
Difference	-5.9	0.1	-4.9	0.0	-10.8
Difference %	-4.6%	0.1%	-3.7%	0.0%	-2.0%

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.

Hunter Water reported that its overall savings of about $11 million in the current price period to be a combination of cost pressures totalling $24 million being more than offset by $35 million in efficiency savings.[57]

Some reported cost pressures were:

- Treatment, operations and maintenance ($7.5 million)
  - cost of core business activities increased due to the nature of jobs conducted during the period (eg, maintenance costs were adversely impacted by a higher average cost per job as a result of increased bulk material costs and more expensive job types being undertaken)
  - increasing regulatory expectations and associated charges (eg, recent changes to the *Protection of the Environment Operations (Waste) Regulation 2014* required Hunter Water to obtain an environment protection licence for a particular site, adding to monitoring and reporting costs), and
  - increasing community expectations (eg, increased road and path restoration costs due to community expectations of like-for-like replacement and higher standards for existing work).
- Head office lease ($4.6 million) – Hunter Water's head office in Newcastle was sold in 2014 as part of an asset recycling program aimed at improving Hunter Water's financial position. This resulted in a change in expenditure type as the lease is classified as an operating cost. The office accommodation cost used to be recovered through prices via a return on and of capital in the regulatory asset base (RAB).
- Lower Hunter Water Plan ($3.5 million) – costs associated with implementing the plan and funding the related activities of the Metropolitan Water Directorate, which leads the development of the plan.[58]

Some large reported efficiency savings were:

- Electricity ($21.1 million) – demand management of electricity use, reductions in direct electricity costs based on repeal of the Carbon Tax on 17 July 2014, and savings from procuring electricity through competitive tendering during a period of suppressed wholesale electricity market prices in April 2014.
- Salaries and wages ($7.7 million) – savings achieved by managing employee numbers and lower than expected employer contributions to its defined superannuation benefit account.
- Treatment contracts ($1.3 million) – market testing of its operations and maintenance contract for treatment plants through competitive tendering.[59]

57 Hunter Water pricing proposal to IPART, June 2015, p 29.
58 Hunter Water pricing proposal to IPART, June 2015, pp 34-35.
59 Hunter Water pricing proposal to IPART, June 2015, p 36.

4.2 Hunter Water's proposed operating expenditure

Hunter Water proposed operating expenditure of $532.5 million over the 4-year period to 2019-20, or average operating expenditure of $133.1 million per year. It reported that its proposed expenditure represents:

- a real cumulative increase of $23.8 million (or 4.7%), when compared with the base 2015-16 operating costs of $127.2 million extrapolated over the next four years, or[60]
- an average annual increase in operating costs of $6.0 million (or 1.2%).[61, 62]

Table 4.2 compares Hunter Water's proposed operating expenditure over the 2016 determination period with the 2015-16 base year. Figure 4.2 compares this proposed operating expenditure with Hunter Water's actual and IPART determined expenditure over the 2013 determination period.

Table 4.2 Hunter Water's proposed operating expenditure for the 2016 determination period ($ millions, $2015-16)

	2015-16 (base year)	2016-17	2017-18	2018-19	2019-20
Water	43.7	43.8	44.3	45.1	45.4
Sewerage	44.3	44.2	47.2	47.1	47.8
Stormwater	1.3	1.3	1.4	1.4	1.4
Corporate	37.9	39.5	40.2	41.2	41.2
Total	**127.2**	**128.9**	**133.0**	**134.8**	**135.8**

Note 2015-16 figures are forecasts. Totals may not add due to rounding.

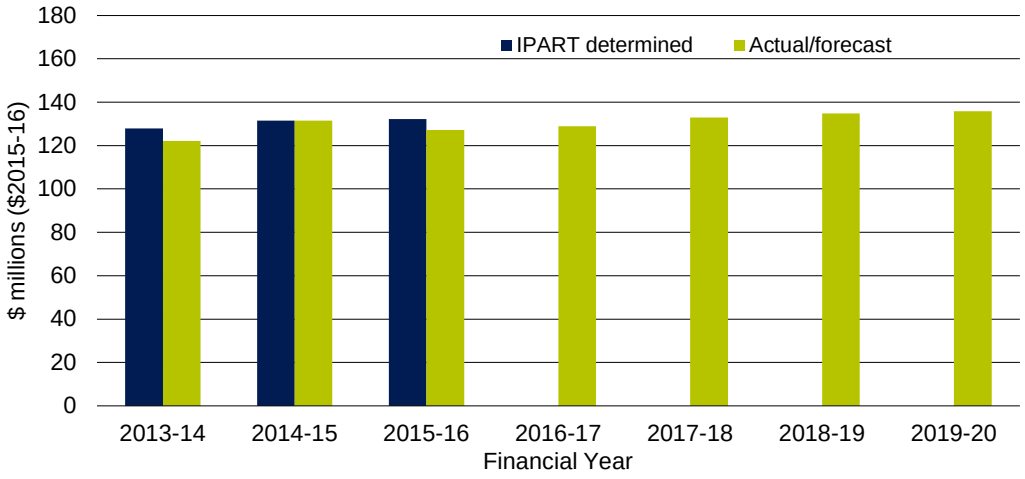
Source: Hunter Water pricing proposal to IPART, June 2015, p 40, Annual Information Return and IPART calculations.

60 The base 2015-16 operating costs of $127.2 million extrapolated over 4-years is calculated by multiplying the operating expenditure costs for its base year (2015-16) by 4 ie $127.17 million x 4 = $508.7 million. $23.8 million is calculated as ($128.9 million + $133.0 million + $134.8 million + $135.8 million) - $508.7 million. 4.7% is calculated as $23.8 million/$508.7 million.

61 Hunter Water has calculated the average annual increase of $6.0 million (or 1.2%) using its method of extrapolating the base 2015-16 operating costs over 4-years. However, if we calculate the yearly increases over 2015-16 to 2019-20, it is $2.2 million on average, or a cumulative 1.7% per year. $2.2 million is calculated as (135.82-127.17)/4 and 1.7% is calculated as (135.82/127.17)^(1/4)-1.

62 Hunter Water pricing proposal to IPART, June 2015, p 40.

Figure 4.2 Hunter Water's proposed operating expenditure compared with its past and IPART determined expenditure for 2013 period ($ millions, $2015-16)



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

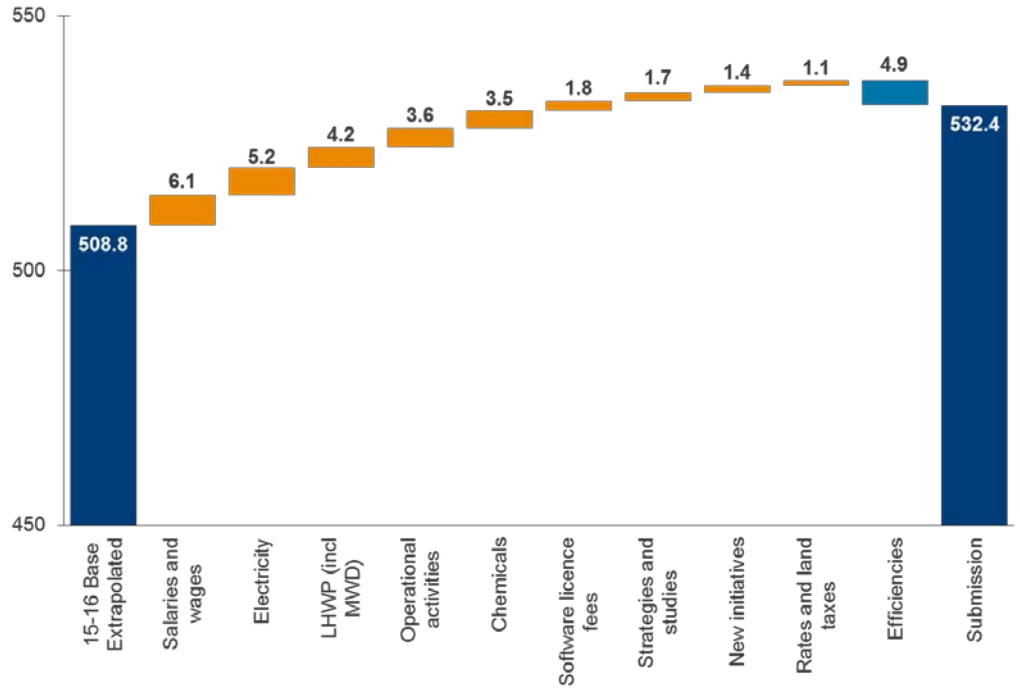
Reasons for increase in proposed operating expenditure

Hunter Water indicated that the key factors driving the total net increase (of $23.8 million) in its proposed operating expenditure over the 4-year period include the following (see Figure 4.3 below):

- Labour costs of $6.1 million. These additional costs include an allowance for performance based salary and wages regrades to ensure Hunter Water remains competitive at attracting and retaining appropriately skilled employees, and additional employer contributions to defined benefit superannuation schemes.
- Electricity costs of $5.2 million. These additional costs are due to anticipated real price increases as well as the impacts of connection growth and wastewater treatment plant upgrades on electricity consumption.
- Forecast Lower Hunter Water Plan costs of $4.2 million. Hunter Water indicated that it is required to fund the costs associated with implementing the plan and funding the related activities of the Metropolitan Water Directorate, which leads the development of the plan.
- Operational activities (excluding electricity) of $3.6 million. These costs are primarily driven by servicing growth and higher quality treatment attributable to recent wastewater treatment plant upgrades to meet EPA licence requirements and pollution reduction programs.

- Chemicals costs of $3.5 million. These costs reflect increased chemical usage due to higher quantities required for drinking water quality management and to manage wastewater odours.[63]

Figure 4.3 Changes to Hunter Water's operating expenditure 2015-16 to 2019-20



Source: Hunter Water Pricing Proposal to IPART, June 2015, p 41.

Efficiencies factored into proposed operating expenditure

Hunter Water indicated that efficiency savings of $4.9 million have been factored into its proposed operating expenditure.[64] Some examples of new efficiency initiatives are:

- Improvements to in-house resource management, with additional resources available as a result of outsourcing the maintenance of treatment plants to Veolia. This has enabled more in-house employees to be utilised in the field, reducing dependency on maintenance contractors.

63 Hunter Water pricing proposal to IPART, June 2015, pp 35, 41-42.
64 Hunter Water pricing proposal to IPART, June 2015, p 43.

- A central dispatch team to be tasked with improving the scheduling and monitoring of maintenance activities. This will involve allocating resources to both reactive and preventative maintenance activities, so that there is a balance between cost prevention and attending to the expected increase in water main leaks and repairs due to the age profile of Hunter Water's assets.

4.3 IPART's response on operating expenditure

We have not formed a preliminary view on Hunter Water's proposed operating expenditure. We note that the proposed efficiency savings of $4.6 million for the 2016 determination period are substantially lower than those achieved by Hunter Water in the current period ($35 million). To make our draft decision, we will review the proposal, and engage an expert consultant to review the efficiency of the proposed expenditure.

The consultant's review will also include an element of benchmarking to compare Hunter Water's operating costs against other comparable water utilities. We will use benchmarking data, where available, to inform our decisions on the efficient level of operating expenditure. We will also consider the responses of other stakeholders to this Issues Paper and our consultant's findings.

In reviewing the proposal, we will consider Hunter Water's expenditure over the 2013 determination period and the reasons for lower expenditure than what we allowed for in making the 2013 Determination. We will also assess how Hunter Water has considered the findings and recommendations made by previous consultants in examining its operating expenditure at the 2013 Determination.[65,66]

We will also consider the reasons for the proposed increase in operating expenditure in the 2016 determination period that Hunter Water has put forward (discussed above), and the scope for further efficiency gains given that proposed operating expenditure is about half of Hunter Water's proposed revenue requirement. In particular, we will examine:

- The scope for Hunter Water to make further efficiencies than those it proposed.
- Whether the proposed increases in individual cost items (such as labour costs, electricity costs, and Lower Hunter Water Plan costs) are efficient.

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65 At the 2013 Determination, consultants WS Atkins International (Australia) Limited in association with Cardno (Queensland) Pty, examined Hunter Water's then expenditure proposal. It made a number of recommendations and findings to Hunter Water to assist it in planning for and incurring operating expenditure. IPART, *Hunter Water Corporation's water, sewerage, stormwater drainage and other services - Final Report*, June 2013, p 60.

66 We note that in Appendix O of its pricing proposal, Hunter Water provides detail on how it has addressed findings from the previous expenditure review.

- The transactions that have impacted Hunter Water's operating expenditure over the 2013 determination period (and thus have implications for its future operating costs). These include the sale of its head office in 2014, and subsequent new head office lease costs, and its new contract with Veolia for the maintenance of its treatment plants.

IPART seeks comments on the following

6 Are Hunter Water's proposed operating costs over the 2016 determination period efficient, taking into account drivers of this expenditure and service levels achieved?

7 What scope is there for Hunter Water to achieve further efficiency gains over the 2016 determination period?

5 Prudent and efficient capital expenditure

Under 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 2012 determination period (past capital expenditure), and
- an efficiency test to its proposed capital expenditure for the 2016 determination period (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 the best way of meeting customers' needs, subject to the utility's regulatory requirements.

We incorporate the prudent and efficient capital expenditure into the value of the RAB, and then use this value in calculating the allowances for a return on assets and regulatory depreciation.

This chapter outlines Hunter Water's proposals on past and forecast capital expenditure and our preliminary response to these proposals.

5.1 Hunter Water's past capital expenditure

Hunter Water submitted that its capital expenditure over the three years (2013-14 to 2015-16) in the current 2013 determination period is expected to be $286.3 million, or $95.4 million per year on average.

As shown in Table 5.1 below, expenditure over the four years 2013-14 to 2016-17 is about $47.5 million (or 14.7%) higher compared with the 2013 Determination. We have included our determined values as Hunter Water's actual value for 2016-17 to facilitate a 4-year comparison against the 2013 Determination.

Table 5.1 Hunter Water's past capital expenditure compared with IPART determined for the 2013 determination period ($ millions, $2015-16)

	2013-14	2014-15	2015-16[a]	2016-17[b]	Total
Determination	81.9	61.2	95.7	84.6	323.5
Actual	90.1	83.7	112.5	84.6	371.0
Difference	8.1	22.5	16.8	0.0	47.5
Difference %	9.9%	36.8%	17.6%	0.0%	14.7%

a 2015-16 figures are forecasts.

b 2016-17 expenditure is the amount we allowed for when determining prices in the 2013 Determination.

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 in the 2013 determination period were:

- delayed delivery of projects from 2012-13, which resulted in the carryover of $36 million into the 2013 period
- additional delivery of projects under round two of the Housing Acceleration Fund, which resulted in an additional $8.5 million in expenditure[67]
- delivery of small projects that are partially or fully funded by external parties[68], and
- upgrade to the Hunter Central Coast transfer capacity, which is an outcome of the 2014 Lower Hunter Water Plan.[69]

Hunter Water also submitted that it is on track to meet or exceed 12 of the 15 output measures (80%) that we set at the 2013 Determination. It reported that under-delivery against the remaining three output measures is due to higher than expected unit rates for renewal of mains and prudent changes to asset management strategies given circumstances arising during the period.[70]

67 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.

68 For example, Government grants and third-party cash contributions.

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

70 Hunter Water pricing proposal to IPART, June 2015, p 49.

The output measures were aimed at measuring Hunter Water's performance in delivering its capital program over the 4-year period 2013-14 to 2016-17 (see Appendix C for Hunter Water's reported progress against each output measure).

5.2 Hunter Water's proposed capital expenditure

Hunter Water's proposed capital expenditure is summarised in Table 5.2. The total proposed capital program of $387.7 million over the 4-year period represents average capital expenditure of around $96.9 million per year, which Hunter Water reports is in line with its actual average capital expenditure of around $95.4 million per year over the 2013 Determination.[71]

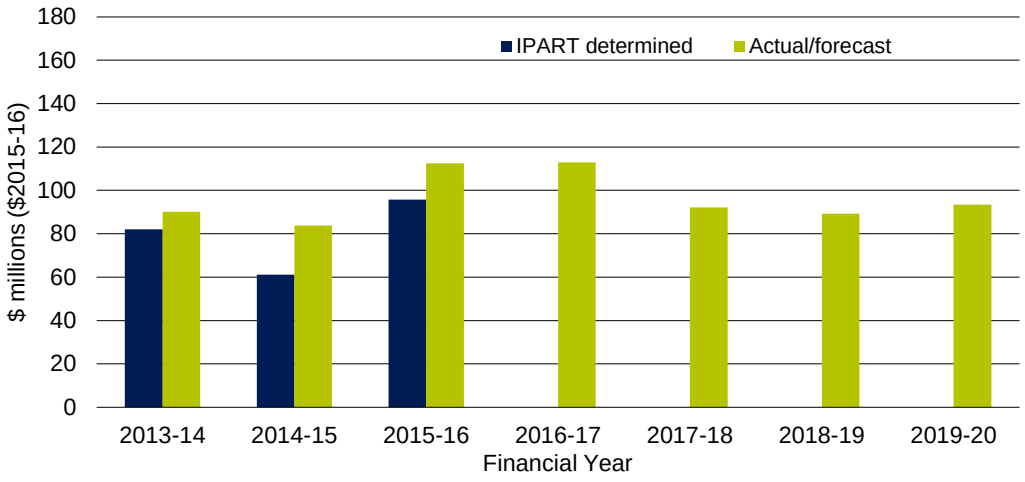
Table 5.2 Hunter Water's proposed capital expenditure for the 2016 determination period ($ millions, $2015-16)

Driver	2016-17	2017-18	2018-19	2019-20	Total
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**

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.

Figure 5.1 Hunter Water's past and proposed capital expenditure compared with IPART determined for the 2013 determination period ($millions, $2015-16)



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

71 Hunter Water pricing proposal to IPART, June 2015, Executive Summary, p i.

Over the 4-year period, Hunter Water proposed:

- **Wastewater projects of $183.7 million**, including upgrading wastewater treatment plants to maintain regulatory compliance, increase their capacity to cater for growth and improve effluent quality.
- **Water supply projects of $147.6 million**, including $110 million on water distribution and trunk mains, and $37 million on water treatment and water resources. Major projects include the replacement of sections of the Chichester Trunk Gravity Main, Balickera tunnel geological stability work, modifications to Seaham Weir, and upgrades to the capacity of the water distribution network to cater for growth.
- **Corporate projects of $52.9 million,** comprising $47 million on Information and Communication Technology projects and $4.8 million for metering and meter replacement projects.
- **Stormwater projects of $3.5 million** on the assessment, rehabilitation and replacement of stormwater channels within the Lower Hunter Region.[72]

Hunter Water indicated that the drivers of this capital program 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.[73]

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.[74]

Hunter Water submitted that it supports the use of output measures to help determine the delivery effectiveness and value for money achieved from the capital portfolio. It has proposed new output measures for the coming price period.[75] The output measures, mentioned previously in section 5.1, are only for the 2013 determination period.

Hunter Water reported that the proposed measures are consistent with the approach taken by IPART in the previous Hunter Water price review (see Appendix C for the full list of Hunter Water's proposed output measures for the 2016 Determination).[76]

72 Hunter Water pricing proposal to IPART, June 2015, pp 55–58.
73 Hunter Water pricing proposal to IPART, June 2015, p 54.
74 Hunter Water pricing proposal to IPART, June 2015, p 59.
75 Hunter Water pricing proposal to IPART, June 2015, p 58.
76 Hunter Water pricing proposal to IPART, June 2015, p 58.

5.3 IPART's response on capital expenditure

We have not formed a preliminary view on Hunter Water's proposed capital expenditure. To make our draft decision, we will review the proposals, and engage an expert consultant to conduct:

- a strategic review of Hunter Water's long-term investment plans and asset management systems and practices, and
- a detailed review of the prudence and efficiency of Hunter Water's actual capital expenditure and the efficiency of its forecast capital expenditure.

The consultant's review will also include an element of benchmarking to compare Hunter Water's costs in delivering its capital program against other comparable water utilities. We will use benchmarking data, where available, to inform our decisions on the efficient and prudent level of capital expenditure. We will also consider the responses of other stakeholders to this Issues Paper and our consultant's findings.

In reviewing Hunter Water's capital expenditure proposal, we will consider the reasons Hunter Water has put forward to explain why its past capital expenditure in the 2013 determination period was higher than we deemed efficient in making the 2013 Determination.[77]

We note that despite Hunter Water's proposed capital expenditure being similar in size to its current expenditure, in annual average terms, its proposed expenditure of $387.7 million over the 4-years from 2015-16 to 2019-20 is about 19.8% higher than the expenditure we allowed for ($323.5 million) over a 4-year period in the 2013 Determination. We will also consider the reasons it has put forward to justify its higher forecast capital expenditure.

As for operating expenditure (section 4.3), we will also assess how Hunter Water has considered the findings and recommendations of the expenditure review from the 2013 Determination.[78]

We will only include in the RAB capital expenditure that we deem to be prudent and efficient. For the purpose of calculating prices, we will exclude from the RAB all grants, subsidies and other contributions (eg, assets given or 'gifted' to Hunter Water) by third parties, where there is no requirement for Hunter Water to refund or earn a return on these contributions.

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77 For the 2013 Determination, we adopted Hunter Water's proposed capital expenditure. See IPART, *Hunter Water Corporation's water, sewerage, stormwater drainage and other services – Final Report*, June 2013, p 74.

78 IPART, *Hunter Water Corporation's water, sewerage, stormwater drainage and other services - Final Report*, June 2013, p 74.

IPART seeks comments on the following

8 Was Hunter Water's capital expenditure over the 2013 determination period prudent and efficient, taking into account drivers of this expenditure and service outcomes achieved?

9 Is Hunter Water's forecast capital expenditure program over the 2016 determination period efficient, taking into account expenditure drivers, scope for efficiency gains and service outcomes achieved?

10 Are Hunter Water's proposed new output measures reasonable?

6 Allowances for return on assets, regulatory depreciation and tax

To calculate the allowances for a return on assets and regulatory depreciation 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, the weighted average cost of capital) on Hunter Water's RAB.

The sections below discuss Hunter Water's proposals on these three inputs and its proposed tax allowance, and our preliminary responses to these proposals.

6.1 Value of the RAB

In general, to determine the value of the RAB over the 2016 determination period, we:

- Take the RAB value we determined at the start of the 2013 period (the opening RAB) and incorporate Hunter Water's prudent and efficient actual capital expenditure over that period (discussed in Chapter 5), and make adjustments to account for other changes to the RAB over the period (eg, asset disposals, capital contributions and allowed regulatory depreciation). This determines the opening RAB for the 2016 period.
- Roll forward this opening RAB to the end of the 2016 determination period by including prudent and efficient forecast capital expenditure over the period (discussed in Chapter 5), and making adjustments to account for other forecast changes to the RAB (eg, asset disposals, capital contributions and regulatory depreciation). This gives the forecast RAB for each year of the 2016 period.

Hunter Water's proposal on value of the RAB

Table 6.1 shows Hunter Water's proposed opening RAB for the 2016 determination period and the adjustments Hunter Water made to derive that value. Table 6.2 shows its proposed RAB and adjustments for each year of the 2016 period.

Table 6.1 Hunter Water's proposed opening RAB for the 2016 determination period ($millions, $nominal)

	2012-13	2013-14	2014-15	2015-16
Opening RAB	**1,980.8**	**2104.1**	**2,212.7**	**2,275.1**
Plus: Actual capex	96.7	85.9	81.7	112.5
Less: Cash capital contributions[a]	-7.8	-7.0	-16.9	-14.8
Less: Asset disposals	-5.1	-2.4	-22.4	-10.4[b]
Less: Allowed regulatory depreciation	-28.6	-32.2	-33.5	-35.1
Plus: Indexation[c]	48.5	64.3	53.5	58.1
Plus: KIWS subsidy & avoided cost	19.5	0	0	0
Closing RAB	**2,104.1**	**2,212.7**	**2,275.1**	**2,385.4**

[a] 'Cash capital contributions' includes the environmental levy, third party cash contributions and Housing Acceleration Fund contributions.

[b] Hunter water presented this amount under 'KIWS subsidy & avoided cost'. As it relates to Hunter Water's consideration of the sale of KIWS, and we discuss the implications of this in the Asset Disposals section, we have moved this amount to 'asset disposals'.

[c] Indexation is applied to the RAB when rolling it forward to 2015-16 so that its value is maintained in real terms.

Source: Hunter Water supplementary information, 28 July 2015.

Table 6.2 Hunter Water's proposed RAB over the 2016 determination period ($millions, $2015-16)

	2016-17	2017-18	2018-19	2019-20
Opening RAB	**2,385.4**	**2,444.4**	**2,493.8**	**2,539.5**
Plus: Proposed capex	112.9	92.1	89.2	93.5
Less: Forecast cash capital contributions[a]	-19.4	-7.2	-7.3	-7.3
Less: Proposed asset disposals	0	0	0	0
Less: Proposed regulatory depreciation[b]	-34.5	-35.4	-36.3	-37.1
Closing RAB	**2,444.4**	**2,493.8**	**2,539.5**	**2,588.5**

[a] 'Cash Capital Contributions' includes the environmental levy, third party cash contributions and Housing Acceleration Fund contributions.

[b] These values were provided by Hunter Water and are end of year values, and so they differ from Tables 7.6 - 7.8 in Hunter Water's proposal, which are mid-year values (they have been discounted by half a year).

Note: When rolling the RAB forward over the 2016 determination period to set new prices, we do not incorporate indexation (as we did in Table 6.1). This is because we will set prices in real terms ($2015-16) and then provide for inflation by indexing prices according to changes in the consumer price index, throughout the determination period. In the subsequent determination, we will again repeat the process by indexing the RAB when rolling it forward to the new base year.

Source: Hunter Water supplementary information, 20 August 2015.

As indicated above, Hunter Water's proposal on the adjustment for actual and forecast capital expenditure is discussed in Chapter 5. Its proposal on the adjustment for regulatory depreciation is discussed in section 6.2. Its other proposed adjustments to the RAB and our preliminary response are discussed below.

Hunter Water's proposed adjustments for cash capital contributions

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

As the tables above show, Hunter Water proposed to deduct between $7 million and $16.9 million ($nominal) per annum for actual capital contributions it received in the 2013 determination period.[79]

Hunter Water indicated that these capital contributions are from the Environmental Improvement Charge (EIC), third-party cash contributions and the NSW Government's Housing Acceleration Fund.[80]

IPART's response on cash capital contributions

Our preliminary response is to accept Hunter Water's proposal to deduct cash capital contributions from the RAB. This proposal is consistent with our view that customers should not pay for a return on assets and regulatory depreciation for capital that has either been directly funded by customers or other parties.

However, our decision on the exact amount to be deducted from the RAB is subject to our decisions on Hunter Water's prudent and efficient capital expenditure (discussed in Chapter 5). This is because cash capital contributions such as the EIC and the Clarence Town Levy are dependent on our findings on the prudence and the efficiency of costs of the backlog sewerage works these charges are intended to fund.[81]

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79 This includes capital contributions for 2012-13.

80 The EIC is a charge levied by Hunter Water and contributes to the cost of providing sewerage services to established, but unsewered residential areas in the Lower Hunter and approved by the NSW Government (source: http://www.hunterwater.com.au/Resources/Documents/Fact-Sheets/Customer-Charges/Customer_Charges_May15-Version-2.pdf). Where applicable, the EIC is waived for eligible pensioners (source: http://www.hunterwater.com.au/Your-Account/Managing-Your-Account/Pension-Rebates/Pension-Rebates.aspx).

81 The Clarence Town Levy is a levy charged by Hunter Water to Clarence Town customers only for the construction of the sewerage scheme (source: http://www.hunterwater.com.au/Resources/Documents/Fact-Sheets/Customer-Charges/Customer_Charges_May15-Version-2.pdf).

Hunter Water's proposed adjustments for asset disposals

The value of any regulatory assets Hunter Water sold during the 2013 determination period and proposes to sell during the 2016 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 the regulated services.

Hunter Water reported that following a review of its options for improving its financial position and achieving a stable investment grade credit rating, it sold a range of non-core assets during the 2013 determination period (or plans to sell them before the end of the period). Hunter Water noted that it considers assets to be 'non-core' if it does not need to own them to fulfil the core functions of providing reliable and safe drinking water and sewerage services.[82]

In its proposal, Hunter Water provided information on its main asset disposals. According to Hunter Water:

- It sold its head office at Honeysuckle for $25.8 million in 2014-15.
  - It anticipates that the regulatory value of the asset will be deducted from the RAB.
  - A 10-year operating lease on the head office building commenced on 16 July 2014.
- It sold its wholly-owned subsidiary Hunter Water Australia (HWA) in late 2014.
  - It had outsourced its treatment operations to HWA until October 2014 but now, through a competitive procurement process, receives services from Veolia Water Australia Pty Ltd.
  - It proposed that the sale of HWA should have no impact on the RAB.
- It is considering disposing of land related to Tillegra Dam[83].
  - Hunter Water proposes that the disposal of such land should have no impact on the RAB as it is not included in the current value of the RAB.
- It is considering the sale of Kooragang Industrial Water Scheme (KIWS) during 2015-16. The scheme provides high quality recycled water for industrial purposes under a contract to a large customer on Kooragang Island. Hunter Water proposed that:
  - $9.5 million in avoided water costs as a result of the KIWS should remain in the water RAB for the 2016 Determination. These avoided costs were included in the 2013 Determination, and related to the deferral of upgrades to the Grahamstown water treatment plan, the trunk delivery main from Grahamstown water treatment plant, and operating cost savings at the

82 Hunter Water pricing proposal to IPART, June 2015, p 13.

83 Subsequent to submitting their pricing proposal, Hunter Water has sold the Tillegra Dam land. Hunter Water, Tillegra Dam Land Sold – Media Release, 22 August 2015.

plant. Hunter Water considers that these avoided costs to water customers remain relevant, with the operation of the KIWS.

- A $10 million subsidy included in the water RAB at the 2013 Determination, following a ministerial direction to IPART, be removed.[84]

Hunter Water also indicated that a sale of KIWS would indirectly affect its operating costs through the allocation of corporate overheads.[85]

IPART's response on asset disposals

In our view, the primary issues we need to consider 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 provided by the asset and not ownership of the asset. Therefore, the impact of any profit or loss should lie entirely with the business (or shareholder).

Given the above, our preliminary response is to accept Hunter Water's proposal to remove the regulatory value of its head office from the RAB, as this is consistent with our view on the appropriate treatment of asset disposals.

84 Hunter Water pricing proposal to IPART, June 2015, p 64.
85 Hunter Water pricing proposal to IPART, June 2015, p 13.

Our preliminary response is to also accept Hunter Water's proposal that the sale of HWA and Tillegra land should have no impact on the RAB. This is because:

- HWA was an unregulated subsidiary and so any related capital expenditure would not have been incorporated as regulated capital expenditure in Hunter Water's RAB,[86] and
- Hunter Water's current RAB does not include any capital expenditure related to Tillegra Dam, as we removed all associated capital expenditure at the 2013 Determination.[87]

In addition, our preliminary response to Hunter Water's proposal in relation to the KIWS is to retain the value of avoided costs associated with the scheme in the RAB provided that these costs continue to benefit water customers. We will assess the continuing value of the avoided costs as part of our review of Hunter Water's expenditure.

We note that Hunter Water has removed the value of the subsidy for KIWS from its proposed RAB.

We will also consider the operating cost implications as a result of Hunter Water's lease back arrangement of its head office, its new treatment operations contract with Veolia, and the potential sale of KIWS. We will assess the efficiency of these arrangements as part of our review of Hunter Water's operating expenditure.

Finally, we note that in some instances, the regulatory value of an asset may be unknown as data on the value of individual assets in the RAB and their assigned cost may be limited. This means, that in these cases, we may need to come up with a best estimate of an asset's regulatory value when it is sold. Appendix B outlines our proposed approach for estimating the regulatory value of assets when the original cost is unknown. In doing so, it distinguishes between significant assets and non-significant assets.

IPART seeks comments on the following:

11 What is the appropriate regulatory treatment of asset disposals?

6.2 Asset lives and regulatory depreciation

The allowance for regulatory depreciation included in the revenue requirement (and used in calculating the value of the RAB, as discussed above) is intended to ensure that the capital the regulated business (or its owner) invests in the regulatory assets is returned over the useful life of the assets.

86 HWA was a fully-owned subsidiary of Hunter Water that operated as an independent commercial enterprise. Hunter Water, Annual Report 2014, p 102.

87 IPART, *Hunter Water Corporation's water, sewerage and stormwater drainage and other services – Final Report,* June 2013, pp 79-80.

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

Hunter Water's proposed asset lives and depreciation method

Hunter Water's proposed allowance for regulatory depreciation is $138.6 million or 12.0% of its total proposed revenue requirement for the 4-year 2016 period (see Table 3.1). To calculate this allowance, Hunter Water proposed to:

- use an asset life of 100 years for all new assets and 70 years for all existing assets, and
- continue to use the straight-line depreciation method where the total value of the RAB is recovered evenly over the assumed life of the assets.[88]

IPART's response on asset lives and depreciation method

We have not formed a preliminary view on Hunter Water's proposed asset lives. Our decision on this input will be informed by the expenditure review to be undertaken by our consultants, which includes an assessment of the appropriateness of Hunter Water's proposed asset lives, given the state of its assets.

Hunter Water's proposed asset lives are consistent with the approach used for the 2013 Determination. However, other utilities take a different approach to setting assets lives. For example, Sydney Water applies different asset lives to different asset classes for both new and existing assets. It uses an asset classification known as CEMELND: Civil, Electrical, Mechanical, Electronic, and Non-depreciating to assign asset lives to specific asset classes. The CEMELND approach results in a more refined attribution of asset lives and therefore is likely to better recover the efficient cost of an investment over the life of the asset.

If Hunter Water were to propose an alternative approach to calculating asset lives (such as CEMELND) in future, it would need to:

- ensure it has adequate information and record keeping systems in place to support such an approach, and
- estimate and explain the impacts on regulatory depreciation, prices and customer bills in its pricing proposal.

IPART seeks comments on the following

12 Are Hunter Water's proposed average asset lives of 100 years for all new assets and 70 years for all existing assets appropriate?

88 Hunter Water pricing proposal to IPART, June 2015, p 61.

6.3 Rate of return

The allowance for a return on assets included in the revenue requirement represents our assessment of the opportunity cost of the capital the regulated business (or its owner) has invested to provide the regulated services, and ensures that it 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 intend to determine the rate of return using a weighted average cost of capital (WACC).

As for our 2013 Determination, we will use a real post-tax WACC to calculate the allowance for a return on assets, and provide for an explicit tax allowance as a separate cost building block (see section 6.4).[89] We will also use our current methodology and process for calculating the WACC, which has been revised since the 2013 Determination (see Box 6.1).

[89] Previously the tax paid by the business was reflected in the rate of return through the use of a pre-tax WACC.

Box 6.1 Overview of our current WACC methodology

Our objective in determining the real post-tax WACC for a regulated business is to set a WACC that reflects the efficient cost of capital for a benchmark utility that operates in a competitive market and faces similar risks to the regulated business.

To do this, we estimate the midpoint of two WACC estimates,[a] which are derived from current market data and long-term averages. This means that we apply a weighting of 50% to current market data and 50% to long-term averages in our estimate of the midpoint. We use an index of economic uncertainty (uncertainty index) to assess if the use of this midpoint is consistent with current economic conditions:

- If the uncertainty index is within one standard deviation from the long-term average of zero, we will use the midpoint of our WACC range (and our input parameters).
- If the uncertainty index is not within one standard deviation from the long-term average of zero, we will investigate potential causes for this. If we find compelling evidence that there has been a shift in financial market conditions, we will consider moving away from using the midpoint of the WACC input parameters.

We have also adopted revised approaches for estimating two of the WACC parameters – the debt margin, and the inflation adjustment for our real post-tax WACC:

- To estimate the debt margin, we use credit spreads for Australian non-financial corporations, published by the Reserve Bank of Australia (RBA). We consider that using data readily available through the RBA's website increases the transparency of our WACC determination process.[b]
- To estimate the inflation adjustment for our real post-tax WACC, we use a 10-year geometric average of the one-year RBA inflation forecast[c] and the middle of the RBA's target band of inflation (ie, 2.5%) for the remaining nine years.[d]

We also publish biannual updates of the WACC on our website to allow stakeholders to better replicate and predict our WACC decisions.[e] In conjunction with the update, we also release a WACC spreadsheet, which includes a working copy of our full WACC model.

a The two WACC estimates are the midpoints of two separate WACC ranges based on long-term averages and current market data (40-day average of most recent data).

b IPART, *WACC - IPART's New Approach to Estimating the Cost of Debt – Fact Sheet*, April 2014, pp 1-2. Tenor (or time-to-maturity) is the length of time until the maturity date of a bond.

c RBA's forecast of underlying inflation is obtained from its quarterly Statement on Monetary Policy.

d IPART, *New Approach to forecasting the WACC inflation adjustment – Fact Sheet*, March 2015, pp 1-2.

e http://www.ipart.nsw.gov.au/Home/Industries/Research/Market_Update

Hunter Water's proposal on the WACC

Hunter Water's proposed allowance for a return on assets is $446.4 million or 38.6% of its total proposed revenue requirement for the 4-year 2016 period (see Table 3.1). To calculate this allowance, it used a real post-WACC of 4.6% (Table 6.3).

Table 6.3 Hunter Water's proposed real post-tax WACC for 2016 determination period

	Short-term	Long-term
Nominal risk free rate (%)	2.5	4.5
Inflation forecast (%)	2.5	2.5
Debt margin (%)	2.2	2.9
Market risk premium (%)	8.2	6.0
Debt funding (%)	60	60
Equity funding (%)	40	40
Gamma	0.25	0.25
Equity beta	0.7	0.7
Cost of equity (%)	8.3	8.7
Cost of debt (%)	4.7	7.4
Real post-tax WACC (%)	3.6	5.3
Real post-tax WACC mid-point (%)	4.6	

Note: Based on the available market information as at end of January 2015. The Hunter Water WACC estimate of 4.6% is not the exact midpoint of the WACC range. Hunter Water reported that it has given a weighting of 60% to long-term data on debt costs and a weighting of 40% to current market data on debt costs.

Source: Hunter Water pricing proposal to IPART, June 2015, p 62 & Appendix G, p G.1.

To calculate this proposed WACC, Hunter Water indicated that it used current market data to predict, to the extent possible, IPART's likely WACC calculation projected to April 2016.[90]

Hunter Water also indicated that while it accepts our WACC methodology,[91] it proposed to deviate from this methodology in one respect. In determining the cost of debt estimate, Hunter Water gave a higher weighting to long-term data (60%) and a lower weighting to short-term data (40%). This is because it proposed transitioning towards IPART's 50% to 50% weighting of long-term to short-term estimates of debt in the calculation of the WACC.[92] However, Hunter Water indicated that it would propose applying the 50% to 50% debt portfolio split (if the uncertainty index is not triggered) for the next price review.[93]

90 Hunter Water pricing proposal to IPART, June 2015, Appendix G, p G.1.
91 Hunter Water pricing proposal to IPART, June 2015, p 63.
92 Hunter Water pricing proposal to IPART, June 2015, p 63.
93 Hunter Water pricing proposal to IPART, June 2015, p 63.

If Hunter Water had used equal weightings for the estimate of the cost of debt, its proposed WACC would have been 4.4%.[94]

According to Hunter Water, more than 75% of its current borrowings are held in debt products with a maturity profile of greater than three years. Hunter Water has sought independent advice on a long-term debt financing strategy. It submitted that it is likely to increase the share of its debt portfolio aligned with the length of the price determination cycle.[95]

Hunter Water argued that it is financially inefficient for it to achieve a 50% to 50% debt portfolio split between long-term and short-term debt within 12 months. It proposed that IPART adopt a phasing-in arrangement by allowing a 60% to 40% split in the 2016 determination period. This would better reflect Hunter Water's actual debt profile, and give it time to adjust to IPART's 50% to 50% debt portfolio split assumption.[96]

IPART's response on the WACC

Our preliminary response is to not accept Hunter Water's proposal to give a higher weighting to long-term debt (60%) and a lower weighting to short-term debt (40%) for the 2016 determination period. This is because our objective in determining the WACC is to establish a value that reflects the efficient cost of capital for a benchmark entity, and not replicate the actual cost of capital of any particular regulated utility. We consider that the efficient cost of capital for a benchmark entity is likely to reflect a mix of current market data and long-term data.

As discussed in Box 6.1, in setting the WACC, our decision-making framework includes the use of an uncertainty index. If the uncertainty index is not within one standard deviation from the long-term average of zero we will investigate potential causes for this. If we find compelling evidence that there has been a shift in financial market conditions, we will consider moving away from using the midpoint (50:50) of any of the WACC input parameters, including the cost of debt.

We will update the uncertainty index, cost of debt, the cost of equity and the inflation adjustment closer to our draft and final decisions.

IPART seeks comments on the following

13 What is a suitable rate of return on Hunter Water's assets?

94 IPART calculations.
95 Hunter Water pricing proposal to IPART, June 2015, p 62.
96 Hunter Water pricing proposal to IPART, June 2015, p 63.

6.4 Allowance for tax

As discussed above, because we use a post-tax WACC to estimate the allowance for a return on assets in the revenue requirement, we also include an explicit allowance for tax, which reflects the regulated business' 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' (nominal) taxable income.[97] 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.[98]

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.

Hunter Water's proposal on the tax allowance

Hunter Water reported that it adopted IPART's methodology to calculate the tax allowance, including using a notional gearing ratio and cost of debt percentage based on the parameters used 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. It argued that IPART's methodology overstates the interest expense, reducing the apparent tax liability. This has the effect of reducing the revenue allowance from the tax building block.[99]

Table 6.4 below compares Hunter Water's proposed tax allowance calculated using IPART's notional gearing rate to its proposed tax allowance using its actual gearing rate.

[97] Under a post-tax framework, the value of franking credits (gamma) enters the regulatory decision only through the estimate of the tax liability.
[98] The nominal cost of debt is the sum of the nominal risk free rate and nominal debt margin.
[99] Hunter Water pricing proposal to IPART, June 2015, p 63.

Table 6.4 Hunter Water's proposed tax building block and difference in gearing ratios ($'000, nominal)

	2016-17	2017-18	2018-19	2019-20
IPART 60% notional gearing	8,610	8,680	8,740	9,000
Hunter Water's actual gearing	12,730	13,100	13,560	14,330
Annual difference	4,120	4,420	4,820	5,330

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

IPART's response on the tax allowance

We acknowledge Hunter Water's argument that using an entity's actual gearing ratio and actual average interest rate would better reflect the actual tax liability of the business. 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 that would be achievable by a similar well-managed privately owned business, and not reflect the actual tax liability of the business.[100] Therefore, our intention is to maintain our current methodology and apply a notional gearing ratio (60%) and cost of debt (based on the parameters used in the WACC) when calculating Hunter Water's tax allowance.[101]

As noted above, 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. Therefore, our decision on the actual tax allowance to be included in Hunter Water's notional revenue will be subject to our decisions on those other items.

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

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

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 forecast water sales and customer numbers. These forecasts are used in calculating the price levels necessary to recover the required revenue.

It is important that the forecasts are as accurate as possible. 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 the 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.

This chapter outlines Hunter Water's proposal on its water sales forecasts and customer numbers for the 2016 determination period, and discusses our preliminary response to this proposal. It also discusses a potential mechanism for addressing the risk of water sales volatility over the period.

7.1 Actual water sales over the 2013 determination period

In the 2013 Determination we adopted forecast water sales proposed by Hunter Water.[102] The model used to develop those forecasts has performed reasonably well over the current period. As Table 7.1 shows, the net level of variation between total actual and forecast sales over the 2013 period is expected to be around 260 ML or 0.2%.

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

Table 7.1 Variance between IPART determined and actual water sales over the 2013 determination period (ML)

	2013-14	2014-15[a]	2015-16[b]	Total
Residential				
IPART 2013 Determination	37,671	37,743	37,823	113,237
Hunter Water actual/projected	40,246	36,488	36,845	113,579
Non-Residential				
IPART 2013 Determination	20,784	19,459	18498	58,741
Hunter Water actual/projected	21,456	18,507	17,317	57,280
Total				
IPART 2013 Determination	58,454	57,203	56,321	171,978
Hunter Water actual/projected	62,161	55,454	54,621	172,236
variance	3,707	-1,749	-1,700	258
%	6.3%	-3.1%	-3.0%	0.2%

a Full year forecast for 2014-15.

b Budgeted figure for 2015-16.

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

Source: Hunter Water pricing proposal to IPART, 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.

7.2 Hunter Water's proposal on forecast water sales and customer numbers

To forecast water sales (or demand) for its pricing proposal, Hunter Water used the integrated Supply Demand Planning (iSDP) model. It used this model to develop the forecasts in its pricing proposal for the 2013 Determination. It also uses the model for resources planning and financial forecasting. In addition, the model was used in developing the Lower Hunter Water Plan (LHWP).[103]

In its proposal, Hunter Water indicated its application of iSDP and resulting demand forecasts were subject to two external reviews prior to use of its outputs for the 2013 Determination and Lower Hunter Water Plan.[104] The external reviews found that the demand forecast model was successfully applied and that comments from previous reviews had been addressed. It also indicated that it has updated the iSDP model since the 2013 Determination.[105] The updates included changes to connections growth forecasts to reflect a longer period of actual data, the extension of consumption trends to ensure that water usage statistics are not influenced by one or two years of high or low water demand, and changes to water efficiency assumptions in line with current information on parameters such as water efficient appliance performance.

[103] Hunter Water pricing proposal to IPART, June 2015, pp 23-24.
[104] Hunter Water pricing proposal to IPART, June 2015, p 24.
[105] Hunter Water pricing proposal to IPART, June 2015, p 25.

Forecast water sales

Hunter Water's forecast water sales for the 2016 determination period are summarised in Table 7.2. Compared to the 2015-16 base year, Hunter Water has forecast total water demand to increase by an average of 417 ML (or 0.8%) per year over the 4-year period, with residential water demand to increase by an average of 0.2% per year, and non-residential water demand to increase by an average 1.9% per year.

Table 7.2 Hunter Water's forecast water sales for the 2016 determination period (ML)

	2015-16 (base year)	2016-17	2017-18	2018-19	2019-20	Total change
Residential	36,844	36,890	36,951	37,025	37,118	274
% change from previous year		0.1%	0.2%	0.2%	0.3%	0.7%
Non-residential	17,776	17,889	18,426	18,880	19,172	1,396
% change from previous year		0.6%	3.0%	2.5%	1.5%	7.9%
Total	54,621	54,779	55,376	55,906	56,290	1,669
% change from previous year		0.3%	1.1%	1.0%	0.7%	3.1%

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.

According to Hunter Water, the forecast growth in residential water demand is due to a forecast increase in the population and number of connected dwellings in its operating area. However, residential water demand will grow at slower rate than the number of connected dwellings, due to the permanent imposition of Water Wise Rules and the increasing uptake of water efficient appliances.[106]

In relation to non-residential water demand, Hunter Water reported that, historically, this demand has been a major component of total water sales. However, over the past 15 years, non-residential water usage has decreased substantially due to industrial closures, reduced business activity, and more efficient water use. The supply of recycled water for industrial purposes has also offset non-residential demand for potable water. Hunter Water expects that non-residential water demand will account for 34% of its total water sales in 2019-20.[107]

[106] Hunter Water pricing proposal to IPART, June 2015, p 25.
[107] Hunter Water pricing proposal to IPART, June 2015, p 25.

Forecast customer connections

Hunter Water's proposed customer connection numbers for water, sewerage and stormwater are shown in Table 7.3, Table 7.4 and Table 7.5. It implies growth of about 1.3% per year for residential water customers and 1.4% per year for non-residential water customers over the 2016 determination period.[108] It reported that the numbers below differ from the information in its Annual Information Return (AIR) in two ways:

- they are 'averages' for each year, which it considers more appropriate in calculating expected revenue, rather than balances at financial year end provided in the AIR, and
- its 'average' customer numbers are actual billable connections (or service agreements) which are a more accurate reflection of service charge revenue compared to using property or dwelling numbers in the AIR.[109]

Table 7.3 Hunter Water's proposed 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: Totals may not add due to rounding.

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

[108] IPART calculations.

[109] Hunter Water pricing proposal to IPART, June 2015, p 25.

Table 7.4 Hunter Water's proposed 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[b]						
Total 20mm individual	No	**5,063**	**5,164**	**5,267**	**5,371**	**5,476**
Multi premises[c]	ME	424	432	441	449	458
20mm & 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: Totals may not add due to rounding.

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

Table 7.5 Hunter Water's proposed 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)	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

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

Table 7.6 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 customer is projected to continue to decline.

Table 7.6 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.

Other demand and connection forecasts

Hunter water indicated that urban water competition within its area of operation has emerged in the form of developer's use of private network operators. The developers are using private network operators to provide self-contained sewerage and recycled water services to greenfield urban development. However due to the lead times involved in planning, construction and securing licences, Hunter Water has not adjusted its demand and connections for purchases of its potable bulk water.[110]

Hunter Water has a water supply arrangement with Gosford and Wyong 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 indicates that no bulk supply transfers (net) will be made over the 2016 determination period.[111]

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

7.3 IPART's response on forecast water sales and customer numbers

We acknowledge that Hunter Water has proposed to continue to use its iSDP model to forecast water demand, and that it has been subject to external review. During this review we will examine the key assumptions in its iSDP model to forecast water demand over the 2016 determination period, assumptions underpinning customer connections forecasts, and consider stakeholder submissions and views on Hunter Water's forecasts.

We acknowledge Hunter Water's arguments about information in the AIR being balances at financial year end. However, when we actually set service charges, we take averages of financial year end data to approximate the 'average' number of customers actually billed throughout the year.

Mechanism for addressing the risk of water sales volatility

In the 2013 Determination, we provided for a mechanism to adjust Hunter Water's revenue to address the risk to the utility 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. We defined material variation as more than 10% (+ or -) over the whole determination period, and indicated that only the impact of variation outside of this 10% variation level would be adjusted for. We also indicated that we would decide how best to make the revenue adjustment in our next price review, if a material variation eventuates.

Based on the information contained in Hunter Water's submission, it is highly unlikely that a material variation will eventuate for the 2013 determination period. As noted above, the net level of variation between actual and forecast sales over the period is expected to be around 260 ML or 0.15%.

However, we will consider whether to provide a water sales volatility mechanism in the 2016 Determination, and if so, whether the 10% materiality threshold and other elements of the mechanism remain appropriate. We will take into account factors such as the distribution of risk between Hunter Water and its customers. In our recent determination of Essential Energy's water prices in Broken Hill[112], we did not define the materiality threshold, but rather left this open to the discretion of IPART at the next price review. This was to allow us to take into account the circumstances around any significant discrepancy between forecast and actual sales volumes.

[112] IPART, *Essential Energy's water and sewerage services in Broken Hill Review of prices from 1 July 2014 to 30 June 2018 - Final Report*, June 2014, p 43.

IPART seeks comments on the following

14 Are Hunter Water's forecast water sales volumes and customer numbers reasonable?

15 What regulatory mechanism, if any, should we use to account for sales volatility?

8 Prices for water, sewerage and stormwater services

The next two chapters outline Hunter Water's proposed prices for the 2016 Determination for water, sewerage, stormwater services and other services, and our preliminary responses to these proposed prices.

This chapter covers prices that are paid by most customers of Hunter Water. The last part of this chapter presents typical bill impacts for residential and non-residential customers using Hunter Water's proposed water, sewerage and stormwater prices.

The proposed 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[113].
- **Stormwater -** a fixed stormwater service charge, that is different for standalone and multi-premise customers (ie, houses and apartments).

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-based water service charge.[114]
- **Sewerage**[115] **–** 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 for the sewerage usage price), and a meter-based sewerage service charge.
- **Stormwater -** a fixed stormwater service charge based on the size of the property.

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113 Currently, residential sewerage service charges vary between houses and flats/unit.

114 Standalone 20mm meter non-residential customers and non-residential customers in mixed developments pay the same standard (fixed) water service charge as residential customers.

115 Some non-residential customers also face load-based trade waste charges. We outline these charges in Chapter 10.

8.1 Hunter Water's proposal on water, sewerage and stormwater charges

Hunter Water's proposed prices for the major services for the next regulatory period are shown in Table 8.1.

In the sections below, we outline Hunter Water's proposed prices in further detail and our response.

Table 8.1 Hunter Water's proposed charges for major services from 1 July 2016 ($2015-16)

Charge description	2015-16 current[a]	2016-17	2017-18	2018-19	2019-20	Total change
Water - Usage						
Residential and Non-residential ($kL)[b]	2.24	2.24	2.24	2.24	2.24	0%
Water - Service						
Residential						
Houses, flats and units	17.89	17.14	30.92	44.82	58.72	228%
Non-Residential						
Small customers (20mm meter stand-alone)	17.89	17.14	30.92	44.82	58.72	228%
Other (25mm meter equiv)[c]	29.20	31.01	55.86	80.84	105.75	262%
Sewerage - Usage						
Non-residential ($kL)[d]	0.67	0.65	0.64	0.62	0.61	-8%
Sewerage - Service						
Residential						
Houses	598.13	589.22	575.51	562.08	549.07	-8%
Flats and units	433.64	441.91	479.59	515.24	549.07	27%
Non-residential						
Small customers (20mm meter stand-alone)	598.13	589.22	575.51	562.08	549.07	-8%
Other (25mm metre equiv)[c,e]	1,857.22	1,916.63	1,908.67	1,906.42	1,896.30	2%
Environmental Improvement Charge	38.67	38.67	38.67	38.67	38.67	0%
Stormwater drainage						
Residential						
Houses	72.41	73.38	74.35	75.34	76.43	6%
Units	26.79	27.15	27.51	27.88	27.97	4%
Non-residential						
Small (<1,000m^2) or low impact	72.41	73.38	74.35	75.34	76.43	6%
Medium (1,001 to 10,000m^2)	130.89	132.62	134.39	136.17	138.14	6%
Large (10,001 to 45,000m^2)	832.55	843.56	854.80	866.18	878.68	6%
Very large (>45,0000m^2)	2,645.21	2680.19	2715.90	2752.07	2791.78	6%

a Hunter Water indicated that prices for 2015-16 are estimates and provided for comparative purposes only. This is because when it drafted its prices, the appropriate inflation information was not available.

b Different usage charges may apply to large customers for water use in excess of 50,000 kL per year.

c This charge is for a 25 mm meter equivalent. Customers with a larger meter will pay a multiple of this charge depending on the size of the meter.

d This charge applies to the imputed volume of sewage in excess of the discharge allowance. In 2015-16 the discharge allowance is 50 kL per year.

e Charges are for a 100% discharge factor.

Source: Hunter Water Price Submission Summary, June 2015, p 4 and IPART calculations.

8.2 Water usage charges

Hunter Water's proposal on water usage charges

Hunter Water has proposed a water usage price to approximate its long run marginal cost (LRMC) of water supply. Specifically, it has proposed that the water usage price should roll forward the price set in the 2013 Determination and be maintained in real terms at $2.24 per kL over the next price period.[116] The proposed water usage prices are shown in Table 8.2 below.

Table 8.2 Hunter Water's proposed water usage prices ($/kL, $2015-16)

	2015-16	2016-17	2017-18	2018-19	2019-20	Total Change
Base Usage	2.24	2.24	2.24	2.24	2.24	0%

Note: The current usage price for 2015-16 is $2.22/kL. As discussed in Chapter 8, $2.24/kL is a forecast.
Source: Hunter Water pricing proposal to IPART, June 2015, p 73.

The water usage charge applies to both residential and most non-residential customers. Separate location-based water usage charges can apply to industrial and commercial customers using large volumes of water (see Table 8.3). These location based charges are explained below.

Hunter Water's pricing proposal noted that its January 2009 submission to IPART adopted the average incremental cost approach to calculate LRMC.[117] IPART's 2009 determination of Hunter Water's prices based the usage charge on its estimate of LRMC. Hunter Water notes that the LHWP, which was published in January 2014, did not identify the next water supply source augmentation. Hunter Water states that it therefore does not have any formal suite of demand and supply measures on which to recalculate the LRMC.[118]

Hunter Water states that its proposal to roll forward the 2013 determination value and maintain it in real terms over the proposed determination period maintains the connection to IPART's best estimate of the LRMC and maintains the usage portion in the total water bill.[119] Hunter Water's survey of customers found that most customers would like more of their bill to be variable – ie, based on actual water use (see section 1.2).

[116] Hunter Water pricing proposal to IPART, June 2015, p 73.
[117] Hunter Water pricing proposal to IPART, June 2015, p 72.
[118] Hunter Water pricing proposal to IPART, June 2015, p 73.
[119] Hunter Water pricing proposal to IPART, June 2015, p 73.

IPART's response on water usage charges

To date, we have generally set the water usage charge for metropolitan water utilities with reference the LRMC of water supply to encourage efficient water consumption. Setting the usage charge to reflect the LRMC signals the cost of water supply augmentation to consumers when supply is nearing a capacity constraint. That is, it sends customers an efficient, long-run scarcity signal, which helps them understand the long-run cost implications of their water usage.

In the 2013 Determination for Hunter Water, the water usage charge was set at $2.08 per kL ($2012-13) and was based on the LRMC calculated as part of the 2009 Determination, which used the then proposed Tillegra Dam as the next supply augmentation.[120] This approach was taken in the 2013 Determination due to uncertainty around the next supply augmentation, which was to be determined as part of the Lower Hunter Water Plan (LHWP). The LHWP was still under development during the last price review. As Hunter Water's proposal set out, the LHWP was finalised in January 2014.

The LHWP states that the lower Hunter's water supply is secure for around 20 years.[121] As a result, the plan focuses on measures to respond to a moderate or severe drought. The LHWP also rules out Tillegra Dam as a future supply augmentation option.[122] However, it does not identify any future water supply augmentation options on which to recalculate the LRMC of water supply for Hunter Water.

We will seek to derive updated estimates of LRMC based on best available information, to inform our decision on the water usage price. However, we note that the absence of an agreed next supply augmentation for Hunter Water's area of operation makes updating the LRMC estimate difficult.

If a supply augmentation is not required in the Lower Hunter for the next 20 years, then we would expect that an updated estimate of LRMC would be lower than the existing LRMC estimate (calculated in 2009 using Tillegra Dam as the next supply augmentation).

If we were to decide on a lower water usage price, based on an updated LRMC, then holding all else constant, this would result in a higher water service charge. This is because costs not recovered from usage charge revenue would need to be recovered from water service charge revenue.

Our decision for the 2016 Determination for water usage charges will be informed not only by any available LRMC estimates but also by other factors such as price stability, customer impacts, and customer views.

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120 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 95.
121 NSW Government, *Lower Hunter Water Plan,* January 2014, p 1.
122 NSW Government, *Lower Hunter Water Plan*, January 2014, Foreword from the Minister.

Increasing the water usage price to recover costs of alternative sources of water (during times of water scarcity)

The LHWP plan provides for drought response measures or provision of alternative sources of water in times of relative water scarcity (eg, water transfers from the Central Coast or additional groundwater pumping).[123] This raises the question of whether a cost pass-through mechanism should be applied to Hunter Water's prices, as is the case for Sydney Water's Sydney Desalination Plant (SDP) costs.

The 2012 Sydney Water determination included a cost pass-through mechanism that allows Sydney Water to recover the additional costs of bulk water when the SDP is turned on and required to supply water. Under the current mechanism, the additional costs of SDP water would be passed through to water users' via Sydney Water's fixed water service charges in the year after the costs are incurred. However, for the 2016 Determination, Sydney Water has proposed that the additional variable costs it incurs when SDP is operating be passed through in water usage prices to its customers as they occur.[124] This mechanism would:

- recognise the uncertainty associated with predicting when SDP would operate (and therefore the risks associated with including forecast SDP costs in Sydney Water's cost base)
- ensure Sydney Water recovers its efficient costs when SDP is operating
- send a signal to customers about the cost of water supply in times of increased scarcity (under its current operating rules, SDP commences supply when Sydney's dam levels fall to 70%).

We note that Hunter Water has not proposed a cost pass-through mechanism, and that cost pass-through mechanisms should only be applied in very limited circumstances (see Box 8.1 below).

[123] NSW Government, *Lower Hunter Water Plan,* January 2014, p 2-3.
[124] Sydney Water pricing proposal to IPART, June 2015, p 241.

Box 8.1 Circumstances when cost pass-through mechanism 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
- the costs would have a potentially material impact on the regulated business.

IPART seeks comments on the following

16 Is Hunter Water's proposed water usage charge reasonable? If so, why?

17 If a revised estimate of the long run marginal cost of water supply for Hunter Water is lower than the current estimate, should the water usage price be reduced over the 2016 determination period to reflect this lower long run marginal cost?

18 Should the water usage charge be set with reference to the long run marginal cost of water supply, or should greater weight be placed on customer preferences?

19 Should the 2016 Determination for Hunter Water include a cost pass-through mechanism for alternative sources of water in times of relative water scarcity? If so, for which measures and how should this flow through to water prices?

Hunter Water's proposal on location-based water usage charges

Hunter Water currently charges location-based water usage prices for major industrial and commercial customers that consume in excess of 50,000 kL per year and are in the location-based price zones. Current and proposed prices are shown in Table 8.3 below.

According to Hunter Water, it has calculated these location prices by adjusting the capital-related costs covered by the usage price (ie, depreciation and return on capital) to reflect the value of the distribution system serving a particular location.[125] It reported 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.[126]

Table 8.3 Hunter Water's proposed 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	2.24	2.24	2.24	2.24	2.24	0.0%
Dungog	1.68	1.80	1.80	1.81	1.81	7.7%
Kurri Kurri	2.22	2.21	2.21	2.21	2.21	-0.5%
Lookout	2.05	2.08	2.08	2.08	2.08	1.5%
Newcastle	2.00	2.04	2.04	2.04	2.04	2.0%
Seaham-Hexham	1.73	1.85	1.85	1.86	1.85	6.9%
South Wallsend	2.09	2.12	2.12	2.12	2.12	1.4%
Tomago-Kooragang	1.68	1.80	1.80	1.81	1.81	7.7%
All Other Areas	2.24	2.24	2.24	2.24	2.24	0.0%

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

Hunter Water noted concerns raised by stakeholders in previous price reviews, that offering the lower location-based usage price to eligible large-volume users erodes the demand management price signal. It argued that the location-based usage price is a volumetric charge and the customers that can take advantage of them are very large users, and so efficient water use is already an important consideration for these customers in managing their costs. It also argued that in a number of cases, the water used is a direct input to the final product and so a material reduction in water use can only be effected by reducing the output of the businesses' end products.[127] That is, for some of these large water users, their demand for water is derived from the demand for these end products.

IPART's response on location based water usage charges

We will consider this issue as part of the review. Relevant considerations include the impacts on customers (including the customers who pay the charges and the wider customer base), our assessment of the costs of supplying these customers and stakeholder views.

[125] Hunter Water notes that its usage price based on LRMC recovers more than the annual operating costs of the water supply businesses and that in 2013-14 around 68% of the water usage price contributed to the recovery of the capital related building block costs of depreciation and return on capital. Hunter Water pricing proposal to IPART, June 2015, p 75.

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

[127] Hunter Water pricing proposal to IPART, June 2015, p 76.

We will consider Hunter Water's proposal for location-based water usage charges for large customers taking into account factors such as the whether these charges are more cost-reflective than the standard postage stamp water usage charge and the impacts on these customers and the wider customer base.

We will also consider how these prices might apply under a weighted average price cap (WAPC) as discussed in chapter 2.

IPART seeks comments on the following

20 Are Hunter Water's proposed location-based water usage charges reasonable?

8.3 Water service charges

Hunter Water's proposal on water service charges

For all residential customers, Hunter Water proposed a real increase in the uniform water service charge as set out in Table 8.4. This increase to its water service charges is to fund the increase in revenue required to fund Hunter Water's proposed costs.[128] Hunter Water notes in its proposal while this increases in large in percentage terms, it is from a low base as Hunter Water has the lowest water service charge in the country.[129]

Table 8.4 Hunter Water's proposed residential service prices ($2015-16)

	2015-16	2016-17	2017-18	2018-19	2019-20	Total Change
Houses	17.89	17.14	30.92	44.82	58.72	228.2%
Units and flats	17.89	17.14	30.92	44.82	58.72	228.2%

Source: Hunter Water pricing proposal to IPART, June 2015, p 74.

[128] As water usages charges as set according to the LRMC of supply, water service charges are set to recover the remaining revenue required to fund a utility's efficient costs.

[129] Hunter Water pricing proposal to IPART, June 2015, p iv.

Hunter Water has also proposed a real increase in the water service charge for non-residential customers (see Table 8.5). Properties with a standard 20mm meter connection pay the same as a residential customer. Non-residential customers pay a water service charge that increases in proportion to the size of the meter serving their property.

Table 8.5 Hunter Water's proposed non-residential service prices ($2015-16)

	2015-16	2016-17	2017-18	2018-19	2019-20	Total Change
20mm stand alone	17.89	17.14	30.92	44.82	58.72	228.2%
20mm	18.69	19.85	35.75	51.74	67.68	262.1%
25mm	29.20	31.01	55.86	80.84	105.75	262.2%
40mm	74.74	79.39	143.01	206.94	270.72	262.2%
100mm	467.11	496.18	893.80	1,293.40	1,692.00	262.2%

Note: Other non-residential meter-based charges can be calculated by applying the following formula: $(\text{meter size})^2 \times \frac{25\text{mm charge}}{625}$.

Source: Hunter Water pricing proposal to IPART, June 2015, p 74.

IPART's response on water service charges

In past reviews, we have set the water service charge to recover Hunter Water's residual revenue requirement after accounting for its expected water usage charge revenue.

Hunter Water has proposed a substantial real increase in the water service charge for both residential and non-residential customers. For residential and small non-residential customers, this represents a real increase of 228% over the regulatory period, and for other non-residential customers a real increase of 262%. However, the proposed increase in the water service charge are from a relatively low base when compared to these charges for the other metropolitan water utilities in Australia.

Hunter Water has reported that even with the proposed increase in the water service charge, the variable proportion of Hunter Water's water bill will remain one of the highest when compared to the other major metropolitan water utilities in Australia.[130] The relative proportions of fixed and variable water charges are shown in Figure 8.1 below.

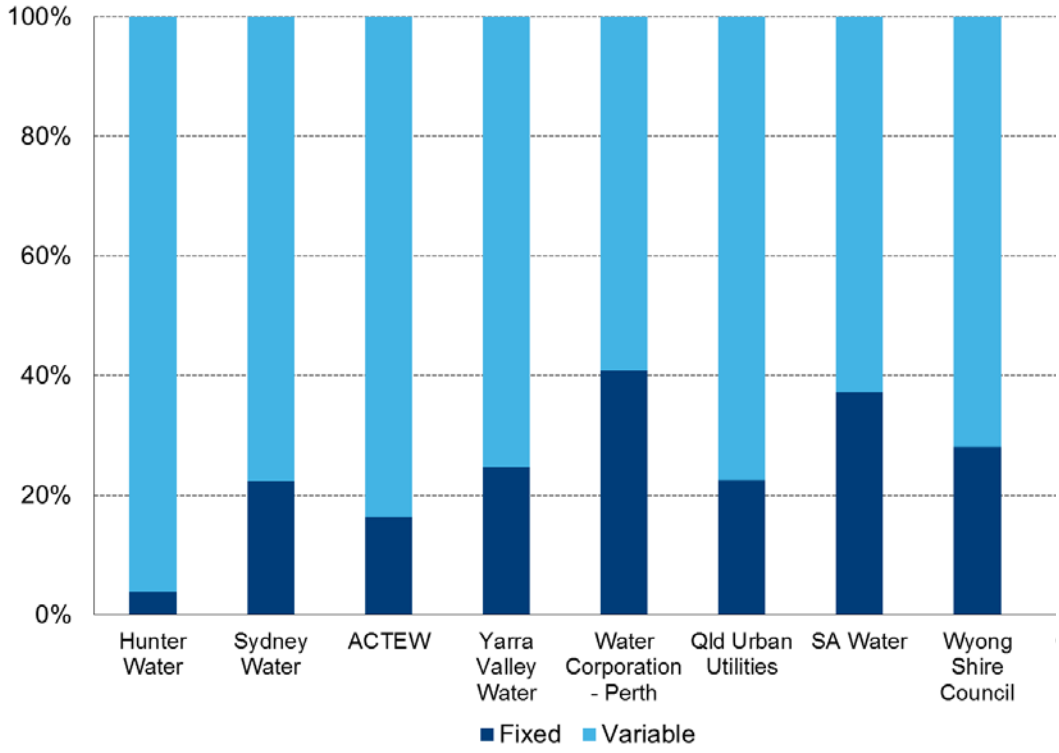
Hunter Water estimates that, using its proposed water prices, the water usage component of the water bill will be reduced from 96% in 2015-16 to 88% in 2019-20.[131]

[130] Hunter Water pricing proposal to IPART, June 2015, p 92-93.
[131] Hunter Water pricing proposal to IPART, June 2015, p 92.

Our decision on Hunter Water's water usage charges will likely have an impact on its water service charges (the higher the usage charge, the lower the service charge, all other things being equal).

We will consider Hunter Water's proposed water service charge, taking into account Hunter Water's costs of providing water services, customer impacts and stakeholder views.

Figure 8.1 Ratio of variable to fixed water charges for metropolitan water utilities



Source: Hunter Water pricing proposal, June 2015, p 93.

IPART seeks comments on the following

21 Are Hunter Water's proposed water service charges for residential and non-residential customers reasonable?

8.4 Sewerage service charge

Residential flats/units sewerage service charges

As noted in Chapter 2, we made decisions as part of the 2013 Determination to restructure Hunter Water's prices to remove cross-subsidies and improve cost reflectivity for all customer groups. These price structure changes mean that currently:

- all residential customers pay a standard (ie, the same) water service charge irrespective of dwelling type – ie, individual flats and units pay the same charges as houses
- individual flats/units pay a sewerage service charge that is 72.5% of that of houses
- non-residential customers with a single 20mm meter pay the same standard water and sewerage service charge as residential customers
- non-residential customers in mixed multi-developments pay the same standard water and sewerage service charge as residential customers, and
- non-residential customers with multiple 20mm meters or any other meter size (including those on shared meters) pay water and sewerage service charges with reference to a 25mm meter charge – ie, meter-based water and sewerage service charges.

Hunter Water's proposal on sewerage service charges

In line with principles underpinning IPART's 2013 Determination, Hunter Water has proposed that flats/units should continue to transition towards paying the same service charge as houses, with the transition to be fully completed by 2019-20.[132]

At the 2013 Determination, Hunter Water considered that it was not appropriate to have the same residential service charges for flats/units and houses. It argued this position on both equity and cost-reflective grounds. Therefore it proposed that the sewerage service charge for flats/units should be increased from the then 65% to 75% of houses.[133] We accepted Hunter Water's proposal as we considered it to be a reasonable balance between progress towards cost reflectivity and managing bill impacts for customers in flats and units for the 2013 determination period.[134]

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132 Hunter Water pricing proposal to IPART, June 2015, p 83.

133 The sewerage service charge for flats/units was to be increased to 75% of houses by 2016-17. Due to Hunter Water's early price proposal, it is currently at 72.5%. Also see following footnote.

134 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 118.

Hunter Water indicated in its pricing proposal that it has reviewed the basis for calculating the cost differential between property types. It reports that its review revealed less of a case for the cost difference and hence it proposes that the sewerage service charge for flats/units and houses should be the same by 2019-20. It also notes that two thirds of its customers responding to the 2012 customer engagement survey agreed that houses, flats and units should pay a similar sewerage service charge.[135] However, a common concern expressed by customers in the 2014 survey was that sewer service charge was too high.[136]

Hunter Water's proposal would bring its residential sewerage service charges in line with its residential water service charges, in that all residential customers would pay the same water service charge and the same sewerage service charge by 2019-20.[137]

The transition will involve:

- a real decrease of about 8% in the sewerage service charge for standalone houses, and
- a real increase of about 27% in the sewerage service charge for flats and units (in equal steps).

Hunter Water's proposed sewerage service charges for the 2016 Determination period for flats, units and houses are shown in Table 8.6 below.

Table 8.6 Hunter Water's proposed sewerage service charges ($2015-16)

	2015-16	2016-17	2017-18	2018-19	2019-20	Total Change
Residential						
Residential house	598.13	589.22	575.51	562.08	549.07	-8.2%
Residential multi-premises	433.64	441.91	479.59	515.24	549.07	26.6%
Non-Residential						
Non-residential (20mm stand alone)	598.13	589.22	575.51	562.08	549.07	-8.2%
Non-residential meter based service charge[a]	1,857.22	1,916.63	1,908.67	1,906.42	1,896.30	2.1%

a Meter based charge is based on a 25mm meter. Other non-residential meter-based charges can be calculated by applying the following formula: $(\text{meter size})^2 \times \frac{25\text{mm charge}}{625}$.

Source: Hunter Water pricing proposal, June 2015, p 84.

135 Hunter Water pricing proposal to IPART, June 2015, p 83.
136 Hunter Water pricing proposal to IPART, June 2015, p 111.
137 Hunter Water pricing proposal to IPART, June 2015, pp 83-84.

Hunter Water proposed the following sewerage service charges for non-residential customers:

- Small stand-alone properties to be charged the same as houses.
- Large properties and multi-premise properties to be charged service charges according to meter size. A discharge factor, as determined by Hunter Water, would continue to be applied to the service charge.[138]

Hunter Water proposed to maintain the current method of allocating its sewerage costs between residential and non-residential customers. This means that, at an aggregate level, each group of customers (residential and non-residential) would continue to pay a similar share of Hunter Water's revenue requirement as under the 2013 Determination. Hunter Water commented that changing the share of costs between residential and non-residential customer as per IPART's proposed approach outlined in section 8.6 below would have an additional impost on residential flats and units, which Hunter Water considers would not be reasonable.[139]

IPART's response on residential sewerage service charges

We will consider this issue as part of the review taking into account our views expressed to date, our approach for other utilities, our modelling of customer bill impacts (factoring in any adjustments we may make to Hunter Water's proposed revenue requirement), and stakeholder comments.

We note that Hunter Water's proposal would mean that by 2019-20 flats/units in Hunter Water's area of operations would be charged sewerage service charges that would be consistent with how flats/units are charged in Sydney Water's area of operations.

IPART seeks comments on the following:

22 Is Hunter Water's proposal to equalise the sewerage service charge for flats/units with houses by 2019-20 reasonable?

[138] Hunter Water pricing proposal to IPART, June 2015, p 83.
[139] Hunter Water pricing proposal to IPART, June 2015, p 85.

8.5 Sewerage usage charge

Sewerage usage charges currently apply to non-residential customers whose discharge to the sewerage system exceeds a specified discharge allowance.

In 2012-13, Hunter Water levied a sewerage usage charge on all non-residential customers' discharges (ie, there was no discharge allowance). However, at the 2013 Determination we introduced a discharge allowance for non-residential customers with the aim of aligning it with the deemed discharge of 150 kL per year for residential customers (which is implicit in their sewerage service charges). Therefore, we phased-in a discharge allowance, starting at 0 kL per year and increasing it by 25 kL per year over the 2013 determination period. It is currently set at 50 kL per year.[140]

Hunter Water's proposal on sewerage usage charge

Hunter Water proposed that the deemed sewerage discharge allowance should continue to transition over the price path to 150 kL pear year by 2019-20 (see table 8.7). It indicates that this would maintain the staged approach set in IPART's 2013 Determination and align Hunter Water with the other metropolitan water utilities.[141]

Hunter Water proposed to retain the current sewerage usage charge for non-residential customers at the nominal price of $0.67 per kL over the next regulatory period.[142] This means that the usage charge would fall in real terms over the proposed price period. Hunter Water commented that this would be consistent with moving sewerage usage charges towards the short run marginal cost of supply (SRMC) and provide a degree of price stability to non-residential customers.[143]

Table 8.7 shows that sewerage usage prices would decline in real terms by 9% over the 4-year period, under Hunter Water's proposal. This charge would be applied to all non-residential customers including those with 20mm stand-alone meters.

140 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 119-120.
141 Hunter Water pricing proposal to IPART, June 2015, p 82.
142 Hunter Water pricing proposal to IPART, June 2015, p 82.
143 Hunter Water pricing proposal to IPART, June 2015, p 82.

Table 8.7 Hunter Water's proposed non-residential sewerage usage charges ($/kL, $2015-16) and free allowance (kL/year)

	2015-16	2016-17	2017-18	2018-19	2019-20	Total Change
Sewerage usage charge	0.67	0.65	0.64	0.62	0.61	-9.0%
Free discharge allowance threshold	50	75	100	125	150	200.0%

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

Hunter Water has also proposed that the sewerage usage charge should be reviewed again prior to the following price period, taking into account the relativity of usage charges across the four regulated metropolitan water utilities.[144]

IPART's response on sewerage usage charge

According to our pricing principles for metropolitan water utilities established in 2012, the non-residential sewerage usage charge should be a standard variable charge for all customers set with reference to, but not necessarily equal to, the utility's short run marginal cost of transporting, treating and disposing of domestic-strength effluent.[145] Hunter Water previously estimated the short run marginal cost to be $0.30/kL ($2009-10).[146]

Our preliminary response is to accept Hunter Water's proposal to reduce the sewerage usage charge in real terms. We note that Hunter Water's proposed price is higher than Hunter Water's previous estimate of the SRMC of transporting, treating and disposing of domestic-strength effluent.[147] However, we recognise that price adjustments may need to be phased-in over time. We will review Hunter Water's proposed prices against any updated estimates of the SRMC.

In relation to the discharge allowance, Hunter Water's proposal is consistent with our intention at the 2013 Determination to ultimately align the discharge allowance of non-residential customers with that of the deemed discharge amount embodied in the residential customer service charge (150 kL per annum).

144 Hunter Water pricing proposal to IPART, June 2015, p 82.

145 IPART, *Review of Price Structures for Metropolitan Water Utilities – Final Report*, March 2012, p 24.

146 IPART, *Review of prices for water, sewerage, stormwater and other services for Hunter Water Corporation – Final Report*, June 2013, p 118.

147 IPART, *Review of prices for water, sewerage, stormwater and other services for Hunter Water Corporation – From date of Gazettal - Final Report*, July 2009, p 142.

Our view is that residential and non-residential customers should be treated on an equitable basis. If residential customers do not face an explicit sewerage usage charge but are deemed to have 150 kL of discharge embodied in their service charge, then the threshold allowance for non-residential customers, beyond which sewerage usage charges apply should also be 150 kL per year.

We also consider that the costs associated with a deemed 150 kL per year of sewerage discharge for residential and non-residential customers should be explicitly added to their service charges as the final step in calculating these charges after they have been set to ensure that non-residential customers with larger meter connections do not pay more than their reasonable share of costs.

Finally, our Issues Paper for our concurrent review of Sydney Water's prices notes that we will consider introducing sewerage usage charges for residential customers if Sydney Water and stakeholders provide positive feedback on it. A residential sewerage usage charge may more closely reflect the user pays principle and give customers greater control of their bills.

This is also a potential option for Hunter Water, although we acknowledge that residential sewerage usage charges were previously levied by Hunter Water, but were removed at the 2009 Determination[148] following submissions from Hunter Water and other stakeholders.

IPART seeks comments on the following

23 Are Hunter Water's proposed sewerage usage charges and discharge allowances for non-residential customers reasonable?

8.6 Rebasing water and sewerage service charges

At the 2013 Determination, we made decisions to restructure Hunter Water's prices to remove cross-subsidies and improve cost reflectivity for all customer groups. As part of the restructure, when setting the service charges, we maintained the existing proportion of residual revenue collected from residential and non-residential customers (the residual revenue is the revenue to be recovered from residential and non-residual customers after revenue from usage charges is deducted). This was done to prevent new inequities and cross subsidies being introduced between the different customer groups. For water service charges, this meant that:

- Residential water service charges were set to a standard charge within the existing proportion of the residual water revenue to be collected from residential customers.
- Non-residential customers with a single 20mm meter were then charged the standard residential water service charge.

[148] 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.

- The revenue to be recovered from non-residential customers with a single 20mm meter was deducted from the total existing proportion of revenue to be recovered from non-residential customers. This resulting revenue was to be then recovered from all other non-residential customers by calculating appropriate water service charges based on a 25mm meter equivalent basis.

A similar process was applied to the setting of sewerage service charges, with the exception that the service charge for flats/units was transitioned to equal 75% of that of houses by 2016-17 (from 65% of that of houses in 2013-14).

As discussed in Chapter 2, we ciruclated a discussion paper in November 2014 indicating our preference to deem all residential customers a 20mm meter and rebase all non-residential customers' service charges to 20mm meter equivalents. This means that individual flats/units would all pay the same service charge for water and the same service charge for sewerage, but with reference to a 20mm meter charge that is common to non-residential customers.

Hunter Water's proposal to not rebase water and sewerage charges

Hunter Water recognises the merits of deeming all residential customers a 20mm meter (and thus rebasing non-residential customers' meters to 20mm meters). However, it notes that this would lead to an increase in the residential customers' share of the residual revenue, thus leading to higher residential service charges.[149,150]

For the 2016 determination period, Hunter Water proposes to maintain the current method of allocating residual costs between residential and non-residential customers based on historical revenue shares. It considers that recalculating the revenue shares by deeming all residential customers (individual flats/units and houses) a 20mm meter would add an additional impost on flats/units beyond that which it considers reasonable given that flats and units are already facing a significant increase in their sewerage service charges under Hunter Water's proposal to increase charges to be in line that of houses by 2019-20.[151]

Hunter Water plans to consider the merits of this reform further when the transition to a common residential sewerage service charge is complete.[152]

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[149] Hunter Water pricing proposal to IPART, June 2015, pp 84-85. We note that Hunter Water mentions this issue explicitly under sewerage service charges and not again under water service charges. However, this issue is applicable to both water and sewerage.

[150] This is largely because under historical revenue shares, flats/units previously only paid a pro-rata share of the common meter they were connected to. If they were all deemed a 20mm meter, they would now pay the same as a non-residential customer on a 20mm meter. Hence the residential share of charges would increase.

[151] Hunter Water pricing proposal to IPART, June 2015, p 85.

[152] Hunter Water pricing proposal to IPART, June 2015, p 85.

IPART's response to not rebasing water and sewerage service charges

We will consider Hunter Water's proposal to maintain the current method of allocating residual costs between the aggregate customer groups of residential and non-residential based on historical revenue splits (or cost share).

We note that the current price structure does not correct the anomaly whereby non-residential customers with a single individual 20mm meter pay a different fixed charge (per meter) to those with multiple 20mm meters.[153] Deeming all residential customers a 20mm meter and rebasing all non-residential customers to 20mm meter equivalents would correct this anomaly.

We will consider stakeholder views and the impact on customers, particularly flats/units, once we have reached draft decisions on Hunter Water's prudent and efficient expenditure and the appropriate rate of return that should be reflected in prices.

IPART seeks comments on the following

24 Is Hunter Water's proposal to maintain the current method of calculating service charges according to historical residential and non-residential revenue shares reasonable?

8.7 Environmental Improvement Charge

Hunter Water levies an annual Environmental Improvement Charge (EIC) on all sewered properties in its area of operation and on properties where there is a commitment to make sewerage services available. 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.[154]

In November 2014 the township of Wyee, South West of Lake Macquarie was added to the priority sewerage program. The NSW Government announced that $23.6 million would be funded through the EIC and $2.4 million by the Government.[155]

Hunter Water's PROPOSAL on EIC

Hunter Water has proposed a 3-year extension of the annual EIC of $38.67 ($2015-16) to be held constant in real terms over the 2016 determination period. Hunter Water's proposal states that in its submission to the 2013 Determination it

[153] This is because currently customers with multiple 20mm meters pay a charge for each of their meters with reference to a 25mm meter. This means that non-residential customers with multiple 20mm meters currently pay about $18.54 (per annum) per meter, compared with about $17.75 (per annum) for a non-residential customer with a single 20mm meter.

[154] Hunter Water pricing proposal to IPART, June 2015, p 85.

[155] Hunter Water pricing proposal to IPART, June 2015, Appendix J, p J1.

proposed that the EIC of $35.89 be maintained in real terms for the period with a sunset at June 2019.[156] The proposal for the EIC means the charge would be abolished at the end June 2022, instead of the current date of 30 June 2019. Hunter Water has also proposed that eligible pensioner concession card holders are exempt from paying the EIC.

Table 8.8 Hunter Water's proposed Environmental Improvement Charge for 2016 determination ($2015-16)

	2015-16	2016-17	2017-18	2019-20	Total change
Charge	38.67	38.67	38.67	38.67	0%

Source: Hunter Water pricing proposal to IPART, June 2015, p 86.

IPART's response on the EIC

At the 2013 Determination, we decided to accept Hunter Water's proposal to hold the EIC constant over the determination period[157], with a view to abolishing the charge in 2019.

However, given that the NSW Government has made a decision to include the township of Wyee on the Priority Sewerage Program, we will consider whether it is appropriate for the current EIC charge to be extended for an additional three years to fund the backlog sewer works.

If maintained, we support the EIC as a separate charge, as it makes the costs of providing backlog sewerage services more transparent.

IPART seeks comments on the following

25 Is Hunter Water's proposed Environmental Improvement Charge reasonable?

8.8 Stormwater

Stormwater drainage services are largely the responsibility of local councils in Hunter Water's area of operations. Hunter Water levies stormwater drainage charges to customers whose properties are in areas serviced by stormwater channels it owns and operates, which is about one quarter of customers.[158]

156 Hunter Water pricing proposal to IPART, June 2015, p 86.
157 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.
158 Hunter Water pricing proposal to IPART, June 2015, p 89.

Hunter Water's current stormwater pricing structure comprises:

- a single standard residential service charge applicable to all residential connections, with different charges applying to houses and multi-premises (eg, flats, units), and
- a land-area based charge for non-residential connections.[159]

There are four area-based categories for non-residential charges to reflect the relationship between land area and stormwater runoff:

- Small (1,000m^2 or less) or low impact.
- Medium (1,001 to 10,000m^2).
- Large (10,001 to 45,000m^2).
- Very large (>45,0000m^2).[160]

Hunter Water's proposal on stormwater charges

Hunter Water has proposed to maintain the existing pricing structure for stormwater services. Over the 4-year period, Hunter Water's proposed stormwater prices would increase in real terms for houses by about 6%, flats and units by 4%, and non-residential customers by 6%. Hunter Water's proposed stormwater prices for residential and non-residential customers are shown in Table 8.9 below.

Table 8.9 Hunter Water's proposed stormwater prices ($2015-16)

	Current (2015-16)	2016-17	2017-18	2018-19	2019-20	Total change
Residential						
Houses	**72.41**	73.38	74.35	75.34	76.43	5.6%
Multi premises	**26.79**	27.15	27.51	27.88	27.97	4.4%
Non-residential						
Small (≤1000m^2) or low impact	**72.41**	73.38	74.35	75.34	76.43	5.6%
Medium (1,001-10,000m^2)	**130.89**	132.62	134.39	136.17	138.14	5.5%
Large (10,001-45,000m^2)	**832.55**	843.56	854.80	866.18	878.68	5.5%
Very large (>45,000m^2)	**2,645.21**	2,680.19	2,715.90	2,752.07	2,791.78	5.5%

Source: Hunter Water pricing proposal, June 2015, p 90.

These prices are based on a 1.2% real per annum increase in the revenue requirement for the provision of stormwater services.[161]

[159] Hunter Water pricing proposal to IPART, June 2015, p 90.
[160] Hunter Water pricing proposal to IPART, June 2015, p 90.
[161] Hunter Water pricing proposal to IPART, June 2015, p 90.

IPART's response on stormwater drainage charges

Over the 2013 determination period, stormwater charges decreased due to lower proposed expenditures. In our final report for the 2013 Determination, we noted capital expenditure (including stormwater) was significantly smaller than in the preceding two determination periods.[162] For the 2016 Determination, Hunter Water has proposed an increase in stormwater operating and capital expenditure.

As discussed in Chapter 5, our consultants will review Hunter Water's proposed capital expenditure on stormwater assets and the efficient profile for this expenditure over the medium term. This will inform our decision on the appropriate level of stormwater prices for the 2016 Determination.

IPART seeks comments on the following

26 Are Hunter Water's proposed stormwater drainage charges reasonable?

8.9 Customer bill impacts

This section sets out the estimated impacts on customers' bills of the prices proposed by Hunter Water.

Residential customers

Under Hunter Water's pricing proposal for the 2016 Determination:

- The typical annual residential bill would rise from $1,069 in 2015-16 to $1,171 in 2019-20, or $25 per year on average in nominal terms. This a decrease in real terms of $8 over the period.[163]
- The typical annual residential strata unit annual bill for a typical strata unit would rise from $826 in 2015-16 to $1,084 in 2019-20 or around $64 per year increase on average in nominal terms. This is an increase in real terms by $156 over the period.[164]
- The typical pensioner customer annual bill would rise from $563 in 2015-16 to $615 in 2019-20, or around $13 per year on average in nominal terms. This is a decrease in real terms of $6 over the period.[165]

The average annual residential bill for a household with and without stormwater drainage charges is shown in Table 8.10.

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[162] 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 74.
[163] Hunter Water pricing proposal to IPART, June 2015, p 92. Based on consumption of 185 kL.
[164] Hunter Water pricing proposal to IPART, June 2015, p 93. Based on consumption of 150 kL.
[165] Hunter Water pricing proposal to IPART, June 2015, p 93. Based on consumption of 100 kL.

Table 8.10 Residential water and sewerage bills under Hunter Water's proposed prices ($ nominal)

	2015-16	2016-17	2017-18	2018-19	2019-20	Total change
185 kL/year with drainage	1,142	1,162	1,191	1,222	1,255	9.9%
185 kL/year without drainage	1,069	1,087	1,113	1,141	1,171	9.5%
200 kL/year with drainage	1,175	1,196	1,226	1,258	1,292	9.9%
200 kL/year without drainage	1,103	1,121	1,148	1,177	1,208	9.5%

Note: Annual bills assuming a consumption of 200 kL/year were not reported in Hunter Water's proposal, and have been calculated by IPART. Figures include Environmental Improvement Charge.

Source: Hunter Water pricing proposal to IPART - Appendices, June 2015, pp K.3- K.4.

Non-residential

Non-residential customers' bills depend on their meter configuration and discharge factors, as well as their water and sewerage usage which can vary significantly depending on the size and nature of the customer. Hunter Water proposed no changes to the structure of water, sewerage or stormwater prices for non-residential customers for the 2016 determination period. On average, Hunter Water's proposed prices result in an annual real increase of less than one per cent for non-residential customers. The annual bill impacts (in nominal terms) for a sample of non-residential customers is shown in Table 8.11.

Table 8.11 Hunter Water's proposed non-residential bills for different types of businesses ($ nominal)

Business Type	2015-16	2016-17	2017-18	2018-19	2019-20	Total change
Small shop – Newcastle	1,163	1,167	1,178	1,193	1,209	4.0%
Large office - Newcastle	16,928	17,327	17,793	18,328	18,867	11.5%
Large licenced club	65,355	67,361	68,934	70,729	72,483	10.9%
Small industrial firm	947	962	987	1,013	1,041	9.9%
Medium industrial firm	284,101	294,735	300,965	308,346	315,681	11.1%
Large industrial firm	495,731	512,665	523,309	535,769	548,239	10.8%

Note: Water, sewerage, stormwater and trade waste water charges are assumed for large industrial and small industrial firms. Medium industrial excludes drainage and small shop (Newcastle) excludes trade wastewater and drainage charges.

Source: Hunter Water pricing proposal to IPART, June 2015, p 97.

8.10 Pricing terminology

Hunter Water has not raised any issues with IPART's pricing terminology. However, we are currently also reviewing Sydney Water's prices for its 2016 Determination, and it has indicated that its customer engagement revealed confusion around the meaning of the 'service charge'. We provide further detail in Box 8.2 below. We seek feedback as to the most appropriate name for the current fixed 'service charge'. This issue is also discussed in our Issues Paper for the Sydney Water review.

Box 8.2 Pricing terminology – Summary of proposals for changes to form of regulation

Sydney Water's customer engagement revealed confusion around the meaning of the 'service charge'.[a] Our experience of customer enquiries is consistent with Sydney Water's findings. Most customers query why their service charge is so high and not representative of their 'use' of the system or the level of 'service' they receive. We consider that changing the name of the 'service charge' would help customers better understand why a component of their bill is fixed and unrelated to usage. The new name should describe the nature of the charge. Alternative names could be:

- availability charge
- supply charge
- system access charge
- distribution charge
- meter charge
- customer charge
- capacity charge
- utility charge
- network charge
- delivery charge
- fixed charge
- pipeline / network rental (similar to line rental used in telecommunications).

We consider that the name 'access charge' is not appropriate as it may be confused with the term 'access pricing'. Access pricing is used in the water industry (and other industries) for the pricing of third party access to the network, often for alternative uses.

Our preferred option is 'availability charge', as this indicates that the fixed component of a bill represents the customers' capacity to use the system (ie, that they are connected to the system (rather than actual use of the system).

[a] Sydney Water pricing proposal to IPART - Appendices, June 2015, p 80.

IPART seeks comments on the following

27 What is the most appropriate name for the current fixed 'service charge'?

9 Prices for other services

In addition to its main water, sewerage and stormwater services, Hunter Water provides a range of other services for which we regulate its prices. These include:

- non-residential trade waste charges
- bulk water charges to Gosford City Council and Wyong Shire Council
- sewerage charges to Clarence Town customers
- unfiltered water charges to some customers serviced by the upper Chichester Dam pipeline
- water charges for unmetered properties, and
- miscellaneous and ancillary charges.

This chapter outlines Hunter Water's proposed prices for these other services and our preliminary responses.

9.1 Trade waste charges

Trade waste is defined as wastewater from commercial and industrial customers in which the concentrations of pollutants exceed a domestic equivalent.[166] 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).

[166] A domestic equivalent is a concentration or level that is the same as would be found in household wastewater.

Hunter Water provides trade wastewater and tankering services to commercial and industrial customers where capacity and capability are available at wastewater treatment works. Trade waste and tankering discharges have a higher concentration of pollutants than domestic discharges and therefore increase treatment costs.

Hunter Water's proposal on trade waste charges

Hunter Water has proposed to maintain the existing structure of its trade waste charges, and to increase the level of the charges in line with inflation.[167]

Hunter Water also proposed a new charge to vary the tankering service agreements to recover the costs of assessing the quality and quantity of waste discharged at wastewater treatment plants not included in the original agreement. These customers will be required to lodge a variation to agreement application for all waste that is generated from areas outside Hunter Water's area of operations.[168]

To support it proposals, Hunter Water indicated that it has reviewed and updated its trade waste charges to reflect movements in operating costs of treatment plants and changes to its regulatory operating environment (such as Environment Protection Licences and pollution reduction programs).[169] According to Hunter Water, this review did not reveal a need to vary any individual charge, or the revenue generated from the charges as a whole (in real terms) as increases in some costs have been offset by savings in the same area.[170]

The full list of Hunter Water's proposed trade waste charges is shown in Appendix D.

IPART's response on trade waste charges

As Hunter Water noted in its proposal, its overall approach to trade waste charging was the subject of a major review prior to the 2009 Determination. We engaged Deloitte and Halcrow to conduct this review. They found that Hunter Water's approach to calculating trade waste charges was in line with our trade waste pricing principles,[171] outlined in Box 9.1.

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167 Hunter Water pricing proposal to IPART, June 2015, p 114.
168 Hunter Water pricing proposal to IPART, June 2015, p 119.
169 Hunter Water pricing proposal to IPART, June 2015, p 114.
170 Hunter Water pricing proposal to IPART, June 2015, p 114.
171 Deloitte/Halcrow, *Review of Hunter Water's miscellaneous and trade waste charges – Final report*, December 2008, p 10.

Box 9.1 IPART's trade waste pricing principles

We defined a set of trade waste pricing principles as part of our 2003 review of trade waste pricing.

- Standards for acceptance of trade waste should be set on the basis of the capacity of current systems to treat wastes.
- Trade waste charges should cover the costs to the water supplier of handling these wastes.
- Charges should vary to reflect differences in the cost of treating waste to the required standards at particular locations.

Water suppliers should set charges and standards in a manner that is transparent and accurate, and the basis for setting charges should reflect costs incurred as far as possible.

For the 2013 Determination, Hunter Water did not change its approach to trade waste charging. It proposed only that its trade waste charges be indexed annually in line with changes in the CPI, and we accepted this proposal.[172]

For the 2016 Determination, Hunter Water has again proposed only to maintain the level of its existing trade waste charges in real terms. Our preliminary view is to accept this proposal, consistent with our previous decision. However, we will consider stakeholder feedback and conduct our own high-level review of the proposal (including the proposed new charge) before making our draft decision.

IPART seeks comments on the following

28 Are Hunter Water's proposed trade waste charges reasonable?

9.2 Bulk water charges to Central Coast councils

Hunter Water has a water supply arrangement with the 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.[173]

[172] 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 130.

[173] 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.

For the 2013 Determination, we decided that the interchange price for this water should recover only the marginal or incremental 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.

We set the interchange price in line with the Central Coast councils' estimated short run marginal cost of $0.60/kL ($2012-13), and provided for it to be maintained in real terms over the 2013 determination period.[174] Currently, the interchange price is $0.65/kL ($2015-16).

Hunter Water's proposal on bulk water charges to Central Coast councils

Hunter Water proposed that the 2015-16 interchange price of $0.65/kL be maintained in real terms over the 4-year determination period as shown in Table 9.1.[175] It indicated that this proposal 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 in 2017.

Table 9.1 Hunter Water's proposed central coast interchange price ($2015-16)

	2015-16	2016-17	2017-18	2018-19	2019-20	Total change
Price ($ / kL)	0.65	0.65	0.65	0.65	0.65	0%

Source: Hunter Water pricing proposal to IPART, June 2015, p 78.

IPART's response on bulk water charges to Central Coast councils

Our preliminary response is to accept Hunter Water's proposal to maintain the interchange price in real terms over the 2016 determination period. However, this is subject to feedback from stakeholders, including the Central Coast councils, and our own analysis.

We seek stakeholder comment on

29 Is Hunter Water's proposed bulk water charge to the Central Coast councils appropriate?

9.3 Clarence Town Sewerage Levy

Hunter Water currently charges customers in the Clarence Town area an annual sewerage levy to contribute to the cost of providing the sewerage scheme for

[174] 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.

[175] Hunter Water pricing proposal to IPART, June 2015, p 78.

Clarence Town, completed in March 2012.[176] This levy is in addition to Hunter Water's standard sewerage charges.

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 (EIC) levied on all of Hunter Water's sewerage customers.[177]

Hunter Water's proposal on the Clarence Town Sewerage Levy

Hunter Water reported that there have been no further material capital investments in the Clarence Town scheme over the 2013 determination period. It also advised that the revenue from Clarence Town Sewerage Levy and the EIC is on track to recover the outstanding capital for the scheme by 30 June 2019, but with a small surplus.[178]

Therefore, it proposed that the levy be maintained at the 2015-16 level of $78.86 until 30 June 2019 as shown in Table 9.2 below. After 30 June 2019, Hunter Water proposed that the levy would no longer be charged.

Table 9.2 Hunter Water's proposed Clarence Town Sewerage Levy ($2015-16)

	2015-16	2016-17	2017-18	2018-19	Total change
Clarence Town Charge	78.86	78.86	78.86	78.86	0%

Source: Hunter Water pricing proposal to IPART, June 2015, p 86.

IPART's response on Clarence Town Sewerage Levy

Given that there has been no further capital invested in the scheme, and the revenue generated by the Clarence Town Sewerage Levy and the EIC is on track to recover the outstanding capital investment by 30 June 2019, our preliminary response is to accept Hunter Water's proposal.

IPART seeks comments on the following

30 Is Hunter Water's proposed sewerage levy for Clarence Town appropriate?

176 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 121-122.
177 Hunter Water Corporation submission to IPART on prices to apply from 1 July 2013, September 2012 pp 116-117.
178 Hunter Water pricing proposal to IPART, June 2015, p 86.

9.4 Prices for unfiltered water

Hunter Water currently charges a discounted price for the supply of water to customers serviced by the upper Chichester Dam pipeline who do not receive filtered water from the Dungog water filtration plant. The water supplied to these customers is disinfected but not filtered, which means the quality of the water can vary, for example in relation to turbidity, after heavy rain.

The unfiltered water charge is set as the standard water usage charge less an estimate of the avoided costs of water filtration. The current charge for unfiltered water is $1.87/kL, compared to $2.24/kL for potable water.[179] 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.[180]

Hunter Water's proposal on prices for unfiltered water

In real terms, Hunter Water proposed to increase the price of unfiltered water from its current level of $1.87/kL to $1.91/kL in 2016-17 and then to $2.05/kL from 2017-18 to 2019-20. This represents a discount of $0.37 in 2015-16, which reduces to $0.19 by 2017-18 and thereafter. According to Hunter Water, this reflects its estimate of the cost of water filtration based on latest cost information available.

Hunter Water's proposed unfiltered water prices are shown in Table 9.3.

Table 9.3 Hunter Water's proposed unfiltered water price ($/kL, $2015-16)

	2015-16	2016-17	2017-18	2018-19	2019-20	Total change
Unfiltered water customers	1.87	1.91	2.05	2.05	2.05	9.6%

Source: Hunter Water pricing proposal to IPART, June 2015, p 79.

IPART's response on prices for unfiltered water

Our preliminary response is to accept Hunter Water's proposed unfiltered water prices. In principle, we support the approach it uses to calculate these prices ie, the potable water charge less the avoided costs of unfiltered water.

However, before making our draft decision, we will review Hunter Water's latest estimates of the costs of water filtration (which are the avoided costs of unfiltered water) and consider stakeholders' comments on the proposed prices.

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179 Hunter Water pricing proposal to IPART, June 2015, pp 77-78.

180 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 108-109.

We seek stakeholder comment on

31 Are Hunter Water's proposed unfiltered water prices appropriate?

9.5 Water prices for unmetered properties

Some residential and non-residential properties serviced by Hunter Water do not have water meters. Therefore, 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.

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).[181]

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.[182]

Hunter Water's proposal on prices for unmetered properties

Hunter Water proposed to maintain the current approach to charging unmetered properties (outlined above). Table 9.3 shows its proposed water charges for these properties.

Table 9.4 Hunter Water's proposed unmetered property water charge ($2015-16)

	2015-16	2016-17	2017-18	2018-19	2019-20	Total change
Unmetered charge	421.22	420.34	434.12	448.02	461.92	9.66%

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

IPART's response on prices for unmetered properties

We consider that unmetered customers should continue to pay a water service charge that reflects the residential service charge (or 20mm equivalent charge, if water and sewerage service charges are rebased on this scale). We also consider that unmetered customers should continue to pay a deemed usage component that reflects average residential water consumption.

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181 Hunter Water pricing proposal to IPART, June 2015, p 77.

182 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.

Therefore, our preliminary response is to accept Hunter Water's proposal. To make our draft decision, we will review Hunter Water's proposed deemed water usage of 180 kL /year against information on the average water consumption level of Hunter Water's customers, and consider stakeholder comments.

IPART seeks comments on the following

32 Are Hunter Water's proposed water prices for unmetered properties reasonable?

9.6 Major service connection charge

There are a small number of existing properties located in areas serviced by Hunter Water's wastewater network, but which are not connected to this network. These properties are typically non-residential and have an onsite wastewater treatment system. Hunter Water has indicated that it receives an average of around six requests each year from these existing properties to connect to its wastewater system, and that these properties can generate high sewerage loads.[183]

Hunter Water's proposal for a major service connection charge

Hunter Water proposed a methodology for calculating charges for connecting existing properties to its wastewater system rather than a specific price (or prices). It indicated a methodology is preferable to a standard charge, because applications for these connections are infrequent, and it is difficult to predict the number and location of applications it will receive during a determination period in advance. This makes it difficult to determine the costs that will need to be recovered.[184]

Hunter Water proposed that the methodology be based on IPART's 2000 developer charges determination, with some amendments so that charges achieve clarity for customers in the practical implementation of the methodology, administrative efficiency and flexibility to deal with different circumstances.[185]

In general terms, IPART's 2000 water and sewerage developer charges methodology uses a net present value approach and allows Hunter Water to recover the costs of servicing new development net of the periodic (postage stamp) pricing revenue it will receive from servicing that development in the future (see Box 9.2).

[183] Hunter Water pricing proposal to IPART, June 2015, p 87.
[184] Hunter Water pricing proposal to IPART, June 2015, p 87.
[185] Hunter Water pricing proposal to IPART, June 2015, p 88.

Box 9.2 Calculation of developer charges using net present value

Developer Charge per Equivalent Tenement is calculated as follows:

$$DC = \frac{K_1}{L_1} + \frac{K_2}{L_2} - \frac{NPV(R_i - C_i)}{L_3} \text{ for i=years 1, …, n}$$

Where:

- DC - Developer Charges per Equivalent Tenement.
- K1 - the Capital Charge for the Pre-1996 Assets which will serve the Development Service Plan (DSP) Area calculated on an NPV basis, discounted at rate r1 from 1 January 1996.
- K2 - the Capital Charge for the Post-1996 Assets which will serve the DSP Area calculated on an NPV basis, discounted at rate r2.
- Ri - the future periodic revenues expected to be received from new customers in the DSP Area in each year (i).
- Ci - the future expected annual operating, maintenance and administration costs of providing new customers in the DSP Area in each year (i).
- r1 - for Sydney Water and Hunter Water 3%, for Gosford and Wyong Councils 0%.
- r2 - for Sydney Water and Hunter Water 7%, for Gosford and Wyong Councils it is the pre-tax WACC in their current determinations.
- r3 for Sydney Water and Hunter Water 7%, for Gosford and Wyong Councils it is the pre-tax WACC in their current determinations.
- L1,L2,L3 the Present Value of the number of Equivalent Tenements in the DSP Area, or to be developed in the DSP Area, calculated at the discount rate r1, r2 and r3 respectively.

N is 30 years from the date of review of the Developer Charge as required by the 2000 Developer Charges Determination. It is the forecast period for the assessment of expected revenues and costs

Source: IPART, *Sydney Water Corporation Hunter Water Corporation Gosford City Council Wyong Shire Council developer charges from 1 October 2000 –Determination No 9*, September 2000.

IPART's response on major service connection charge

We have not formed a preliminary response to Hunter Water's proposed methodology for calculating the major service connection charge. However, this proposal raises a number of complex issues in relation to cost allocation between the customers requesting a connection and those customers that are already connected.

There may be a case for considering these charges in one consolidated review of developer charges and backlog sewerage services for metropolitan water utilities. This review could occur in 2017-18, after the current price reviews for Sydney Water and Hunter Water and the next price reviews for Gosford City Council and Wyong Shire Council are complete. This would facilitate a consistent approach and consideration of issues across the metropolitan water utilities.

We note that, depending on factors such as their size and location, customers requesting connection to Hunter Water's network could potentially impose a range of costs on Hunter Water. This could range from simply the cost of infrastructure to connect to the network, up to the cost of expanding the capacity of downstream assets (eg, trunk mains and/or sewage treatment plants).

In considering any proposal to regulate prices, we first need to establish whether the connection service is a monopoly service and therefore whether we should regulate its price. In its proposal, Hunter Water noted that the customers concerned can choose to connect to Hunter Water's services at their own discretion as a substitute is available to them (ie, onsite self-managed wastewater treatment). According to Hunter Water, these customers are generally large non-residential customers with significant negotiating power.[186]

If we establish that the service is a monopoly service that we should regulate, then the following issues would need to be considered:

- 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.
- The potential impact of Hunter Water's proposed methodology on different types of customers and the size of potential upfront connection charges.
- How such customers are charged by other metropolitan water utilities.

IPART seeks comments on the following

33 What are your views on Hunter Water's proposed methodology for calculating the major service connection charge for connecting existing properties to its wastewater system?

[186] Hunter Water pricing proposal to IPART, June 2015, p 88.

34 What are the merits of regulating the major service connection charge as part the 2016 Determination as opposed to a later consolidated review of developer charges?

9.7 Miscellaneous and ancillary charges

Miscellaneous and ancillary charges are a number of non-contestable, one-off charges levied on a small number of customers. 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.

In 2009, we engaged Deloitte/Halcrow to review Hunter Water's miscellaneous and ancillary charges. The consultants found that in general Hunter Water's approach for calculating these charges was sound.[187]

Hunter Water's proposal on 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 provided a detailed breakdown of the cost base for each miscellaneous or ancillary charge.[188]

The most substantial proposed price increases (in percentage terms) are to:

- the application fee for water service disconnection, which it proposed increase by 59% (from $71.50 to $114)
- the application fee for water service connection, which it proposed increase by 62% (from $77.80 to $126) and
- the building plan stamping charge, which Hunter Water proposed increase by 43% (from $12.65 to $18.15).

The most substantial proposed price decreases (in percentage terms) are to:

- the application fee for combined water and sewer service connection/disconnection, which Hunter Water proposed decrease by 25% (from $77.80 to $58.35)

[187] Deloitte/Halcrow, *Review of Hunter Water's miscellaneous and trade waste charges – Final report*, December 2008, p 62.

[188] Hunter Water pricing proposal to IPART, June 2015, Appendix M.

- the application fee for sewer service connection/disconnection, which it proposed decrease by 27% (from $77.80 to $57.05), and
- the non-compliant meter inspection fee, which it proposed decrease by between 8% and 32%.

All figures above are in $2015-16, that is they exclude the effects of inflation.

Hunter Water reported that the proposed price changes would ensure its business processes and costs are aligned with the delivery of the services.

Hunter Water also reported that a number of contracts have been market tested and awarded over the previous two years.[189] These new contracts are expected to have a direct impact on the costs to be recovered from the miscellaneous and ancillary charges.

Hunter Water proposed a substantial change in the delivery of developer funded network infrastructure charges, including the introduction of third-party certification for developer works for design and construction activities.[190] As a result of this change, it proposes to discontinue five of these developer service charges.

For the current regulatory period, Hunter Water reported that it has received few customer complaints regarding miscellaneous and ancillary charges. There was no trend in the complaints and they represented less than 0.01% of all transactions.[191]

Hunter Water's proposed schedule of miscellaneous and ancillary charges compared to current charges is listed in Appendix E.

IPART's response on miscellaneous and ancillary charges

We support Hunter Water's proposed introduction of third-party certification for developer works and the discontinuation of five developer service charges for design and construction activities. We will further evaluate Hunter Water's proposal for miscellaneous and ancillary charges, particularly those charges where substantial increases are proposed.

IPART seeks comments on the following

35 Are Hunter Water's proposed miscellaneous and ancillary charges reasonable?

[189] Hunter Water pricing proposal to IPART, June 2015, p 126.
[190] Hunter Water pricing proposal to IPART, June 2015, p 126.
[191] Hunter Water pricing proposal to IPART, June 2015, p 126.

10 Wholesale water pricing

Wholesale customers are utilities that buy drinking water and/or wastewater services from Hunter Water,[192] and then on-sell water and/or wastewater services to end use customers. These wholesale customers are licensed as retail suppliers of water and/or wastewater services under the *Water Industry Competition Act 2006* (the WIC Act). That is, they act as alternative water and/or wastewater retailers to Hunter Water.

To date, our determinations have set maximum prices for 'residential' and 'non-residential' properties, with no specific reference to wholesale customers. For this price review, however, we intend to explicitly consider the issue of wholesale pricing.

This chapter outlines Hunter Water's proposal and our preliminary response on wholesale pricing, particularly in relation to two key questions:

- What is the appropriate pricing approach for wholesale services?
- Should prices for wholesale services be regulated under the price determination or the access provisions of the WIC Act?

We note that this issue is equally relevant to our concurrent review of Sydney Water's prices, as Sydney Water also has wholesale customers. Our preliminary positions outlined in this chapter are consistent with those in the 'Wholesale pricing' chapter[193] in our Issues Paper for the Sydney Water review.

10.1 Pricing wholesale services

It is important to get wholesale prices right, otherwise prices may:

- encourage inefficient, costly, competition if the price is too low, and
- discourage efficient, beneficial competition if the price is too high.

[192] It is not currently possible to buy and re-sell stormwater services.
[193] Chapter 12 in Sydney Water Issues Paper.

Hunter Water's proposal on wholesale pricing

In relation to wholesale pricing, Hunter Water proposed that:[194]

- Some retail operating costs are avoided when providing services to private network operators, and it intends to deduct these avoided costs from the water usage price that is charged to private network operators under a utility services agreement.
- Any pricing arrangement for WIC Act licensees needs to be fair and reasonable for new entrants without adversely impacting existing customers.
- It expects to execute a number of agreements with private network operators prior to commencement of the next determination period (expected to commence 1 July 2016).
- It supports consideration of the access pricing principles under section 41 of the WIC Act, including that access pricing must be consistent with the maintenance of postage stamp pricing (where applicable).
- It is not in a position at this stage of the price review to provide detailed comment on the merits of specific pricing structures or methodologies for the services it sells to private network operators.

IPART's response on wholesale pricing

There are several different methodologies that could be used to set wholesale prices. These include the following:

- **retail price minus avoidable costs –** the retail charges less the costs Hunter Water no longer incurs
- **cost of service –** the actual cost of supplying the particular wholesale customer
- **non-residential charge –** the non-residential customer charge based on the connection size, as set under our prevailing price determination, and
- **mixed multi premise charge –** the mixed multi premise charge based on the number of properties, as set under our price determination.

Our preferred approach is for wholesale prices to be based on **retail price minus avoidable costs**. This approach creates the best signals for efficient new entry and competition under retail postage stamp pricing.

[194] Hunter Water pricing proposal to IPART, June 2015, p 128-129.

Retail price minus avoidable cost

We consider that wholesale customers and access seekers should be charged on a retail-minus avoidable cost basis. The retail minus avoidable cost approach is consistent with the maintenance of postage stamp pricing[195] and allows the wholesale customer to compete with the incumbent on the costs of providing the contestable service (or services).

The contestable service is the service the wholesaler is providing (or seeking to provide) to retail customers 'upstream' or 'downstream' of the wholesale services it has purchased from the incumbent utility. Contestable services usually include, for example, retail services (such as billing customers and responding to customer enquiries and complaints).

A key challenge of retail minus pricing is assessing the minus costs associated with each wholesale customer's scheme. Retail minus charges are usually minus **avoided** or **avoidable** costs:[196]

- **Avoided** costs are the costs that Hunter Water would **actually** avoid if it no longer directly supplied water or sewerage services to end-use customers (ie, short run marginal costs).[197]
- **Avoidable** costs typically include long term costs that Hunter Water **may** avoid in the present and future or could have been avoided in the past if the entry of a wholesale customer was expected.[198]

We support the avoidable cost approach, as it reflects optimised investment decisions that consider the potential of future market entry. Incumbent utilities may not be able to recover all the actual costs of their operations (ie, there is a risk of asset stranding). However, this is a legitimate business risk, in that Hunter Water should be making capital investment decisions with an understanding of the risk of market entry. It ensures that competitors are not subsidising the cost of any over investment by Hunter Water (due to unanticipated market entry).

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[195] The postage stamp price reflects Hunter Water's area-wide average cost of servicing its customers. However, some locations within its area of operations are higher than average cost to service, while others are lower than average cost. Therefore, under postage stamp pricing, each retail customer effectively pays a positive or negative cross-subsidy.

[196] We have used the terms as considered by the ACCC. In other jurisdictions, such as England and Wales, the term avoidable costs has been used to mean avoided cost as defined above.

[197] See Australian Competition and Consumer Commission, *Access dispute between Services Sydney Pty Ltd and Sydney Water Corporation*, Final Determination Statement of reasons, 22 June 2007, p 5.

[198] According to the ACCC, avoidable costs are Costs that a vertically integrated access provider would otherwise incur in the provision of a good or service that could be avoided if it ceased provision of the relevant contestable activities completely in respect of the good or service in question. See Australian Competition and Consumer Commission, *Access dispute between Services Sydney Pty Ltd and Sydney Water Corporation*, Final Determination Statement of reasons, 22 June 2007, p 5.

Other regulators have also favoured retail minus pricing on an avoidable costs basis. For example, in the Services Sydney determination, the ACCC stated that retail minus avoidable costs is necessary to provide scope for entry for a wholesale customer that is more productively efficient than the incumbent.[199]

Cost of service/building block prices

A cost of service, or building block, approach to wholesale (or access) pricing is a bottom up approach (whereas the retail minus approach is top down). That is, the actual costs of providing the service to a wholesale customer are added to calculate a charge for drinking water and/or sewerage services.

Under a postage stamp pricing regime, the incumbent's prices reflect its system-wide average costs of supplying services, and therefore lower cost areas subsidise higher cost areas. By setting wholesale customer charges based on the area's actual cost of service, the wholesale customer would be excluded from the implicit postage stamp pricing subsidy scheme. This can mean that there is potential for the following perverse outcomes:

- In lower cost areas, the wholesale customer could be less efficient than the incumbent, but may still outcompete the incumbent on price due to the incumbent's requirement to price at postage stamp pricing (which reflects its system-wide average cost, rather than the actual cost of servicing the lower cost area).
- In higher cost areas, the wholesale customer could be more efficient than the incumbent, but may not be able to match the incumbent's prices (which reflects its system-wide average cost, rather than the actual cost of servicing the higher cost area).

The non-residential charge

Under our current determination, non-residential customers are charged for water and wastewater based on the size of their connection (service charges) and the quantity (and, in the case of wastewater, strength) of their usage (usage charges).

Our determined non-residential and residential prices are cost reflective for end users, not intermediaries.

[199] See Australian Competition and Consumer Commission, *Access dispute between Services Sydney Pty Ltd and Sydney Water Corporation*, Final Determination Statement of reasons, 22 June 2007, p 2.

Properties within a multi-premises typically share a main connection to Hunter Water's network, and then have individual connections to the multi-premises' plumbing network. The shared main connection's capacity is typically smaller than the sum of the capacity of each connection to the multi-premises plumbing network. If Hunter Water were to charge wholesale customers the non-residential charge (based on main connection size) and wholesale customers were then able to charge individual houses and apartments Hunter Water's residential service charges, an arbitrage (or riskless profit) opportunity would exist.

An arbitrage opportunity would allow wholesale customers to enter the market without providing any additional services or improving overall system efficiency. The margin created by this arbitrage opportunity ultimately needs to be recovered from Hunter Water's wider customer base, which would increase prices to all remaining direct customers of Hunter Water.

The mixed multi premises charge

Under the current determination, each individual property within a multi premise is charged a residential service charge. A wholesale customer could be viewed as a private business that is responsible for operating the plumbing beyond a mixed multi premises connection. Under this interpretation, it may be appropriate to charge a wholesale customer a mixed multi premises charge based on its customer numbers.

However, levying such a charge would make it difficult for a wholesale customer to compete with the incumbent, as it would leave no margin for the wholesaler to recover its costs of providing retail services. The wholesaler would therefore either need to operate at a loss or increase its retail prices above those of Hunter Water.

IPART seeks comment on the following

36 What is the most appropriate methodology or basis for setting wholesale prices?

10.2 Regulating wholesale customers

Wholesale customers can be regulated under the WIC Act access regime or our price determinations. It is important to design the right form of price regulation as it may influence how competition develops within the urban water market.

Hunter Water's proposal on how wholesale prices should be regulated

Hunter Water considers there would be a number of advantages to IPART determining prices or determining a methodology for calculating prices to WIC Act licensees:

- it would remove any perception that Hunter Water was acting in a manner that was unfairly or improperly impeding the entry of private operators to the water market
- it may reduce the time and cost associated with transacting utility services agreements, as when negotiating a utility services agreement Hunter Water could make reference to the IPART determination.[200]

IPART's response on how wholesale prices should be regulated

In principle, our view is that wholesale prices should be regulated through the WIC Act's access regime. The WIC Act is the NSW Government's legislative framework for competition in the water industry, including the licensing of wholesale water customers.

However, this requires an access undertaking to be approved (or a coverage declaration being made) and agreements in place that cover the relevant wholesale services. The WIC Act's access regime is discussed in more detail in Appendix F.

Without an approved voluntary access undertaking in place (or a coverage declaration being made) covering relevant services, there may be barriers to entry, especially for smaller utilities.

Our preliminary view, therefore, is that we should determine wholesale prices under our price determination for a limited period, which would apply until a voluntary access undertaking covering the wholesale services has been approved by IPART and is in place or prices have been agreed between Hunter Water and the wholesale customer under the access regime of the WIC Act.

Options for how to regulate wholesale prices are discussed further below.

Voluntary access undertakings under the WIC Act

A voluntary access undertaking would set out the basic terms and conditions of access to Hunter Water's infrastructure services. To take effect under the WIC Act, we would need to approve the access undertaking. We consider that this is the best way to regulate wholesale prices in the long term. Typically, the access undertaking would set out a negotiate/mediate/arbitrate regime to arrive at individual access agreements.

[200] Hunter Water pricing proposal to IPART, June 2015, pp 128–129.

Price determination

We have three options for how we could regulate Hunter Water's prices to its wholesale customers under our determination powers:

- set explicit maximum prices (price caps)
- set a methodology for calculating maximum prices, or
- monitor prices against pricing principles.

Price caps

Price caps set specific maximum prices for goods and/or services. A price cap needs to be 'self-executing', which requires the charge to be definable and relatively simple to apply.

Setting scheme specific price caps is unfeasible as we would need to foreshadow every scheme that may develop over a price path and the information requirements would be prohibitive. Therefore, we consider that only a standardised (postage-stamp) price cap that covers all schemes is feasible.

A standardised price cap would apply to all wholesale customers, and would likely reflect avoidable costs from retail services (eg, for the on-selling of water and sewerage). There is likely to be little variation in retailing costs between geographic areas (and the marginal cost of retailing is also relatively constant). Such a price cap could be relatively simple to set, such as the relevant retail price minus 10%.

However, where a wholesale customer performs a service in addition to or other than on-selling, such as recycled water, any avoidable costs apart from retail costs would not be reflected in the wholesale prices. In these instances, the prices may not be efficient for all wholesale customers.

IPART seeks comment on the following

37 What is a reasonable retail-minus avoidable costs price cap to apply to all wholesale customers?

Price methodologies

We could set maximum prices for secondary utilities by way of a methodology under our Determination (or in a separate determination). The main advantage of a methodology is that it may provide greater flexibility than price caps. In particular, it would allow us to consider a wider range of pricing options and therefore better accommodate scheme specific attributes.

A methodology is binding, which means that the regulated utility cannot charge above the maximum price determined through the methodology. It would allow some negotiation between the incumbent and the secondary utility (the wholesaler), subject to the constraints of the specified methodology.

Our approach to regulating developer charges (water, wastewater, and recycled water) is a methodology supported by procedural requirements to ensure compliance and transparency (such as requirements for utilities to publish/lodge Development Servicing Plans).

However, we consider that applying a methodology is not markedly different to how the WIC Act's access regime operates. This could be considered as duplicating, or even as circumventing, the WIC Act.

Pricing principles

We could establish high level pricing principles for incumbent utilities to apply in negotiations with secondary utilities. Pricing principles are not binding and we have limited ability to ensure compliance with our pricing principles. The incentive for Hunter Water to comply would be reputational, as it can be required to report on its compliance in its annual report.

Transition from price determination to WIC Act

The WIC Act provides that new entrants can seek to have infrastructure services declared open for access (ie, a coverage declaration), subject to negotiation and arbitration on access terms and conditions. Alternatively, incumbents can submit voluntary access undertaking to IPART, which outline the proposed terms and conditions of access to their infrastructure services.

However, the costs of seeking a coverage declaration and arbitration are potentially prohibitive for small retail competitors to Hunter Water. For small retail businesses to use the access regime, we consider that a voluntary access undertaking that provides certainty on pricing principles, terms and conditions, and guarantees filtration and treatment services is required.

Our preliminary view is that, for the 2016 Hunter Water and Sydney Water determinations, we should determine temporary wholesale water and sewerage price caps, which apply until:

- a specified period (eg, 12 months) after a voluntary access undertaking covering the wholesale services has been approved by IPART (this period after approval of the access undertaking is intended to provide the incumbent and wholesale customers sufficient time to negotiate, and if necessary arbitrate, individual access agreements), or

- prices have been agreed between the incumbent (Hunter Water or Sydney Water, as relevant) and the wholesale customer under the access regime of the WIC Act.

IPART seeks comment on the following

38 Should wholesale prices be regulated under the WIC Act, IPART's price determination or a combination of both?

11 Recycled water pricing

Our approach to recycled water pricing is governed by our 2006 Guidelines.[201]

Since the release of the 2006 Guidelines, we decided to take a light handed approach to recycled water pricing. In particular, we decided that we would monitor rather than determine all recycled water prices for mandated schemes.[202,203] This approach was considered more appropriate, as it is proportionate to the costs and benefits of regulation given the increasing number of small schemes.[204] This is the approach we took in Hunter Water's 2013 Determination.[205] The 2006 Guidelines contain principles that agencies can use to set their own prices.

In the 2006 Guidelines, we set out, for voluntary schemes (ie, where customers can connect to the recycled water scheme at their own discretion) that we would not determine prices. These prices should be negotiated directly between the water utility and the customers. This is because the water utility is limited in its exercise of market power as these customers can connect voluntarily and have a substitute water product available to them such as potable water or river water.[206]

201 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.

202 This decision was made as part of the 2012 Sydney Water review.

203 Mandated schemes are schemes where customers are required to connect due to a government policy eg, BASIX.

204 IPART, *Review of prices for Sydney Water Corporations water, sewerage, stormwater drainage and other services – Final Report,* June 2012, pp 130-133.

205 IPART, *Hunter Water Corporation's water, sewerage and stormwater drainage and other services – Final Report*, June 2013, p 150.

206 IPART, *Pricing arrangements for recycled water and sewer mining, Sydney Water Corporation, Hunter Water Corporation, Gosford City Council and Wyong Shire Council – Determination and Final Report*, September 2006, p 4.

As part of a price review, we also require that recycled water costs (and revenues) for both mandated and voluntary schemes are ring-fenced from the water agencies' regulated business. Under the 2006 Guidelines, 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 ie, we apply a 'user pays' principle, with the exception of where there are:

- avoided and deferred costs – in these instances, in addition to recycled water users, the broader customer base can contribute towards recycled water costs to the extent that the recycled water scheme provides benefits in avoiding or deferring water and/or sewerage costs (use of recycled water can result in the temporary or permanent deferral of water supply augmentation, water or sewerage treatment, or augmentation of water or sewerage systems)[207]
- Government directions that direct IPART to allow a portion of recycled water costs to be passed on to a water agency's broader customer base.[208]

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.

In this chapter, we provide an overview of Hunter Water's recycled water schemes, its proposed prices for these schemes over the 2016 determination period, its proposed avoided and deferred costs, and IPART's response relating to these proposed items.

11.1 Hunter Water's proposal on recycled water schemes

Hunter Water reported that it supplies over 4,700ML of recycled water for direct sale each year.[209]

Its recycled water schemes can be funded in a number of ways in line with our funding framework:

- schemes to service new development in growth areas of Hunter Water can be funded through contributions from developers (developer charges)[210] and by recycled water usage and service charges (mandated schemes), and
- commercial schemes can be funded by scheme customers under contractual arrangements (voluntary schemes).[211]

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[207] IPART, *Assessment Process for Recycled Water Scheme Avoided Costs – Guidelines*, January 2011, p 2. In 2011, we released further guidance on our approach to the assessment process for recycled water scheme avoided costs.

[208] 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 26.

[209] Hunter Water pricing proposal to IPART, June 2015, p 4.

[210] 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.

Hunter Water reported that it has two mandated schemes, Gillieston Heights and Thornton North (Chisolm), where it provides recycled water to residential customers through dual reticulation.[212,213] It proposed the same charges for both areas which are shown in Table 11.1 below. The proposed usage charge is about 13% less that the proposed potable water usage charge, and the proposed service charge is, on average, about 28% less than the proposed residential water service charge. Hunter Water indicated that it applied IPART's pricing guidelines for recovering the costs of recycled water in setting periodic (usage and service) charges for these residential recycled water schemes.[214]

Table 11.1 Hunter Water's proposed recycled water usage charges and services charges for Gillieston Heights and Thornton North (Chisolm) ($2015-16)

	2015-16	2016-17	2017-18	2018-19	2019-20	Total Change
Usage charge $/kL	1.94	1.94	1.94	1.94	1.94	0%
Service charge 20mm base $/year	21.81	22.20	22.20	22.20	22.20	1.8%

Source: Hunter Water pricing proposal to IPART, June 2015, p 80.

Hunter Water reported that, in addition to complying with IPART's guidelines, it applied the following principles:

- Each dual reticulation scheme will have its own service and usage prices in order to minimise cross-subsidies (ie, Hunter Water will not necessarily aim to apply postage stamp pricing to all recycled water schemes).
- Service charges will be set at a level that recovers operational and administrative costs that are relatively constant per dwelling, such as customer service (eg, meter reading), call centre contacts and customer information.
- Usage prices will be set by using a fairness test such that customers are not disadvantaged by living in a dual reticulation area. The fairness test will set the usage charge such that an average customer in a dual reticulation area using both recycled and drinking water has the same total water bill as customers with the same total usage of drinking water only. This test is based on 40% of the total use being recycled water and 60% being drinking water, which is consistent with the intended uses of recycled water (eg, outdoors and toilet flushing).

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211 Hunter Water pricing proposal to IPART, June 2015, pp 79-80.
212 Hunter Water pricing proposal to IPART, June 2015, p 79.
213 Dual reticulation refers to properties which are supplied or have access to both standard drinking water and recycled water. (Source: http://www.hunterwater.com.au/Your-Account/Managing-Your-Account/Residential-Pricing--Charges/Dual-Reticulation-Charges.aspx).
214 Hunter Water pricing proposal to IPART, June 2015, p 79.

- During any interim period between construction of properties with dual reticulation and commissioning of the recycled water plant, recycled water usage charges will apply even though drinking water will be supplied through the recycled water system. This is intended to encourage appropriate behaviour and safeguard against inappropriate use from taps that will eventually provide recycled water.[215]

Hunter Water also reported that it also has a number of voluntary schemes. It indicated that it has negotiated individual agreements for these schemes on mutually acceptable terms, and that the price structures for these schemes may vary with access conditions, and the quality and quantity of recycled water supplied.[216]

Hunter Water also indicated that it has separately identified and reported expenditure amounts estimated to represent recycled water in accordance with IPART's requirements to ring-fence expenditure.[217]

11.2 Hunter Water's proposal on avoided and deferred costs

Hunter Water proposed that the $9.5 million inclusion to its RAB made in the 2013 Determination for avoided and deferred costs associated with the Kooragang Industrial Water Scheme (KIWS) should remain in its RAB for this determination. The avoided cost represented the cost savings associated with deferring the need to upgrade potable water treatment and the trunk delivery system as a result of supplying recycled water instead of potable water to a large customer on Kooragang Island.[218]

Hunter Water's proposal states that the cost savings from deferring these upgrades include the deferment of the stage three upgrade of the Grahamstown water treatment plant, deferment of the need to upgrade the trunk delivery main from Grahamstown water treatment plant and operating cost savings at the Grahamstown water treatment plant.

Hunter Water considers the avoided cost of $9.5 million remains relevant in terms of representing benefits water customers will receive from the operation of KIWS.[219]

[215] Hunter Water pricing proposal to IPART, June 2015, p 80.
[216] Hunter Water pricing proposal to IPART, June 2015, p 80.
[217] Hunter Water pricing proposal to IPART, June 2015, p 44.
[218] Hunter Water pricing proposal to IPART, June 2015, p 64.
[219] Hunter Water pricing proposal to IPART, June 2015, p 64.

11.3 IPART's response on recycled water schemes and avoided and deferred costs

We intend to monitor Hunter Water's proposed recycled water prices in accordance with our pricing guidelines for recycled water, as per the 2013 Determination (see Appendix G).

As mentioned previously, a key principle of our 2006 Guidelines for recycled water is that costs and revenues of mandated and voluntary recycled water schemes must be ring fenced. Specifically, under our 2006 Guidelines, recycled water prices should recover the full direct cost of implementing the recycled water scheme concerned, unless:

- the scheme gives rise to avoided costs to the water agencies and users other than the direct users of the recycled water, and/or
- the scheme gives rise to broader external benefits for which external funding is received, and/or
- 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.

We acknowledge that at the 2013 Determination we included $9.5 million ($2013-14) in Hunter Water's RAB due to savings related to deferring upgrades at Grahamstown water treatment plant as a result of the KIWS. This was to be recovered from Hunter Water's broader water customer base. We will review the value of this avoided cost as part of our review of Hunter Water's expenditure.

IPART seeks comments on the following

39 Are Hunter Water's proposed recycled water prices for Gillieston Heights and Thornton North (Chisholm) reasonable?

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).

B Regulatory treatment of asset disposals

The purpose of this appendix is to outline our proposed policy or framework for asset disposals, for stakeholder comment (also included in the Sydney Water and WaterNSW Issues Papers).

In our view, the primary issues we need to consider 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 ownership of 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 come up with our best estimate of its regulatory value.

We propose 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 asset). We also distinguish between significant and non-significant assets.

B.1 Significant asset write-offs

Definition: 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.

Treatment: These disposals will be dealt with separately, as and when the need arises.

B.2 Significant asset sales

Definition: (a) Assets that incur capital gains tax (ie, therefore this includes all land sales), or (b) those where the receipts from sale of 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, and this asset entered the RAB before the 2000 'line-in-the-sand', we propose to estimate its regulatory value based on:

- the ratio of the RAB to the depreciated replacement cost (DRC) of the utility's assets 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).

Table B.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. For most of these water businesses, the DRC equals the book value of their assets at the time (2000). The exception is WaterNSW (formerly SCA). As the book value of this business' assets in 2000 was the deprival value (not the DRC), we have used an estimated DRC to determine its RAB to DRC ratio.

For Hunter Water, the DRC of its noncurrent assets in 2000 was $1.9 billion, while the economic value (estimated by IPART) was $0.8 billion. Therefore, at the time of the line-in-the-sand, all assets were included in the RAB at 42% ($0.8 billion/$1.9 billion=42%) of their DRC (ie, book value).

Table B.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	0.5	0.35
WaterNSW (formerly SCA)	0.7	1.7	0.40

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 reports and Annual reports of regulated businesses.

Our proposed approach for estimating the regulatory value of assets where their value as they entered the RAB is unknown will provide consistent and fair treatment of all assets acquired pre-2000. This approach will allow the businesses, including Hunter Water, to retain a significant proportion of the proceeds from the sale of such assets, and thus remove any disincentive to sell them under our current approach. It will also mean that customers will not continue to provide Hunter Water with a return on or of assets that have been sold, which will be reflected in lower prices. We consider that this proposed approach is also simple to apply.

We propose to apply this approach both in establishing the opening value of the RAB for the 2016 determination period, and in rolling forward this value over the determination period. In our view, this use of our best estimate of the regulatory value of asset disposals is consistent with our use of actual capital expenditure (where prudent and efficient) to roll forward the RAB.

The RAB to DRC ratio determines the regulatory profit from which the business would pay any tax obligation. This approach will allow the businesses to retain a significant proportion of the proceeds from the sale of their assets, removing disincentives there might be 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.

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.

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 propose that 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 maintenance 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.

B.3 Non-significant asset disposals (sales and write-offs)

Definition: Assets that do not incur capital gains tax (ie, therefore this excludes all land assets) and if 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 old 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 propose to treat these disposals in a simple, uniform manner. In particular, we propose removing non-significant disposals from the RAB using the book value of the disposals multiplied by the ratio of the utility's RAB to book value in the year in which the disposal occurs. The ratio of the RAB to book value serves as a means of deriving indicative estimates of regulatory value from book values.

C Output measures

The output measures were originally set for a 4-year period. As the request of Hunter Water, we have brought forward the review by one year. Hunter Water has adjusted the 4-year output measures to 3-year output measures.

We also provide Hunter Water's proposed output measures for its 2016 Determination.

C.1 Hunter Water's progress against the 2013 Determination output measures (2013-14 to 2015-16)

Table C.1 Water Services

Measure	Units	Target Output (4 years)	Adjusted output (3 years)[a]	Actual/ Projected[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 Wastewater Services

Measure	Units	Target Output (4 years)	Adjusted output (3 years)[a]	Actual/ Projected[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.
Wastewater 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[b]	Variance (3 years)	Variance (%) (3 years)	Hunter Water's Comments
Telemetry upgrades (water & wastewater)	sites	138	103	115	12	12%	Strategy updated in 2014 with accelerated rate of renewals scheduled for 2015-16.
Replacement of pumps (water & wastewater)	pumps	342	256	256	0	-	The decision to repair or replace pumps is determined by risk.
Replacement of switchboards (water & wastewater)	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 Drainage

Measure	Units	Target Output (4 years)	Adjusted output (3 years)[a]	Actual/ Projected[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[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 Hunter Water's proposed output measures

Table C.6 Water service

Output (or activity) measure	Target Output
Renewal/reliability of distribution mains	20 km
Trunk mains undergoing condition assessment	12 km
Critical trunk main replacement	0.4 km

Source: Hunter Water pricing proposal to IPART, June 2015, Appendix F.

Table C.7 Wastewater service

Output (or activity) measure	Target Output
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

Source: Hunter Water pricing proposal to IPART, June 2015, Appendix F.

Table C.8 Mechanical and Electrical Services

Output (or activity) measure	Target Output
Telemetry upgrades (water and wastewater)	250 sites
Switchboards replaced	40 sites
Replacement or refurbishment of pumps	430 pumps

Source: Hunter Water pricing proposal to IPART, June 2015, Appendix F.

Table C.9 Drainage

Output (or activity) measure	Target Output
Stormwater drainage channel rehabilitations	0.7 km

Source: Hunter Water pricing proposal to IPART, June 2015, Appendix F.

Table C.10 Corporate

Output (or activity) measure	Target Output
Replace customer meters 20mm	67,000 meters

Source: Hunter Water pricing proposal to IPART, June 2015, Appendix F.

D Hunter Water's proposed trade waste prices

Hunter Water's proposed trade wastewater charges are shown below. Under Hunter Water's proposal, the current trade waste price structures and levels would be retained in real terms over 2016-17 to 2019-20.

Table D.1 Hunter Water's proposed trade wastewater agreement and inspection fees ($2015-16)

	2015-16	2016-17 to 2019-20
Minor agreements		
Establish minor agreement (new agreements)	137.48	137.48
Existing minor agreement holders:		
Annual trade waste agreement fee	112.41	112.41
Inspection fee	119.48	119.48
Existing renew/reissue	101.54	101.54
Variation to minor agreement fee	108.18	108.18
Moderate agreements		
Establish moderate agreement (new agreements)	488.39	488.39
Existing moderate agreement holders:		
Annual trade waste agreement fee	821.79	821.79
Inspection fee	119.48	119.48
Existing renew/reissue	275.14	275.14
Variation to moderate agreement fee	108.18	108.18
Major agreements		
Establish major agreement (new agreements)	553.02	553.02
Existing major agreement holders:		
Annual trade waste agreement fee	457.67	457.67
Inspection fee	119.48	119.48
Existing renew/reissue	391.14	391.14
Variation to major agreement fee	108.18	108.18

Source: Hunter Water pricing proposal to IPART, June 2015, p 115.

Table D.2 Hunter Water's proposed trade wastewater high strength charges for BOD/NFR ($2015-16)

Wastewater treatment works	2015-16 Base charge	2015-16 Incentive charge[b]	2016-17 to 2019-20 Base charge	2016-17 to 2019-20 Incentive charge[b]
			$/kg ($ 2015-16)[a]	
Belmont WWTP	1.35	4.03	1.35	4.03
Boulder Bay WWTP	1.82	5.45	1.82	5.45
Branxton WWTP	5.02	15.06	5.02	15.06
Burwood Beach WWTP	0.76	2.26	0.76	2.26
Cessnock WWTP	1.69	5.09	1.69	5.09
Clarence Town WWTP	14.36	43.07	14.36	43.07
Dora Creek WWTP	2.00	5.99	2.00	5.99
Dungog WWTP	3.15	9.48	3.15	9.48
Edgeworth WWTP	1.32	3.98	1.32	3.98
Farley WWTP	1.29	3.89	1.29	3.89
Karuah WWTP	14.39	43.16	14.39	43.16
Kearsley WWTP	2.71	8.15	2.71	8.15
Kurri Kurri WWTP	2.90	8.68	2.90	8.68
Morpeth WWTP	1.00	3.00	1.00	3.00
Paxton WWTP	7.96	23.87	7.96	23.87
Raymond Terrace WWTP	1.98	5.92	1.98	5.92
Shortland WWTP	1.52	4.56	1.52	4.56
Tanilba Bay WWTP	3.09	9.28	3.09	9.28
Toronto WWTP	1.63	4.89	1.63	4.89

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.

Source: Hunter Water pricing proposal to IPART, June 2015, p 118.

Table D.3 Hunter Water's proposed trade wastewater service variable quality charges ($/kg $2015-16)

	2015-16	2016-17 to 2019-20
Heavy metals:		
Burwood Beach WWTP catchment	23.58	23.58
All other catchments	38.89	38.89
Phosphorus >11mg/L ($/kg)	2.70	2.70
Sulphate formula ($/kg)	0.16 x (SO_4/2000)	0.16 x (SO_4/2000)

Source: Hunter Water pricing proposal to IPART, June 2015, p 119.

Table D.4 Hunter Water's proposed tankering services charges ($2015-16)

	2015-16	2016-17 to 2019-20
Establish tankering agreement	211.05	211.05
Renew agreement	134.70	134.70
Delivery processing fee	4.16	4.16
Portable toilet effluent ($/kL)	13.79	13.79
Septic waste ($/kL)	5.43	5.43
High strength waste ($/kL):		
Volume charge ($/kL)	3.51	3.51
High strength charges for BOD/NFR ($/kg)	See Table D.2	See Table D.2
Heavy metals ($/kg)	See Table D.3	See Table D.3
Phosphorus >11mg/L ($/kg)	See Table D.3	See Table D.3
Sulphate formula ($/kg)	See Table D.3	See Table D.3

Source: Hunter Water pricing proposal to IPART, June 2015, p 120.

E Hunter Water's proposed miscellaneous and ancillary charges

Table E.1 Hunter Water's proposed change in miscellaneous charges ($2015-16)

Service No		Function	Current Charge (2015-16)	Proposed Charge (2016-17)	Changes in prices (%)
1		Conveyancing certificate			
	a)	Over the counter	$32.85	$37.00	12.6%
	b)	Electronic	$10.15	$14.00	37.9%
2		Property sewerage diagram (up to A4)	$20.20	$24.00	18.8%
3		Service location diagram			
	a)	Over the counter	$26.55	$26.65	0.4%
	b)	Electronic	$15.90	$16.50	3.8%
4		Meter reading - special reads and by appointment			
	a)	During business hours	$25.95	$26.50	2.1%
	b)	Outside of business hours (by appointment)	$106.00	$107.00	0.9%
5		Billing record search statement			
	a)	Individual property	$64.50	$65.55	1.6%
	b)	Multiple properties	$93.25	$94.00	0.8%
6		Building over or adjacent to sewer advice	$75.55	$79.65	5.4%
7		Water restriction and reconnection after restriction			
	a)	Restriction	NA	$72.30	
	b)	Water reconnection after restriction - during business hours	$114.00	$106.00	-7.0%
	c)	Water reconnection after restriction - outside business hours	$138.00	$126.00	-8.7%

Service No	Function	Current Charge (2015-16)		Proposed Charge (2016-17)		Changes in prices (%)
8	Workshop flow rate test of a meter					
a)	Without strip test	20-25mm	$170.00	25mm	$203.00	19.4%
		32mm	$239.00	32mm	$248.00	3.8%
		40mm	$243.00	40mm	$251.00	3.3%
		50mm L	$287.00	50mm L	$366.00	27.5%
		50mm H	$357.00	50mm H	$366.00	2.5%
		65mm	$359.00	65mm	$366.00	1.9%
		80mm	$419.00	80mm	$487.00	16.2%
		100mm	$500.00	100mm	$565.00	13.0%
		150mm	$567.00	150mm	$672.00	18.5%
b)	With strip test	20-25mm	$235.00	20-25mm	$284.00	20.9%
		32mm	$304.00	32mm	$328.00	7.9%
		40mm	$304.00	40mm	$330.00	8.6%
		50mm L	$351.00	50mm L	$465.00	32.5%
		50mm H	$421.00	50mm H	$465.00	10.5%
		65mm	$423.00	65mm	$465.00	9.9%
		80mm	$484.00	80mm	$584.00	20.7%
		100mm	$564.00	100mm	$655.00	16.1%
		150mm	$621.00	150mm	$762.00	22.7%
9	Application for disconnection					
a)	Water (all sizes)		$71.50		$114.00	59.4%
b)	Recycled water (all sizes)		$143.00		$160.00	11.9%
10	Application for water service connection – (all sizes)		$77.80		$126.00	62.0%
13	Application to assess a water main adjustment (Moving and fitting and / or adjusting a section of water main up to and including 25 metres in length)		$366.00		$369.00	0.8%
14	Metered standpipe hire security bond	20mm	$329.00	20mm	$331.00	0.6%
		32mm H	$881.00	32mm H	$887.00	0.7%
		32mm L	$399.00	32mm L	$402.00	0.8%
		50mm	$881.00	50mm	$887.00	0.7%
15	Metered standpipe hire – triannual fees	20mm	$34.40	20mm	$53.60	55.8%
		32mm H	$44.45	32mm H	$62.75	41.2%
		32mm L	$35.60	32mm L	$54.60	53.4%
		50mm	$44.45	50mm	$62.75	41.2%
16	Metered standpipe water usage fee		As per water usage tariff per kilolitre		As per water usage tariff per kilolitre	

Service No	Function	Current Charge (2015-16)	Proposed Charge (2016-17)	Changes in prices (%)
18	Backflow prevention device fees			
a)	Device test	$336.00	$328.00	-2.4%
b)	Disconnection for noncompliance	$NA	$332.00	
c)	Reconnection after rectification of noncompliance	$NA	$175.00	
19	Major works inspection fee	$10.35/m	$10.45/m	1.0%
20	Statement of available pressure and flow	$335.00	$336.00	0.3%
21	Application to connect/disconnect sewer service (or for special internal inspection permit)	$77.80	$57.05	-26.7%
22	Application to connect/ disconnect water and sewer services (combined application)	$77.80	$58.35	-25.0%
23	Irregular and dishonoured payments			
	Banking authority – cheque declined	$36.10	$35.95	-0.4%
	Banking authority – direct debit declined	$28.00	$28.45	1.6%
	Australia Post – cheque declined	$41.45	$40.95	-1.2%
24	Request for separate metering of units	$32.25 per plan	$33.10 per plan	2.6%
25	Unauthorised connections	$116.00	$164.00	41.4%
26	Building plan stamping	$12.65	$18.15	43.5%
27	Determining requirements for build over/ adjacent to sewer or easement	$162.00	$186.00	14.8%
28	Hiring of a metered standpipe			
a)		$182.00	$179.00	-1.6%
b)		Breach 1 $19.60	Breach 1 $20.15	2.8%
		Breach 2 $25.90	Breach 2 $26.65	2.9%
		Breach 3 – Step 1 $32.25	Breach 3 – Step 1 $33.10	2.6%
		Breach 3 – Step 2	Breach 3 – Step 2	

Service No	Function	Current Charge (2015-16)	Proposed Charge (2016-17)	Changes in prices (%)
		$32.25	$33.10	2.6%
29	Meter affixtures/handling fee	$89.70 (up to 50mm light duty)	$50.60 (up to 50mm light duty)	-43.6%
		$89.70	$79.90	-10.9%
30	Inspection of non-compliant meters	$60.45	$55.50	-8.2%
32	Connect to or building over / adjacent to a stormwater channel for a single residence	$97.20	$110.00	13.2%
33	Stormwater channel connection	$347.00	$350.00	0.9%
34	Hydraulic design assessment (previously Hydraulic Assessment Application – less than 80mm)			
		1) Residential 25-40mm $243.00	1) Residential 25-40mm $244.00	0.4%
		2) Residential >40mm $291.00	1) Residential 25-40mm $292.00	0.3%
		3) Non-Residential 25-40mm $348.00	3) Non-Residential 25-40mm $350.00	0.6%
		4) Non-Residential >40mm $381.00	4) Non-Residential >40mm $382.00	0.3%
35	Pump station design assessment	Water: $4,678	WPS: $4,713	0.7%
		Sewer: $5,152	SPS: $5,190	0.7%
		Recycled water: $4,678	RW: $4,713	0.7%
36	Application to assess sewer main adjustment	$477.00	$481.00	0.8%
38	Revision of development assessment	$396.00	$399.00	0.8%
39	Bond application	$1,806.00	$1,819.00	0.7%
40	Bond variation	$261.00	$262.00	0.4%
41	Development assessment application (s.50) (previously application processing fee)	$477.00	$481.00	0.8%

Service No	Function	Current Charge (2015-16)	Proposed Charge (2016-17)	Changes in prices (%)
42	Application for water / sewer main extensions	$477.00	$481.00	0.8%
45	Connection to existing water system			
a)	Major works (valve shutdown)	$708.00	$710.00	0.3%
b)	Major works (non-valve shutdown)	$302.00	$302.00	0.0%
46	Insertion or removal of tee & valve			
a)	Valve shutdown and charge up	$1,114.00	$1,118.00	0.4%
b)	Non-valve shutdown and charge up	$696.00	$698.00	0.3%
47	Application for additional sewer connection point	$347.00	$350.00	0.9%
48	Tee & valve connection	$275.00	$276.00	0.4%
50	Major works inspection & WAE fee	Water $6,494.00 Sewer $8,796.00 Recycled water $6,494.00	Water $6,542.00 Sewer $8,862.00 Recycled water $6,542.00	0.7% 0.8% 0.7%
51	Application to assess encroachment on Hunter Water land, easement rights or assets	$415.00	$416.00	0.2%
52	Technical Services hourly rate	$108.00/ hour	$108.00/ hour	0.0%
53	Remote application fee	$296.00	$298.00	0.7%
54	Preliminary servicing advice	$451.00	$455.00	0.9%
55	Servicing strategy review	$1,158.00	$1,167.00	0.8%
56	Environmental assessment report review	$1,158.00	$1,167.00	0.8%
58	Reservoir construction inspection & WAE fee	Quote	Quote	
59	Water cart tanker fees			
a)	Inspection	$138.00	$148.00	7.2%
b)	Reinspection after rectification of noncompliance	$125.00	$135.00	8.0%

Service No	Function	Current Charge (2015-16)		Proposed Charge (2016-17)		Changes in prices (%)
61	Inaccessible meter – imputed charge for breach of meter reading agreement	18.95 + imputed usage as per calculation		$24.05+ imputed usage as per calculation		26.9%
62	Damaged meter replacement	20mm	$65.05	20mm	$57.80	-11.1%
		25mm	$108.00	25mm	$105.00	-2.8%
		32mm	$150.00	32mm	$175.00	16.7%
		40mm	$179.00	40mm	$217.00	21.2%
		50mm L	$382.00	50mm L	$570.00	49.2%
		50mm H	$436.00	50mm H	$445.00	2.1%
		65mm	$533.00	65mm	$360.00	-32.5%
		80mm	$669.00	80mm	$502.00	-25.0%
		100mm	$696.00	100mm	$548.00	-21.3%
		150mm	$1,191.00	150mm	$1,470.00	23.4%
		250mm	$4,379.00	250mm	$4,037.00	-7.8%
		300mm	$5,454.00	300mm	$5,010.00	-8.1%
63	Affix a separate meter to a Unit	$60.45		$55.50		-8.2%
64	Recycled water meter affix fee	$38.95		$49.25		26.4%
66	Application for recycled water connection - domestic	$50.55 (pre-laid connections)		$50.60 (pre-laid connections)		0.1%
		$149.00 (redevelopment)		$159.00 (redevelopment)		6.7%

Source: Hunter Water pricing proposal to IPART – Appendix N, June 2015.

F The WIC Act access regime

The WIC Act was introduced by the NSW Government to promote private-sector investment and innovation in the water and wastewater industries, and it establishes a regime for third-party access to certain water infrastructure services in NSW.

Part Three of the WIC Act establishes a NSW-based access regime for water industry "infrastructure services" within the Sydney Water and Hunter Water areas of operations.[220] Infrastructure services under the WIC Act means:[221]

> The storage, conveyance or reticulation of water or sewage by means of water industry infrastructure, and includes the provision of connections between any such infrastructure and the infrastructure of the person for whom the water or sewage is stored, conveyed or reticulated, but:
>
> (a) does not include the storage of water behind a dam wall, and
>
> (b) does not include:
>
> (i) the filtering, treating or processing of water or sewage, or
>
> (ii) the use of a production process, or
>
> (iii) the use of intellectual property, or
>
> (iv) the supply of goods (including the supply of water or sewage),
>
> except to the extent to which it is a subsidiary but inseparable aspect of the storage, conveyance or reticulation of water or sewage.

A limitation of the WIC Act is that a wholesale customer's purchases are explicitly not covered – ie, the supply of water and wastewater services. The WIC Act focuses on access to infrastructure services to transport water and wastewater, rather than the wholesale purchase of bundled water services (comprising the water itself and its treatment, in addition to its transportation) and wastewater services (including wastewater treatment and disposal, in addition to its transportation) at point of connection.

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220 Note – WIC Act access regime covers infrastructure services of any 'service provider' within the Sydney Water and Hunter Water areas of operations.

221 Dictionary of the Water Industry Competition Act 2006.

This limitation could potentially be overcome through separate negotiation and agreement with Sydney Water and/or Hunter Water (ie, the incumbent) and bulk water providers and/or an access seeker providing its own services (eg, treatment) upstream and downstream of the incumbent's water and wastewater transportation network. However, this could add significantly to wholesalers' or access seekers costs, limiting the extent of new entry and competition in the market.

Under the WIC Act, an infrastructure service is subject to compulsory access if:[222]

- The Minister makes a 'coverage declaration' in respect of it,[223] which means that new entrants can negotiate with Sydney Water or Hunter Water to obtain access to these networks for the purpose of competing in upstream and downstream markets.
- IPART approves a utility's voluntary access undertaking in respect of it. An approved access undertaking would provide standard terms, conditions and a pricing methodology for using a service provider's network to all secondary utilities and other access seekers.

F.1 Coverage declarations

Third parties, including wholesale customers, can seek access to infrastructure services through private negotiations with Sydney Water or Hunter Water. If negotiations fail, third parties can seek a coverage declaration from the Minister.

A coverage declaration creates a negotiate-arbitrate access regime, where if negotiations between a third party and Sydney Water or Hunter Water cannot be negotiated, the issue is referred to IPART for arbitrating the terms and conditions (including price) on which access must be granted.

A third party can lodge a coverage application with IPART at any time. We are required to consider the application and prepare a report to the Minister within four months that details whether we are of the opinion that all the coverage declaration criteria (see Box F.1) are met.

222 An infrastructure owner can voluntarily grant access outside of access undertakings or coverage declarations but cannot be compelled to provide it.

223 The Bondi, Malabar and North Head wastewater reticulation networks are declared.

Box F.1 The WIC Act's declaration criteria

Section 23 of the WIC Act sets out the following criteria for the assessment of applications for coverage:

a) that the infrastructure is of State significance, having regard to its nature and extent and its importance to the State economy,

b) that it would not be economically feasible to duplicate the infrastructure,

c) that access (or an increase in access) to the service by third parties is necessary to promote a material increase in competition in an upstream or downstream market,

d) that the safe use of the infrastructure by access seekers can be ensured at an economically feasible cost and, if there is a safety requirement, that appropriate regulatory arrangements exist,

e) that access (or an increase in access) to the service would not be contrary to the public interest.

If we consider that all the declaration criteria are met, we must also detail our recommended terms and period for a coverage declaration. The Minister, to his or her best endeavours, will make a decision within six months of the application being lodged with IPART.

We are not aware of any applications for a coverage declaration that have been rejected under the WIC Act. The Bondi, Malabar and North Head wastewater reticulation networks in Sydney Water's network are already subject to a coverage declaration. Notably, this does not include Sydney Water's wastewater treatment plants serving these networks.

The existing coverage declaration process allows wholesale customers to seek access to infrastructure services (as defined under the WIC Act) on fair terms. This creates a disincentive for Sydney Water or Hunter Water to refuse access to these services on reasonable terms.

F.2 Voluntary access undertaking process

Sydney Water or Hunter Water can, at any time, submit a voluntary access undertaking to IPART. Where approved, this sets out which infrastructure Sydney Water or Hunter Water is compelled to provide access to and under what terms. Section 38(6) of the WIC Act sets out four criteria IPART must consider in approving access undertakings:

- the legitimate business interests of the service provider
- the public interest, including the public interest in having competition in markets
- the interests of prospective access seekers, and

- any other matters that IPART considers relevant.

IPART is also required to consider pricing principles under the WIC Act in approving an access undertaking, as listed in Box F.2.[224] The principles must be implemented in a manner consistent with postage stamp pricing.[225]

Box F.2 Pricing principles under section 41 (2) of the WIC Act

The "pricing principles" in relation to any infrastructure service are as follows:

a) the price of access should generate expected revenue for the service that is at least sufficient to meet the efficient costs of providing access to the service, and include a return on investment commensurate with the regulatory and commercial risks involved,

b) the price of access should allow multi-part pricing and price discrimination when it aids efficiency,

c) the price of access should not allow a vertically integrated service provider to set terms and conditions that discriminate in favour of its downstream operations, except to the extent to which the cost of providing access to other operators is higher,

d) the price of access should provide incentives to reduce costs or otherwise improve productivity.

In 2012, Sydney Water submitted a voluntary access undertaking to IPART. While Sydney Water chose not to ultimately seek approval of this undertaking,[226] we consider that it could form a solid basis for a future access undertaking. A voluntary access undertaking allows Sydney Water to set the terms and conditions of access (with IPART's approval).

We consider that a voluntary access undertaking, with guarantees to provide water filtration and wastewater treatment services, could potentially service wholesale customers.

[224] Arbitrators are bound by the same pricing principles in relation to coverage declarations.
[225] S41 (3) of the WIC Act.
[226] Sydney Water pricing proposal to IPART, June 2015, p 244.

G Pricing guidelines for recycled water schemes

In this Appendix we have included our pricing guidelines for mandated recycled water schemes, from our 2006 *Pricing arrangements for recycled water and sewer mining*.[227]

1. The maximum cost that can be recovered for a recycled water scheme is the efficient "total direct cost" of the scheme, given by formula **A** below:

   Total direct cost = $PV_r(K_i + OC_i + JC_i)$ for i years 1,....n: n = 30 (A)

   Where:

   - K is the total capital cost associated with the project, including recycled water treatment plants, other infrastructure and storage
   - OC is the annual operating cost of the scheme, including pumping, treatment, chemicals, labour, monitoring and any other costs of operating the system
   - JC is the share of joint costs allocated to the recycled water scheme
   - n is the life of the project in years and for the purposes of calculating recycled water prices is equal to 30 years
   - r is the cost of capital and should be equivalent to the WACC used to calculate the return on capital for water and sewerage prices

2. The retail price of potable water used to supplement the recycled water scheme is to be included as an operating cost of the scheme when calculating the total direct cost.

3. The maximum amount that a water agency can 'offset' against the cost of a recycled water scheme to be recovered from recycled water customers is to be calculated using formula **B** below:

   Cost Offset = PV_r ($Subsidy_i$ + $Avoided\ Cost_i$ + $Deferred\ Cost_i$ + Govt Directive[228]) (B)

4. Other than costs included in the 'cost offset' amount, all costs are to be recovered through recycled water usage, fixed and developer charges.

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227 IPART, *Pricing arrangements for recycled water and sewer mining - Final Report*, September 2006, p 58.

228 This means that the Government has directed the Tribunal to allow water agencies to recover a portion of costs from customers other than recycled water users.

5. Except as provided for in Clauses 7 and 8 below, the total revenue that the water agency can recover from recycled water customers is to be calculated using the formula: **A – B**
6. If the agency wishes to recover the avoided or deferred costs from water or sewerage customers, it will be required to demonstrate to the Tribunal that costs have been calculated and allocated in accordance with the *Guidelines for Calculation of Avoided and Deferred Costs of Recycled Water Schemes*[229]
7. Recycled water prices are to include a usage component, which is to be set no greater than the potable water usage price prevailing from time to time unless the Tribunal's prior approval has been obtained. The usage charge is to be set at such a level that it sends appropriate consumption signals aimed at equating the demand for recycled water with the available supply.
8. If potable water 'top-up' of the recycled water supply exceeds more than 10% by volume on an annual basis,[230] the recycled water usage charge is to be calculated as a percentage of the potable water price as shown below:

Potable water top-up %	% of potable water price
>10% and ≤ 15%	80%
>15% and ≤ 20%	90%
>20%	100%

9. Prices may include a fixed component, which should not be so high as to act as an incentive for customers to disconnect from the recycled water scheme.
10. Where customers are subject to developer charges, the developer charge is to be calculated according to the Recycled Water Developer Charges Determination.
11. Where customers are not subject to developer charges, any residual cost not recovered through usage charges is to be recovered via an annual fixed charge or in the case of non-residential customers, may be recovered through a negotiated up-front capital contribution.
12. Agencies are to review recycled water prices at least once every 3 years. Between price reviews, recycled water prices may be indexed for inflation.
13. Agencies are required to publish and publicly exhibit their calculations of recycled water prices. This exhibition process is to include information on the costs of the scheme, avoided or deferred costs and assumptions used to calculate the prices. The calculated recycled water prices must be made available to customers and published on the agencies' websites.
14. Costs and revenues from recycled water schemes are to be ring fenced from the regulated business.

[229] See Appendix C of IPART, *Pricing arrangements for recycled water and sewer mining - Final Report*, September 2006.

[230] In calculating the annual recycled water volume the water agency may normalise seasonal fluctuations in demand.

Glossary

2009 Determination	*Review of prices for water, sewerage, stormwater and other services Hunter Water Corporation from date of Gazettal*, July 2009 (Determination No 4, 2009).
2009 determination period	The period commencing 1 July 2009 to 30 June 2013.
2013 Determination	*Maximum prices for Hunter Water Corporation from 1 July 2013 to 30 June 2017*, June 2013 (Determination No 4, 2013).
2013 determination period	The period commencing 1 July 2013 to 30 June 2017.
Annual revenue requirement	The notional revenue requirement in each year of the determination period.
CEMELND	Assets are grouped into civil, electrical, mechanical, electronic, and non-depreciating components.
Central Coast councils	Gosford City Council and Wyong Shire Council.
current determination period	The period from 1 July 2013 to 30 June 2017, as set in the 2013 Determination.
CPI	Consumer Price Index.
determination period	Given period over which price limits (maximum prices) are set by IPART.
DPI Water	Department of Primary Industries Water.
DRC	Depreciated Replacement Cost.

EBSS	Efficiency Benefit Sharing Scheme.
EPA	Environment Protection Authority.
EPL	Environment Protection Licence.
EIC	Environmental Improvement Charge.
FFO	Funds From Operations.
GL	Gigalitre.
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.
LRMC	Long Run Marginal Cost (of supply).
LHWP	Lower Hunter Water Plan.
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.
PSP	Priority Sewerage Program.
RAB	Regulatory Asset Base.
RBA	Reserve Bank of Australia.

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.
SDP	Sydney Desalination Plant.
Upcoming determination period	Determination period commencing from 1 July 2016 for up to 5 years.
WACC	Weighted Average Cost of Capital.
WAPC	Weighted Average Price Cap.
WIC Act	*Water Industry Competition Act 2006* (NSW).
WWTP	Wastewater Treatment Plant.