IPART
New South Wales

Independent Pricing and Regulatory Tribunal

Prices for wholesale water and sewerage services

Sydney Water Corporation and Hunter Water Corporation

Water — Discussion Paper
April 2016

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The Tribunal members for this review are:

Dr Peter J Boxall AO, Chairman

Ms Catherine Jones

Mr Ed Willett

Inquiries regarding this document should be directed to a staff member:

Justin Robinson	(02) 9290 8427
Anita Payne	(02) 9113 7783
Zoe Moffat	(02) 9113 7765

Independent Pricing and Regulatory Tribunal of New South Wales
PO Box K35, Haymarket Post Shop NSW 1240
Level 15, 2-24 Rawson Place, Sydney NSW 2000

T (02) 9290 8400 F (02) 9290 2061

www.ipart.nsw.gov.au

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 31 May 2016.

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

You can also send comments by mail to:

Review of wholesale prices for Sydney Water and Hunter Water
Independent Pricing and Regulatory Tribunal
PO Box K35
Haymarket Post Shop NSW 1240

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 Executive summary

In recent years, a new category of water customer has emerged in NSW: wholesale customers. They buy wholesale water and/or sewerage services from Sydney Water Corporation (Sydney Water) or Hunter Water Corporation (Hunter Water) and on-supply these services to end-use customers. Typically, wholesale customers will be licensed under the *Water Industry Competition Act 2006* (the WIC Act).[1] Therefore, they are alternative retail suppliers to the incumbent utilities, and compete with them for customers.

The Independent Pricing and Regulatory Tribunal of NSW (IPART) is currently conducting our first review of the prices Sydney Water and Hunter Water can charge wholesale customers. We originally intended to review these prices as part of our ongoing 2016 reviews of the incumbent utilities' retail prices, and undertook some initial consultation on this issue as part of these reviews. However, after further considering our legislative requirements and stakeholder views expressed in the initial consultation, we have decided a separate and longer review of this new and complex area of water price regulation is necessary.

The purpose of this discussion paper is to explain our legislative requirements in relation to Sydney Water's and Hunter Water's wholesale water and sewerage prices, explain our proposals for meeting those requirements, and seek stakeholder comments.

We will consider the potential regulation of prices for Gosford City Council's and Wyong Shire Council's water and sewerage wholesale services at our next review of these utilities' prices.[2]

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1 Currently, retail suppliers licensed under the WIC Act must source sufficient quantities of water from a source other than a public water utility: WIC Act, section 10(4)(d). Therefore, wholesale customers often treat sewage, industrial sewage, contaminated groundwater or stormwater onsite and reuse it, as well as on-supply wholesale services. Examples include the water schemes within new developments such as Barangaroo and Central Park in Sydney and Huntlee in the Hunter Valley.

2 We are now scheduled to commence our next review of Gosford and Wyong's water and sewerage prices in mid 2017, for new prices to commence 1 July 2018. See: http://www.ipart.nsw.gov.au/Home/Industries/Water/Reviews/Metro_Pricing/Review_of_prices_for_Gosford_City_Council_and_Wyong_Shire_Council_from_1_July_2018 .

1.1 We are required to determine wholesale prices

We have a standing reference to conduct investigations and determine prices for government monopoly services supplied by government agencies.[3] As state-owned corporations, Sydney Water and Hunter Water are government agencies, and their water supply and sewerage services have been declared government monopoly services.[4] Therefore, we are required to regulate the price of all of Sydney Water and Hunter Water's water supply and sewerage services, regardless of whether they are retail or wholesale services.

We also consider there is an in-principle need for us to regulate Sydney Water's and Hunter Water's wholesale prices. Both utilities are the monopoly supplier of wholesale water and sewerage services in their area of operations, so regulation is needed to protect wholesale customers from potential abuses of this monopoly power. In addition, we do not consider the WIC Act access regime is currently a suitable framework for this regulation. It regulates access to 'infrastructure services',[5] rather than the wholesale purchase of bundled water and sewerage services.

Nevertheless, we recognise that, in some instances, the parties may prefer to negotiate a private pricing agreement for wholesale services to achieve mutually beneficial outcomes. We consider that they should be given the option to do so. Therefore, we propose the regulated prices would apply unless such an agreement is made between the parties.

1.2 Our main objective is to encourage efficient entry to the water and sewerage services markets

Our objective in determining wholesale prices for water and sewerage services is to create a level playing field, so that new entry to the water and sewerage services markets occurs where it is efficient. That is, that new entrants or alternative suppliers to Sydney Water and Hunter Water can compete where they are efficient, leading to overall least cost supply, enhanced service levels and efficiency gains in the water and sewerage services markets.

Specifically, it is important to get wholesale prices right, otherwise prices may:

- encourage inefficient entry if the price is too low, or
- discourage efficient entry if the price is too high.

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3 Section 11(1) of the IPART Act requires us to conduct investigations and make reports on the pricing for government monopoly services supplied by Sydney Water, Hunter Water, and other specified government agencies.

4 The *Independent Pricing and Regulatory Tribunal (Water, Sewerage and Drainage Services) Order 1997* lists the services declared by the NSW Premier to be government monopoly services.

5 Infrastructure services are the conveyance, reticulation and storage other than behind a dam wall of water or sewage.

To achieve this objective in the current policy and operating environment, we need to set prices that allow:

- the wholesale service providers (the incumbent utilities) and wholesale customers (new entrants) to compete on a level playing field (ie, on equal terms), and
- new entrants to compete with each other on a level playing field.

Such prices would allow new entrants to enter the contestable parts of the market where it is efficient for them to do so. That is, where they can compete by supplying contestable services[6] at lower cost and/or by enhancing value to customers through the services they provide. Over time, increasing competition should encourage greater efficiency in the supply of water and sewerage services, thus reducing costs and enhancing services for the benefit of consumers.

1.3 A retail-minus (plus net facilitation costs) price setting approach can achieve this objective

Our preliminary view is that **retail-minus (plus net facilitation costs)** is the right pricing approach for wholesale services at this time. We consider that, while the policy of postage stamp pricing applies to Sydney Water and Hunter Water prices, retail-minus is the only viable pricing approach that can allow the incumbent public water utilities and the new entrants to compete on equal terms, so that new entry and competition occurs where it is efficient.

On balance, our preliminary view is that the 'minus' component should reflect the costs that a **reasonably efficient competitor** would incur in delivering water and/or sewerage services from the wholesale connection point[7] to the end-users.[8] We consider this would provide greater scope for dynamic efficiency gains (and hence greater benefits to consumers over time) than the retail minus **avoidable cost** approach we suggested in our Issues Papers.

Facilitation costs are costs (positive) or cost savings (negative) to the wholesale service provider of servicing the wholesale customer that are:

- not reflected elsewhere in the retail-minus pricing formula, and
- additional to what the wholesale service provider would have otherwise incurred in the absence of servicing the wholesale customer.

6 The services from the wholesale connection point to end users.

7 A wholesale connection point is the point where a wholesale service is delivered to a wholesale customer's infrastructure.

8 That is, the minus component of wholesale prices should reflect the reasonably efficient cost of providing water and/or sewerage services from a wholesale connection point to end-use customers.

For example:

- a positive facilitation cost may arise if a wholesale service provider needs to upgrade or extend its water network to provide water to a wholesale customer, or
- a negative facilitation cost may arise if a wholesale customer produces recycled water that allows the wholesale service provider to defer its next scheduled water supply augmentation.

Net facilitation costs are the sum of positive and negative facilitation costs (ie, facilitation costs *less* cost savings).

Our preferred pricing framework would result in wholesale prices that equate to the incumbent utilities' regulated **retail price** plus **net facilitation costs minus** the **reasonably efficient cost** of supplying water and/or sewerage services from the wholesale connection point to the end-users. Both these costs (**net facilitation** and **reasonably efficient**) can vary across schemes – for example, due to differences in the demand, location and density of the developments wholesale customers supply.

Our preferred approach of subtracting the reasonably efficient cost of contestable services recognises that competitive entry may be hindered if new entrants were required to achieve the scale economies of the incumbent utility immediately. Over time, this entry could benefit consumers through efficiency gains by entrants and incumbents.

1.4 Options to implement a retail-minus (plus net facilitation costs) pricing approach

We have identified several options to implement a retail-minus (plus net facilitation costs) pricing approach. Each option involves determining a methodology for fixing maximum wholesale prices. In each option, the **retail** component of retail-minus pricing would be calculated by multiplying the prevailing regulated retail prices by end use customer numbers and consumption volumes for each scheme where the wholesale customer is servicing end-users. Also common to each of our proposed options are the concepts that:

- the minus component should reflect the **reasonably efficient costs** of supplying water and/or sewerage services from the wholesale connection point to end users (ie, the reasonably efficient costs of the contestable services), and
- where possible and applicable, the wholesale price formula should include provision for the wholesale service provider's **net facilitation costs.**

However, each option would vary in terms of how the **minus** and **net facilitation cost** components would be determined in practice. In considering these pricing options, we will take into account their ability to reflect scheme-specific characteristics and facilitate efficient entry to the water and sewerage services markets, as well as their administrative costs and feasibility.

The options for calculating the **minus** and **net facilitation cost** components of retail-minus (plus net facilitation costs) pricing include:

- **Option 1: IPART determining system-wide average or typical minus[9] and net facilitation costs to be used for all schemes**
  - The minus component would comprise a minimum standard percentage or value (ie, percentage or value reduction from the retail price) per type of wholesale service provided (water or sewerage). It could also extend to a schedule of percentages or values to reflect different wholesale customer models and locations.
  - This would reflect our best estimate of the costs that a reasonably efficient competitor would typically (or on average) incur in supplying water and/or sewerage services from the wholesale connection point to the end users.
  - Similarly, the net facilitation cost component would be an estimate of typical or average net facilitation costs (as a percentage of retail revenue or other value) or a schedule of average net facilitation costs (eg, for different types of locations and/or network component augmentations).
  - This option has some similarities with Sydney Water's and Hunter Water's initial wholesale pricing proposals of retail minus 3% and 2% or 3%, respectively[10] – although IPART would determine the percentage or value to be subtracted from the retail charge.
  - This option would be relatively simple (and lower cost) to administer and provide transparency and hence some certainty to all stakeholders. However, it would not account for scheme-specific characteristics or variations from the average.
- **Option 2: IPART determining a methodology that wholesale service providers must use to calculate the minus and net facilitation costs for each scheme.**
  - The incumbent utility would calculate the minus and facilitation cost components in accordance with the methodology in IPART's determination. The dispute resolution mechanism in section 31 of the *Independent Pricing and Regulatory Tribunal Act 1992* (IPART Act) (which provides for arbitration) would be available if the wholesale customer was dissatisfied with how the methodology set out in the determination had been applied by the wholesale service provider.
  - This would be similar to the approach to regulating developer charges, where IPART's determinations specify a methodology for fixing a maximum price, and the incumbent utilities produce Development Servicing Plans (DSPs) outlining their developer charges for each area in

9 For simplicity, we refer to 'minus' throughout this paper. However, under a price determination, there may be a different 'minus' to reflect each different service (eg, at a minimum water vs sewerage) and supply scenario.

10 Sydney Water submission to IPART Issues Paper (Sydney Water), October 2015, p 106, and Hunter Water submission to IPART Issues Paper (Hunter Water), October 2015, p 11.

accordance with the methodology. Arbitration is available if a customer is dissatisfied with how the IPART-determined pricing methodology has been applied by the service provider.

- This approach would likely be more costly to administer than Option 1 and there would be a period of uncertainty until the wholesale price is calculated and any arbitration is settled. However, it would allow for prices that account for scheme-specific characteristics.

- **Option 3: IPART determining the minus and net facilitation costs for each scheme.**
  - IPART would make a price determination for each scheme that takes into account minus and net facilitation costs tailored to that scheme.
  - Similar to Option 2, this approach would be more costly to administer than Option 1, but would allow for prices to account for scheme-specific characteristics. This option would likely have more price certainty than Option 2, as there would be less likelihood of an arbitration process.

Default of interim prices

Option 2 and Option 3 may require **interim or default prices** for each scheme until a scheme's minus and net facilitation costs are determined.

Options for such interim or default prices include **Option 1** or the prevailing IPART-determined retail **non-residential prices**.

For example, Option 1 or the prevailing retail non-residential prices could combine with Option 3, such that:

- Option 1 or retail non-residential prices apply to all wholesale schemes unless IPART determines prices to apply to a particular scheme (under Option 3)
  - A wholesale service provider or customer could make a case to IPART to conduct a price review for a specific scheme.
  - We could make scheme-specific determinations where requested and where there is information to suggest a material difference between the interim or default prices and an efficient price for that scheme.

Alternatively, Option 1 or the non-residential price could combine with Option 2, such that:

- Option 1 or the non-residential price applies to all wholesale schemes until a wholesale service provider registers its wholesale prices for a scheme in accordance with Option 2 (at which time those prices would apply for that scheme).

1.5 The option of unregulated prices

We also propose that wholesale customers and wholesale service providers should be free to opt-out of the IPART determination and opt into unregulated pricing agreements, where there is mutual agreement to do so.

1.6 Structure of this paper

We encourage all stakeholders to make a submission to this paper. The rest of the paper provides more information on the review, and explains our proposals and preliminary views in detail:

- Chapter 2 outlines the key context for this review, including our objectives and the matters we must consider. It also outlines the timetable for the review, and provides details on how to make a submission.
- Chapter 3 discusses our preferred pricing approach.
- Chapter 4 outlines options to implement our preferred pricing approach.

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 any **other issues** related to this review.

1.7 List of issues for stakeholder comment

Definitions of wholesale services and customers

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16 Do you support a methodology for determining scheme-specific minus and net facilitation costs (Option 2)? Please explain why or why not. 52

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22 What should be the methodology or formula for determining the scheme-specific net facilitation cost component? 52

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24 If a methodology for scheme-specific minus and net facilitation costs is adopted: 52

- What should be the interim or default price until the incumbent utility has finalised a scheme's wholesale prices in accordance with the methodology? 52
- How can we ensure the incumbent utility finalises these prices in a timely manner? 52
- What, if any, measures should be adopted to account for differences between interim and final prices? 52

IPART determining scheme-specific minus and net facilitation costs (Option 3)

25 Do you support IPART conducting scheme-specific price determinations (Option 3)? Please explain why or why not. 55

26 What steps should be included in IPART's price determination process? 55

2 Context for this review

As Chapter 1 noted, we initially intended to review wholesale water and sewerage pricing as part of our 2016 retail pricing reviews for Sydney Water and Hunter Water. We discussed the utilities' proposals and our preliminary responses in the issues papers we published in September 2015. We also held a separate public hearing on wholesale pricing on 8 December 2015.

However, we have recently decided to separate our review of wholesale prices from these retail reviews, and to extend the timeframe for the review. To provide context, the sections below discuss:

- why we are conducting a separate, extended review of wholesale prices, our timetable for this review, and how stakeholders can contribute to the review
- our proposed definitions of wholesale customers and wholesale services
- why we have decided to regulate wholesale prices through a determination
- our main objectives in making this determination, and
- the legislative and other factors we need to consider in making the determination.

2.1 Why we are conducting a separate, extended review

We decided to conduct a separate, extended review of Sydney Water and Hunter Water's wholesale prices for three main reasons.

First, wholesale pricing is a new area of price regulation for IPART and the water industry. It is also a complex area that has potential implications for the wider NSW urban water market. Extending the review will allow more time to consult with stakeholders and develop the best wholesale pricing approach. In particular, we consider stakeholders need time to assess the implications of any pricing proposals on their businesses.

Second, a separate review and determination will help us ensure that our pricing approach for wholesale services is consistent for Sydney Water and Hunter Water. This will provide wholesale customers with greater certainty on the approach, and may better facilitate state-wide expansion of activities.

Third, a separate review and determination will allow us to set an appropriate determination period for wholesale prices, rather than necessarily linking it to the retail price determination period. This will allow the determination period to better reflect wholesale providers' and customers' needs.

Table 2.1 outlines our indicative timetable for the review. We will update this timetable on our website as the review progresses.

Table 2.1 Indicative review timetable

What	When
Released Issues Papers for Sydney Water and Hunter Water price reviews, with wholesale pricing chapters	7 September 2015
Held first public hearing wholesale pricing	8 December 2015
Release Discussion Paper	26 April 2016
Submissions to Discussion Paper due	31 May 2016
Release Draft Report and Draft Determination	End August 2016
Hold second public hearing on wholesale pricing	Mid September 2016
Receive submissions to Draft Report and Draft Determination	Early October 2016
Release Final Report and Determination	December 2016

2.1.1 How can you contribute to this review?

Stakeholders will have a number of opportunities to further contribute to this review:

- **Submission to this discussion paper:** We encourage all stakeholders to make a submission to this paper. We have asked targeted questions throughout this paper. Stakeholders are also free to raise any other options or issues they consider relevant to this review.
- **Public hearing:** We will also be holding a public hearing in August 2016 to gather further stakeholder ideas and facilitate transparent debate on this topic. You can register your interest for this hearing on our website.
- **Submission to the draft report and determination:** We will release our draft report and determination in July 2016, and will give stakeholders six weeks to make submissions.

As noted above, submissions in response to this discussion paper are due on 31 May 2016. If you wish to make a submission, see page iii at the front of this paper for more information.

2.2 Our proposed definitions of wholesale customers and wholesale services

We consider wholesale customers to be those that purchase water supply and/or sewerage services from Hunter Water and Sydney Water for the purposes of on-supplying water and sewerage services to customers. As such, wholesale customers are alternative water and sewerage service providers to Hunter Water and Sydney Water.

The types of supply arrangements we envisage as wholesale services could be where wholesale customers purchase a wholesale water supply service from Hunter Water and/or Sydney Water (comprising, for example, bulk water, treatment and transportation) and then provide retail water services[11] to end-use customers. Similarly, wholesale customers could purchase a wholesale sewerage service from Hunter Water and/or Sydney Water (comprising, for example, sewage transportation, treatment and disposal) and provide retail sewerage services to end-use customers.

To date, IPART has set maximum prices that Hunter Water and Sydney Water can charge for the provision of water, sewerage and related services to end-use (or 'retail') customers. In March 2016, we released Draft Determinations for Sydney Water and Hunter Water setting out the prices to apply to these services from the period 1 July 2016 to 30 June 2020.[12] These Draft Determinations set out which services are covered by retail prices. For both water supply and sewerage services, the Draft Determinations excluded wholesale water and sewerage services based on definitions included in the Draft Determinations. Submissions on the Draft Determinations for retail prices for Hunter Water and Sydney Water closed on 18 April 2016. Our Final Determinations for retail prices will be released in June 2016, for new retail prices to apply from 1 July 2016.

The maximum prices to apply to the provision of wholesale water and sewerage services by Hunter Water and Sydney Water will be determined as part of this review. This requires definitions of both **wholesale services** and **wholesale customers**. We intend that there is a consistent definition of wholesale customers and services in the retail and wholesale price determinations for Hunter Water and Sydney Water.

We have considered submissions received on the definitions of wholesale customers and services in response to our draft retail price determinations. In light of these submissions, we have revised the definitions of wholesale customers and services. They are set out in the Box 2.1 below. We seek stakeholders views on these definitions.

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11 Examples of retail services include billing and payment handling, customer complaints; meter reading.

12 IPART, *Hunter Water Corporation – Maximum prices for water, sewerage, stormwater drainage and other services from 1 July 2016 – Draft Determination*, March 2016 and *Sydney Water Corporation– Maximum prices for water, sewerage, stormwater drainage and other services from 1 July 2016 – Draft Determination*, March 2016.

Box 2.1 Proposed definitions of wholesale services and customers

Wholesale Sewerage Service means any sewerage service supplied by Sydney Water and/or Hunter Water to any Wholesale Sewerage Services Customer in that Wholesale Sewerage Services Customer's capacity as an on-supplier of that sewerage service.

Wholesale Sewerage Services Customer means each of the following:

a) a public water utility;

b) a licensed retail supplier, or person required to hold a retail supplier's licence, under the WIC Act;

c) a licensed network operator, or person required to hold a network operator's licence, under the WIC Act;

d) a sewerage services supplier that is exempt from the requirement to obtain a retail supplier's licence or network operator's licence under the WIC Act; and

e) a local council.

Wholesale Water Supply Service (for Hunter Water) means any water supply service (other than Bulkwater service[a]) supplied by Hunter Water to any Wholesale Water Supply Services Customer in that Wholesale Water Supply Services Customer's capacity as an on-supplier of that water supply service.

Wholesale Water Supply Service (for Sydney Water) means any water supply service supplied by Sydney Water to any Wholesale Water Supply Services Customer in that Wholesale Water Supply Services Customer's capacity as an on-supplier of that water supply service.

Wholesale Water Supply Services Customer means each of the following:

a) a public water utility;

b) a licensed retail supplier, or person required to hold a retail supplier's licence, under the WIC Act;

c) a licensed network operator, or person required to hold a network operator's licence, under the WIC Act;

d) a water supply services supplier that is exempt from the requirement to obtain a retail supplier's licence or network operator's licence under the WIC Act; and

e) a local council.

a Bulkwater service refers to the supply by Hunter Water of water supply services to Gosford City Council and Wyong Shire Council under the Hunter/Central Coast Pipeline Agreement. IPART, *Review of prices for Hunter Water Corporation - From 1 July 2016 to 30 June 2020 – Draft Repor*t, March 2016, pp 125-127.

Given the diversity of current and potential wholesale supply arrangements, it is important to ensure that the definition of wholesale customers and services captures the intended services and customers. Issues that require further consideration include supply arrangements such as:

- service transformation (eg, where potable water is purchased from Sydney Water or Hunter Water for the purpose of potable top-up of a WIC Act licensee's recycled water scheme)
- where customers do not have a physical connection to the network of Hunter Water or Sydney Water but may still be wholesale customers of these utilities (eg, tankering arrangements)
- where end-use customers are located outside the area of operation of Hunter Water or Sydney Water.

We welcome stakeholder views on whether (and if so how) these arrangements should be included in the definition of wholesale customers and/or services.

We will consider submissions in response to this wholesale pricing discussion paper, in finalising the definition of wholesale customers and services for our retail and wholesale price determinations.

We propose that this review of wholesale water and sewerage prices does not include the supply of **wholesale recycled water services**. To date, apart from Sydney Water's Rouse Hill scheme, we have not determined the maximum retail prices Sydney Water and Hunter Water can charge for recycled water.[13] We intend to conduct a full review of our approach to regulating recycled water pricing in 2017-18 (including a review of our 2006 *Pricing arrangements for recycled water and sewer mining*[14]) and will consider pricing of retail and wholesale recycled water services at that time.

IPART seeks comments on the following

1 Do you support our proposed definitions of wholesale water and sewerage services and customers? If not, how should wholesale customers and services be defined and why?

13 IPART, *Review of prices for Sydney Water Corporation – From 1 July 2016 to 30 June 2020 – Draft Report,* March 2016, p 171 and *Review of prices for Hunter Water Corporation- From 1 July 2016 to 30 June 2020 – Draft Repor*t, March 2016, pp 132-137.

14 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.

2.3 Why we decided to regulate wholesale prices through a determination

In our issues papers for the 2016 reviews of retail prices, we discussed whether the wholesale prices charged by Sydney Water and Hunter Water for water and sewerage services could be regulated through the WIC Act's access regime or set by private negotiations. However, after considering this issue further, we reached the view that IPART is required by legislation to determine these wholesale prices.

The IPART Act requires us to conduct investigations and make reports to the Minister on the pricing of government monopoly services provided by specified government agencies, including Sydney Water and Hunter Water.[15] Both utilities' "water supply services" and "sewerage services" are declared to be government monopoly services under the *Independent Pricing and Regulatory Tribunal (Water, Sewerage and Drainage Services) Order 1997*. We consider that wholesale services are "water supply services" and "sewerage services" for the purposes of this order.

We also reached the view that there is an in-principle need for IPART to regulate Sydney Water and Hunter Water's wholesale prices, for the reasons outlined below.

2.3.1 Regulation needed to protect wholesale customers from potential abuses of monopoly power

As noted above, Sydney Water and Hunter Water are monopoly suppliers of water and sewerage services in their areas of operations. Most of their wholesale water and sewerage customers have no alternative supplier of these services. This gives Sydney Water and Hunter Water a dominant wholesale market position and potential bargaining power, which could be used to create a barrier to retail entry in the absence of price regulation.

2.3.2 WIC Act access regime does not accommodate bundled water and sewerage services

The WIC Act was introduced by the NSW Parliament to promote private-sector investment and innovation in the water and sewerage industries. It establishes a regime for third-party access to certain water and sewerage infrastructure services in NSW.

15 IPART Act, section 11; Schedule 1.

Under the WIC Act, IPART is required to consider specific pricing principles in deciding whether to approve an access undertaking or in determining a dispute in relation to access pricing. These principles are listed in Box 2.2 below. The WIC Act also requires these principles to be implemented in a manner consistent with postage stamp pricing.[16]

Box 2.2 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.

However, the WIC Act access regime does not explicitly cover all the water and sewerage services wholesale customers purchase from the incumbent utilities. It focuses on access to the utilities' **infrastructure services to transport** water and sewage (ie, via their networks of pipes).[17] It does not cover the bundled services that wholesale customers may wish to purchase, including:

- water services (the water itself and its treatment, in addition to its transportation), and
- sewerage services (sewage treatment and disposal, in addition to its transportation).

This limitation could potentially be overcome. This would require wholesale customers to negotiate access to the transportation services covered under the WIC Act, and also:

- enter into private negotiations with the incumbent utilities for the purchase of bulk water, water treatment, and/or sewage treatment and disposal services (ie, the services 'upstream' and 'downstream' of the transportation services covered under the WIC Act); or
- provide their own water and/or sewerage services 'upstream' and 'downstream' of the incumbent's water and sewage transportation network.

16 WIC Act, section 41 (3).

17 WIC Act, Part 3 and Dictionary (definition of 'infrastructure service').

However, this would likely add significantly to wholesalers' costs, limiting the extent of new entry and competition in the market. As discussed above, wholesale providers are also likely to have bargaining power in any private negotiations, potentially creating barriers to entry.

Appendix A contains further information on the access regime in the WIC Act.

Stakeholders' views on the suitability of the WIC Act are outlined in Box 2.3.

Box 2.3 Stakeholder views on the suitability of the WIC Act access regime

In submissions to our September issues papers, Sydney Water agreed with our preliminary view that the WIC Act's access regime should be used to regulate wholesale pricing. Sydney Water put the view that the access framework is a valid long-term approach to support efficient entry into the market. It noted that it would take it 18 to 24 months to prepare a voluntary access undertaking to submit to IPART for approval.[a]

Hunter Water raised concerns about whether a wholesale service would be considered an 'infrastructure service' under the WIC Act's access regime.[b]

Flow Systems opposed using the WIC Act's access regime to regulate wholesale prices. It argued that the access regime is "untested, clumsy and time-consuming and introduces unworkable legal, process and economic problems".[c]

a Sydney Water submission to IPART Issues Paper (Sydney Water), October 2015, p 73.
b Hunter Water submission to IPART Issues Paper (Hunter Water), October 2015, p 12.
c Flow Systems submission to IPART Issues Paper (Sydney Water), October 2015, p 19.

2.4 What are our objectives in regulating wholesale prices?

Our objective in determining wholesale prices is to create a level playing field, so that new entry to the water and sewerage services markets occurs where it is efficient.[18]

When determining wholesale prices, we need to consider current policy and legislative frameworks. Generally, wholesale prices should be set to allow the incumbent utilities and their wholesale customers to compete on equal terms within the regulatory constraints in which they operate (discussed in further detail below).

18 That is, that new entrants or alternative suppliers to Sydney Water and Hunter Water can compete where they are efficient.

Wholesale prices should allow new entrants to enter the contestable parts of the market where it is efficient for them to do so. That is, where they can compete by supplying contestable services at lower cost and/or by enhancing value to customers through the services they provide. Over time, increasing competition should encourage greater efficiency in the supply of water and sewerage services, thus reducing costs and enhancing services for the benefit of consumers (see Box 2.4 for more detail).

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

- encourage inefficient entry if the price is too low, and
- discourage efficient entry if the price is too high.

Many of the stakeholders who commented on wholesale prices in submissions to our September issues papers generally agreed that the wholesale price should allow efficient entry to occur.[19]

Box 2.4 How competition may lead to efficiency gains

Increasing competition in the supply of water and sewerage services should encourage greater efficiency in the supply of these services, thus reducing costs for the benefit of consumers. In particular, competition should lead to three types of efficiency.

Productive efficiency

Productive efficiency means that an organisation's output is maximised for a given cost or that cost is minimised for a given output. Competitive forces generally lead to the displacement of high cost or low quality firms by more efficient ones. Where there is effective competition (with minimal barriers to entry), firms will be forced to lower their prices and/or increase their level of service quality to attract and keep customers.

Allocative efficiency

Allocative efficiency means that production reflects consumer preferences, and resources are assigned to those that value them most highly. Competition compels firms to offer products that customers value.

Dynamic efficiency

Dynamic efficiency means that investment decisions lead to optimal levels and types of output over the long term. Competition can drive innovation, which may be dynamically efficient where valuable new types of services become available or existing services are provided at lower cost.

[19] Sydney Water submission to IPART Issues Paper (Sydney Water), page xiv; Hunter Water submission to IPART Issues Paper (Sydney Water), p 10; Flow Systems submission to IPART Issues Paper (Sydney Water), p 14.

A secondary objective in determining wholesale prices is to ensure that the administrative burden the price determination process places on the parties involved is in proportion to the potential benefits of competition. We will therefore also consider the administrative costs and feasibility of different pricing options.

We recognise that setting the right wholesale price is only part of the solution to ultimately achieving a level playing field for water utilities, and not all barriers to competition can be addressed through a pricing determination. Regulation has benefits and costs, which need to be weighed against each other when considering the merits of a particular approach. The benefits relate to the outcome that the regulation is intended to achieve. The costs of regulation include compliance and administrative costs to the regulated entities.

IPART seeks comments on the following

2 What should be our objectives and guiding principles in determining prices for wholesale services?

2.5 Legislative and other factors we must take account of in making our determination

In determining maximum prices for wholesale services, we need to consider the existing legislative framework and current NSW Government policies. For example, some of these factors affect what we are required and able do in making our determination, including the methods that IPART may adopt to determine maximum prices under the IPART Act.[20] Others influence the extent to which the possible pricing methodologies will meet our objectives for the determination.

We particularly need to take account of the following:

- the matters specified in section 15 of the IPART Act
- the service levels specified in public utilities' and wholesale customers' licences
- the Government's current postage stamp pricing policy for Sydney Water's and Hunter Water's water and sewerage services
- the Government's current direction that Sydney Water and Hunter Water set water and sewerage developer charges at zero
- the potential for component pricing, and
- the potential for future policy changes.

Each of these factors is discussed in more detail below.

[20] IPART Act, section 13A.

2.5.1 IPART Act

The IPART Act specifies that in making a determination on the prices of a government monopoly service, IPART must either:

- fix a maximum price (such as a price cap), which is similar to how we set retail water and sewerage prices, or
- set a methodology for fixing the maximum price (a pricing methodology).[21]

We will consider which of these pricing approaches is best suited for meeting our pricing objectives for this determination.

The IPART Act also outlines a number of matters that we must have regard to when determining prices.[22] Three of these matters are particularly relevant to this determination:

- the protection of consumers from abuses of monopoly power in terms of prices, pricing policies and standard of services
- the need for greater efficiency in the supply of services so as to reduce costs for the benefit of consumers and taxpayers, and
- the need to promote competition in the supply of the services concerned.[23]

We will have regard to all of the matters listed in section 15 of the IPART Act, as well as any other matters we consider relevant, when developing our pricing determination (see Appendix B).

2.5.2 Service levels specified in operating licences

The operating licences for Sydney Water and Hunter Water place requirements on these utilities in relation to levels of service and obligations to service certain customers.

Level of service

The appropriate price for any service is directly linked to the level or quality of service provided. The operating licences and customer contracts of Sydney Water and Hunter Water[24] establish the minimum level of service they must provide customers. For example, both water utilities must meet water quality requirements and some system performance standards (such as water pressure

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21 IPART Act, section 13A. IPART may also use a combination of the two approaches, fixing a maximum price for part of the service, and setting a methodology for the fixing of a price for the other parts of the service.

22 IPART Act, section 15.

23 IPART Act, section 15.

24 Issued under the *Sydney Water Act 1994* (Sydney Water Act), sections 12 and 54 and *Hunter Water Act 1991* (Hunter Water Act), sections 12 and 35.

and continuity), as well as implement an appropriate asset management system.[25]

Neither the operating licences nor the customer contracts currently distinguish between wholesale and retail services and customers. Where Sydney Water or Hunter Water provides services to any "customer" as defined in the operating licences,[26] they must meet the obligations of the customer contract regardless of whether the customer is a wholesale or retail customer, unless both parties enter into a separate agreement.[27]

Our pricing determinations should ensure Sydney Water and Hunter Water can recoup the costs they require to continue to efficiently meet their operating licence requirements.

Obligation to service

Sydney Water and Hunter Water must ensure that drinking water and sewerage services are available on request to any property situated in their area of operation.[28] The connection of properties to a utility's drinking water and sewerage systems is subject to any conditions the utility may determine to ensure the safe, reliable and financially viable supply of those services.[29]

The word 'property' is defined as either an individual dwelling, individual premises, land owned by a person or a lot in a strata plan that is connected to the water supply and/or sewerage system, or for which connection is available.[30] That is, 'property' refers to land or premises, rather than to water or sewerage infrastructure. This means that Sydney Water and Hunter Water are only obliged to provide services on request of the owner of the relevant land or premises for which a connection has been requested. Whether this obligation applies does not depend on whether the connection is for a retail or wholesale service. However, we note that in some cases wholesale customers may own the water or sewerage infrastructure, but not the property, for which a connection is requested.

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25 *Sydney Water Operating Licence 2015-2020*, clauses 2 and 4; *Hunter Water Operating Licence 2012-2017*, clauses 2 and 4.

26 See *Sydney Water Operating Licence 2015-2020*, clause 12.1; *Hunter Water Operating Licence 2012-2017*, clause 12.1. See also Sydney Water Act, section 55; Hunter Water Act, section 36.

27 Sydney Water Act, section 57; Hunter Water Act, section 37; *Sydney Water Operating Licence 2015-2020, Schedule 4 - Customer Contract*, clause 2.3; *Hunter Water Operating Licence 2012-2017, Schedule C - Customer Contract*, clause 2.3.

28 *Sydney Water Operating Licence 2015-2020*, clause 1.6.1; *Hunter Water Operating Licence 2012-2017*, clause 1.6.1.

29 *Sydney Water Operating Licence 2015-2020*, clause 1.6.2; *Hunter Water Operating Licence 2012-2017*, clause 1.6.2.

30 *Sydney Water Operating Licence 2015-2020*, clause 12.1; *Hunter Water Operating Licence 2012-2017*, clause 12.1.

Operating licence review

Matters relating to **levels of service** and the **obligation to service** are outside the scope of this review of prices for wholesale water and sewerage services. We will, however, soon commence a review of Hunter Water's operating licence, with the new operating licence scheduled to apply from 1 July 2017.

This upcoming operating licence review provides an opportunity to consider whether modification should be made to the provisions relating to obligation to service,[31] level of service and the definition of 'customer' and 'consumer' in the operating licence, in light of the emergence of wholesale customers.

An Issues Paper seeking stakeholder views on these and other issues relating to the operating licence is scheduled for release in June 2016.

2.5.3 Postage stamp pricing policy

The Government's current postage stamp pricing policy means Sydney Water and Hunter Water must charge all customers in their area of operations the same ongoing water and sewerage prices – regardless of differences in the cost to supply them due to their location and other site-specific factors. In other words, their retail water and sewerage prices reflect the average cost of supplying the service in their area of operations. This results in cross-subsidies between the public utilities' retail customers, so that:

- customers located in areas that are cheaper than average to supply (eg, because they are close to a sewage treatment works or in a lower cost sewage treatment catchment) pay more than their true cost of supply, and
- customers located in areas that are more expensive to supply (eg, because they are a long distance from a sewage treatment works or in a higher cost sewage treatment catchment) pay less than their true cost of supply.

If wholesale customers and Sydney Water and Hunter Water are to be able to compete for retail customers on equal terms, the wholesale prices we determine need to include these cross-subsidies. If they did not, wholesale customers would face a competitive disadvantage in areas that are more expensive to supply. This is because the incumbent utilities would be able to offer lower prices in these areas (ie, the postage stamp price), rather than a cost reflective price, due to these cross-subsidies. Alternatively, in areas that are less expensive to supply, the incumbent utilities would face a disadvantage because they must charge a higher price (ie, the postage stamp price), rather than the cost reflective price.

31 *Hunter Water Operating Licence 2012-2017*, clause 1.6.

2.5.4 Developer charges set at zero

Under IPART's 2000 water and sewerage developer charges determination,[32] Sydney Water and Hunter Water could levy developer charges to recover the additional costs of servicing new developments. A developer charge is a site-specific up-front charge that reflects the additional costs of servicing that development area (above the average network-wide costs recovered through postage stamp pricing revenue). Box 2.5 shows a high-level overview of the developer charges methodology in our 2000 determination.

Box 2.5 Developer charges are based on the postage stamp price

Under IPART's 2000 determination, the basic formula for calculating Sydney Water's and Hunter Water's maximum developer charge for a new development area is:

$$\text{Developer charge} = \frac{\text{Net present value [capital costs + operating costs - revenue]}}{\text{Number of customers}}$$

The capital costs in this formula include past, present and future capital expenditure required to service the development area (in practice, this means capital costs have to be shared or allocated between the particular development and other customers). The operating costs reflect the expected operating costs of servicing the new development. The forecast revenue included in the calculation is from postage stamp retail prices (usage and service charges) to be levied on customers within the new development area.

The developer charge was designed to recover the total difference between the average system cost (reflected in the postage stamp price) and the costs of the servicing the development.

However, in 2008, the then NSW Government directed Sydney Water and Hunter Water to set developer charges for water, sewerage and stormwater assets to zero.[33] The combined effect of postage stamp pricing and zero developer charges is that Sydney Water and Hunter Water can use revenue from the broader customer base to cross-subsidise growth infrastructure in areas that are higher than average cost to service. This gives these incumbent utilities a competitive advantage over other providers (including wholesale service customers) in these areas.

If wholesale customers and Sydney Water and Hunter Water are to be able to compete for retail customers on equal terms, we need to take this combined effect into account. Ideally, our pricing determination should be flexible enough to create a level playing field with or without developer charges.

[32] IPART, *Sydney Water Corporation, Hunter Water Corporation, Gosford City Council, Wyong Shire Council Developer Charges from 1 October 2000, Determination No. 9, 2000,* September 2000.

[33] Developer charges can still be levied for recycled water and out-of-sequence developments.

2.5.5 Potential for component pricing in the future

With sufficient information, in future retail price reviews IPART may decide to use component pricing. This would mean that we would set prices for each stage of the water and sewerage systems, including retail, reticulation, treatment, and disposal. This could potentially simplify wholesale pricing, and facilitate greater use of the WIC Act's access regime.

2.5.6 Potential for broad policy changes in future

Stakeholders have suggested that the broader policy settings for competition in the water industry warrant an industry wide review. For example, in its submission DPI Water stated:

> In considering what pricing approach to adopt, it is important to note that the current market is not 'perfect' and seeking to facilitate 'efficient competition' in that context may not achieve the desired objective. Indeed, it may have the perverse result of removing the competition that has developed to date. A holistic approach to considering such factors is important to achieve intended outcomes and avoid unintended ones.[34]

Flow Systems also expressed support for an in-depth industry review to identify all aspects required to achieve a level playing field.[35]

We agree that determining a wholesale price that allows wholesale customers and Sydney Water and Hunter Water to compete on equal terms is only part of the solution for facilitating competition in the water industry, and that there would be merit in an industry wide review of how to better facilitate competition in the water industry.

However, we do not consider that we should delay our wholesale pricing determination until such an industry review is complete. Rather, we intend to adopt a pricing approach that provides certainty and facilitates efficient entry to the water and sewerage services markets within the existing policy and legal framework.

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34 DPI Water submission to Issues Papers (Sydney Water and Hunter Water), October 2015, p 4.

35 Flow Systems submission to Issues Paper - Review of prices for Sydney Water Corporation from 1 July 2016, October 2015, p 4.

3 Our preferred pricing approach

In our September 2015 Sydney Water and Hunter Water issues papers and our December 2015 wholesale pricing public hearing, we explored several high-level pricing approaches that could be used to determine Sydney Water's and Hunter Water's wholesale water and sewerage prices. These options included using a **retail-minus** approach, a **cost of service** approach, or applying the existing **non-residential charge** to wholesale services.

This chapter outlines our preliminary views on our preferred pricing approach and its key elements. Chapter 4 then discusses options for implementing this pricing approach.

3.1 Overview of IPART's preliminary views on pricing approach

Our preliminary view is that a **retail-minus** (**plus net facilitation costs**) approach is the best approach for pricing wholesale services at this time. We consider that it is the only viable wholesale pricing approach, in the long term, which can facilitate efficient entry to the water and sewerage services markets while the postage stamp pricing policy applies to Sydney Water and Hunter Water retail prices.

In addition, our preliminary view is that the 'minus' component should reflect the costs that a low cost utility (or 'reasonably efficient' utility) would incur in delivering the water and/or sewerage services from the wholesale connection point to the end-users. We consider this would be more effective at encouraging efficient entry to the water and sewerage services markets than alternative approaches at this stage.

We also propose that wholesale customers be free to negotiate unregulated pricing agreements with the incumbent utilities if both parties so choose. Regulated prices would apply unless an unregulated pricing agreement has been agreed between the parties.

3.2 Retail-minus is the most appropriate pricing approach

In the current policy and operating environment, we consider that wholesale customers should be charged on a **retail-minus** basis as it is consistent with the maintenance of postage stamp pricing. It would allow the wholesale customer to compete with the incumbent on the costs of providing the contestable service (or services). Retail-minus is based on the total end user retail charges (as determined by IPART) **minus** the costs of the contestable service (or services).

The contestable service(s) is the service the wholesale customer is providing (or seeking to provide) to retail customers 'upstream' or 'downstream' of the wholesale services it has purchased from the incumbent utility. That is, the service between the wholesale connection point and the end user (retail) customers.

We do not consider a **cost of service** pricing approach appropriate in the context of postage stamp pricing, as it could disadvantage either incumbent utilities or wholesale customers, depending on the situation.

3.2.1 A retail-minus approach would allow incumbent utilities and new entrants to compete on equal terms

Under a retail-minus approach, the starting point for the wholesale price of a particular water or sewerage service is the incumbent utility's retail price for that service. As section 2.5.3 discussed, these prices include cross-subsidies due to the current postage stamp pricing policy.

Under a retail-minus approach, the costs involved in delivering the particular service (or bundle of services) from the wholesale connection point to the end-users is calculated. This amount (the minus component) is then subtracted from the retail price to give the wholesale price.[36] Because this amount (the wholesale price) still includes the cross-subsidies (positive or negative for a given location) associated with postage stamp pricing, the wholesale price will allow the incumbent retailer (the wholesale service provider) and the wholesale customer to compete on equal terms in all locations.

The effectiveness of a retail-minus approach in facilitating efficient entry to the water and sewerage services markets will depend on how the 'minus' component is calculated. Our preliminary views on this issue are discussed in section 3.3.

In our consultations to date, Sydney Water, Hunter Water and their consultants supported a form of retail-minus pricing, whereas most other stakeholders did not (see Box 3.1).

[36] Ideally, where applicable, facilitation costs should also be added to the wholesale price.

Box 3.1 Submissions were mixed on retail-minus pricing

Sydney Water

Sydney Water's submission noted that postage stamp pricing has an impact on which pricing approaches would reliably encourage efficient entry. As such, Sydney Water recommended a methodology based on retail-minus avoidable costs plus facilitation costs. This is said to be consistent with the ACCC's 2007 determination of Sydney Water's access prices for Services Sydney.[a] Sydney Water's consultants supported this approach.[b]

Sydney Water recommended an interim price cap of retail-minus 3%, while it developed a voluntary access undertaking.[c] However, at the Public Hearing, Sydney Water noted that charges based on retail-minus 3% might be too high for some developments to the extent there are other avoidable costs.[d]

Hunter Water

Hunter Water's submission recommended a determined price based on retail-minus 2% or 3%.[e] Hunter Water's consultants supported this approach.[f] Hunter Water argued that wholesale prices should encourage competitive entry, but not lead to Hunter Water servicing the highest cost customers.

Hunter Water noted that it has no power to require information on customer numbers from wholesale customers.[g] This may cause trouble in calculating prices under a retail-minus approach.

Flow Systems

Flow Systems did not support retail-minus approaches. It suggested that retail-minus prices could suppress and block competition.[h]

Other stakeholders

Some other stakeholders who made submissions to our Issues Papers raised some questions or expressed concern with retail-minus pricing. These stakeholders included Permeate Partners, Infrastructure Partnerships Australia, Institute for Sustainable Futures, City of Sydney Council and the Green Building Council of Australia.

a Sydney Water submission to IPART Issues Paper, October 2015, pp 69-70.
b HoustonKemp Economists, *Pricing for Access to Sydney Water's Water and Wastewater Infrastructure,* 2 October 2015, p 13.
c Sydney Water submission to IPART Issues Paper, October 2015, p 71.
d Transcript from Public Hearing, 8 December 2015, p 43.
e Hunter Water submission to IPART Issues Paper, October 2015, p 11.
f Frontier Economics, *Pricing of Wholesale Water Services,* October 2015, p 30.
g Hunter Water submission to IPART Issues Paper, October 2015, p 11.
h Flow Systems submission to IPART Issues Paper (Sydney Water), October 2015, p 7.

3.2.2 Cost of service approach would not allow incumbents and new entrants to compete on equal terms

As noted above, one of the other pricing approaches we consulted on was a cost of service approach. Under this approach, the wholesale price of a particular service is an estimate of the actual cost of supplying the wholesale service to that particular location. As such, it excludes the cross-subsidies included in the retail price for that service and is therefore incompatible with the Government's postage stamp pricing policy.

In particular, a cost of service approach to wholesale pricing would result in wholesale prices that advantage new entrants (and encourage inefficient entry) in low-cost areas, and advantage the incumbent utilities (and discourage efficient entry) in high-cost areas. That is, 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 out compete the incumbent on retail price due to the incumbent's requirement to charge postage stamp prices (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 retail prices (which reflects its system-wide average cost, rather than the actual cost of servicing the higher cost area).

3.2.3 Non-residential charge might not be the best long-term option

In our Issues Paper, we raised the option of applying the IPART-determined retail Sydney Water and Hunter Water non-residential charges to wholesale customers. Under our current retail price determinations, non-residential customers are charged for water and sewerage services based on the size of their connection or meter (**service charges**) and the quantity (and, in the case of trade waste charges, strength or concentration) of their usage (**usage charges**). Most wholesale customers supported using non-residential charges for wholesale services (see Box 3.2).

Non-residential charges could potentially act as interim wholesale prices until scheme-specific prices are in place (see Chapter 4). However, our preliminary view is that non-residential charges would not encourage efficient entry over time, and therefore we consider they may not be the best long-term option for pricing wholesale services. Non-residential charges are not designed for wholesale services.

Under current and proposed[37] retail prices for Sydney Water and Hunter Water, there are differences in how **residential** and **non-residential** service charges are determined. Residential customers' service charges are set on a dwelling basis (ie, an apartment serviced by Sydney Water is charged the same as a house, regardless of the size of the meter servicing the apartment block)[38]; whereas non-residential customers' service charges are based on the actual meter size at point of connection. This means that if Sydney Water were to charge wholesale customers the **non-residential service charge** (based on meter size at connection) and wholesale customers were then able to charge individual houses and/or apartments Sydney Water's **residential service charges**, an arbitrage opportunity may exist.

Such an arbitrage opportunity could make it profitable for wholesale customers to enter the market without providing any additional services or improving overall system efficiency. That is, wholesale customers could enter the market through the arbitrage opportunity rather than by being as or more efficient than the incumbent utility.[39] Overtime, this could increase the revenue Sydney Water and Hunter Water need to recover from their wider customer bases, which would increase prices to all their remaining retail customers, without any offsetting system-wide efficiency gains from the new entry.

We also note that the non-residential price is generally only attractive for new entrants (wholesale customers) where the difference between the non-residential price and the residential price provides wholesale customers with a margin. However, overtime, non-residential and residential price structures have evolved, and may continue to evolve. This could ultimately lead to wholesale customers being squeezed out of the market, making competition unsustainable.

IPART seeks comments on the following

3 Is retail-minus the best pricing approach to facilitate efficient new entry? If not, what approach can best achieve this objective?

[37] As previously mentioned, IPART is currently reviewing Sydney Water's and Hunter Water's retail prices, for new prices to apply from 1 July 2016.

[38] This follows IPART's 2012 pricing principles, which state that water and sewerage residential service charges should be the same for all residential dwellings, unless there is evidence that there are material differences in the cost of servicing different residential property types (IPART, *Review of price structures for metropolitan water utilities – Final Report*, March 2012, p 3). For the current reviews of Sydney Water's and Hunter Water's retail prices (for prices to apply from 1 July 2016), we have proposed that all residential customers (including houses and apartments) be *deemed* to have a 20mm meter for the purpose of determining service charges.

[39] It is regulation, in the form of postage stamp pricing, that prevents this arbitrage window from closing.

Box 3.2 Some wholesale customers supported the non-residential price

Flow Systems

Flow Systems noted that in some of it schemes it is currently charged for drinking water and sewerage services as a non-residential customer. It supports the maintenance of this approach. It argued that there is no arbitrage opportunity, as it cannot simply on-supply drinking water or sewerage under the WIC Act.[a]

DPI Water – Metropolitan Water Directorate

DPI Water did not share our concerns, expressed in our Sydney Water and Hunter Water Issues Papers, regarding the potential for arbitrage under the non-residential price. DPI Water noted that it is not currently permissible for WIC Act licensees to engage only in retail competition.[b]

Other stakeholders

Other stakeholders who supported applying the non-residential price included the Institute of Sustainable Futures and City of Sydney Council.

Some other stakeholders indicated they wanted to see no change, which we assume means they also support applying non-residential customer charges.

a Flow Systems submission to IPART Issues Paper (Sydney Water), October 2015, pp 6, 8-10.

b DPI Water submission to IPART Issues Paper (Sydney Water and Hunter Water), October 2015, pp 2-4.

3.3 Minus component should reflect costs of a reasonably efficient competitor

As noted above, the effectiveness of a retail-minus approach in creating a level playing field so that new entry and competition occurs where it is efficient depends on how the 'minus' component is calculated.

In our Issues Papers, we noted that we could base the minus on the incumbent's avoided or avoidable costs, both of which are related to the efficient component-pricing rule. We noted that:

- **Avoided** costs are the costs that Sydney Water or Hunter Water would **actually** avoid if it no longer directly supplied water or sewerage services from the wholesale connection point to end use customers (ie, short run marginal costs).[40]

40 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.

- **Avoidable** costs typically include long term costs that Sydney Water and Hunter Water **may** avoid in the present and future or could have avoided in the past if the entry of a wholesale customer was expected.[41]

However, we signalled at our Public Hearing that we were also considering a **retail-minus efficient competitor costs** approach, based on the efficient competitor test used in anti-trust assessments in some jurisdictions.[42] This would create a margin between the wholesale and retail prices that allows an efficient utility to enter the market and sustainably charge the postage stamp retail price, while providing a water and/or sewerage service of equal quality to the wholesale service provider's retail operations.[43]

We considered two main options for defining the efficient competitor benchmark (and hence the 'minus' component of our retail-minus approach):

- **An 'as-efficient' competitor.** This would reflect the total costs the incumbent would incur between the wholesale connection point and serving end users.[44] Prices calculated according to this method should be similar to retail-minus avoidable cost prices.
- **A 'reasonably efficient' competitor.** This would reflect the total costs a reasonably efficient business would incur between the wholesale connection point and serving end users. This approach recognises that it may be unrealistic for a new entrant to achieve the scale economies of the incumbent utility immediately.

On balance, our view at this stage is to apply the **reasonably efficient competitor** benchmark while the competitive market is developing. Over time, competition should create an incentive for innovation that lowers costs and enhances service. We have previously applied a similar principle to retail electricity pricing, to recognise the costs of entry and the long-term value of competition – particularly the potential for gains in dynamic efficiency (see Box 3.3).

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41 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.

42 A summary is provided in "Margin squeeze," OECD DAF/COMP(2009)36, September 2010, pp 89,182,219-221,228-233,256,290,299-305.

43 That is it meets the wholesale service provider's minimum system performance and water quality standards set out in its operating licence.

44 The underlying assets in this approach can be valued in a number of ways, including average regulatory asset base value, depreciated replacement cost value and modern engineering equivalent replacement asset value.

Box 3.3 Supporting competition in the retail electricity market

When we regulated the retail prices for electricity, we were required to include a customer acquisition and retention cost (CARC) allowance in the regulated price. This allowance reflected the costs that an efficient new entrant would incur in acquiring and retaining customers. It recognised that the efficient costs of an entrant are greater than those of the incumbent (default) supplier. The CARC allowance was designed to promote competition in the long-term the interest of consumers.[a]

[a] IPART, *Review of regulated retail prices and charges for electricity – From 1 July 2013 to 30 June 2016 – Final Report, June 2013, pp 94-106.*

In addition, the minus component needs to take into account service quality. We consider it should be set so that a reasonably efficient competitor could provide a water and/or sewerage service of equal quality to the incumbent retailer.[45]

Other issues to consider in calculating the minus component of retail-minus (plus net facilitation costs) are outlined below.

3.3.1 The value of assets

At the Public Hearing, some stakeholders said that the 2000 'line-in-the-sand' valuations of Sydney Water and Hunter Water's regulatory asset bases are a barrier to competition.[46] The regulatory asset base 'line-in-the-sand' valuations were based on prevailing prices in 2000, rather than the depreciated replacement costs of the assets.

This is seen as a barrier to competition, as wholesale customers are likely to require a market rate of return on the full investment cost of their assets. We consider that the reasonably efficient competitor cost should be based on the full value of assets. This would create a level playing field where a low-cost wholesale customer can compete with Sydney Water and Hunter Water, while making a market return on their assets.

We consider that this approach would result in a margin between the wholesale price for a service and the postage stamp retail price that allows low-cost utilities to enter the market and sustainably charge the retail price, while providing a water and/or sewerage service of equal quality to the incumbent's retail operations.[47]

45 That is it meets the wholesale service provider's minimum system performance and water quality standards set out in its operating licence.

46 Transcript from Public Hearing, 8 December 2015, p 27.

47 That is, it meets the wholesale service provider's minimum system performance and water quality standards set out in its operating licence.

3.3.2 Variations in the minus component

The minus component should take into account the particular location, topography and density of the development area the scheme supplies. These factors will affect the cost of providing the wholesale services. For example, typically:

- the costs of providing sewerage treatment services in locations close to ocean outfalls will be lower than those locations close to river outfalls, and
- the network costs of providing water and/or sewerage services in high-density developments will be lower than in low-density developments.

However, if the Government were to reinstate cost-reflective developer charges in the future, our approach to creating a level playing field may need to change. This is because any additional location-specific costs not recovered by the postage-stamp price would be recovered through the developer charges (see Box 2.5) rather than through cross-subsidies, resulting in a lower postage stamp retail price. In this situation, these additional costs should not be included in the minus component.[48]

If the Government were to reinstate cost-reflective developer charges or there are other significant changes to regulation or the industry, we could replace the determination if warranted.

IPART seeks comments on the following

4 Should the minus component of retail-minus prices reflect the costs of a reasonably efficient competitor? If not, what 'minus' would best achieve our objectives?

3.3.3 How to define a reasonably efficient competitor

One of the key challenges in this review is to develop a clear, workable definition of a reasonably efficient competitor. A reasonably efficient competitor would be assumed to have higher costs than the current incumbents.

[48] Under this scenario, the simplest approach may be for the minus component to reflect the costs a reasonably efficient competitor would incur to provide the services (eg, retail, network and treatment) from the wholesale connection point to the end-use customers, on average across the wholesale service provider's area of operations.

The water industry exhibits strong economies of scale. That is, as a utility grows its customer base, its costs per customer generally decrease. Therefore, the reasonably efficient competitor cost reflects the level of efficiency that is reasonable to expect from a well-run smaller utility or a new entrant to the market. To simplify the calculation of the costs of a reasonably efficient competitor it could, for example, be defined as:

- the costs of an efficient utility of a certain scale (eg, one providing water and/or sewerage services to a community with a population of 50,000 people), or
- the costs of Sydney Water or Hunter Water in the area plus a percentage to reflect the smaller scale of a relatively new entrant, for example a five percent addition to Sydney Water's or Hunter Water's costs of servicing the area.[49]

The reasonably efficient competitor benchmark would allow more innovation, as new businesses would not be deterred from entering the industry because they are of smaller scale than the incumbents. This would allow the industry to make dynamic efficiency gains, through maximising productive and allocative efficiency over time.

We are interested in stakeholders' views on how this critical term should be defined.

IPART seeks comments on the following

5 How should a 'reasonably efficient competitor' be defined?

3.4 Net facilitation costs could signal efficient entry

In principle, we consider that the wholesale customer receiving a wholesale service should pay for the **net facilitation costs** that service provision creates.

Facilitation costs are costs (positive) or cost savings (negative) to the wholesale service provider of servicing the wholesale customer that are:

- not reflected elsewhere in the retail-minus pricing formula, and
- additional to what the wholesale service provider would have otherwise incurred in the absence of servicing the wholesale customer.

For example:

- a positive facilitation cost may arise if a wholesale service provider needs to upgrade or extend its water network to provide water to a wholesale customer, or
- a negative facilitation cost may arise if a wholesale customer produces recycled water that allows the wholesale service provider to defer its next scheduled water supply augmentation.

[49] For the purpose of estimating reasonably efficient competitor costs, the higher the addition to Sydney Water's or Hunter Water's estimated costs of servicing the area, the higher the minus and the lower the wholesale price (all other things being equal).

Net facilitation costs are the sum of positive and negative facilitation costs (ie, facilitation costs *less* cost savings).

Scheme-specific net facilitation costs would signal to wholesale customers where it is lowest cost to provide water and/or sewerage services. This is consistent with the objective of creating a level playing field, so that new entry and competition occurs where it is efficient, as it would help ensure the wholesale service providers (and their retail customers) do not subsidise schemes that involve high net facilitation costs (such as in developments in isolated fringe areas). It also creates an incentive for wholesale customers and developers to build schemes where they represent the lowest cost option to supply the services.

At some point (depending on factors, for example, such as the location of the scheme), it may become cheaper to build standalone water and sewerage systems than to purchase wholesale services from Sydney Water or Hunter Water.[50] Net facilitation costs, by reflecting the added cost of expanding and extending Sydney Water and Hunter Water's networks, would signal to potential wholesale customers these costs and send appropriate signals as to whether to build a standalone system.

However, as outlined below, the approach for determining the appropriate level of facilitation costs should reflect the status of water and sewerage developer charges.

3.4.1 Calculating facilitation costs with no developer charges

Currently, with water and sewerage developer charges set to zero, when Sydney Water or Hunter Water supplies a new development area, it recovers all its additional system costs from its wider customer base through an uplift to the postage stamp price. In effect, this allows an incumbent to supply the development at subsidised retail prices, and thus gives it a competitive advantage over competing providers (such as wholesale customers).

To remove this advantage and allow competition on a level playing field in this scenario, our pricing methodology needs to extend an equivalent subsidy to wholesale customers. However, it needs to do so in a way that does not create incentives for wholesale customers to operate in high-cost fringe areas (which would ultimately increase the price for all water users).

To do this, we propose that the facilitation costs include a subsidy that relates to the wholesale service providers own plan to service growth in the development area concerned, but reflects any timing differences between incumbent and wholesale customer:

Facilitation costs=NPV[Augmentation costs less planned cross-subsidy of these costs]

[50] This point is likely to be different for water and sewerage services.

This approach would mean that the facilitation costs included in the wholesale price would be:

- Zero if the augmentation would be triggered at the same time under the wholesale service provider's growth plans, because the wholesale service provider would have the ability to pay for it through an increase to the postage stamp price.
- Equal to the cost of the augmentation if the augmentation would never be triggered under the wholesale service provider's growth plans, because the wholesale service provider was not planning to augment its system for this development.

Where a development is within the wholesale service provider's growth plans, but is not planned to be developed in the immediate future, the subsidy should be reduced to reflect the fact that a cost has been brought forward in time.

Under the approach outlined above, the wholesale service providers' growth plans would play an important role in determining the subsidy to facilitation costs, and hence the level of facilitation costs. Therefore, it would be important for these growth plans to be subject to objective review. This could occur, to some extent, through IPART's review of Sydney Water's and Hunter Water's growth plans as part of its determinations of these utilities' retail prices. It could also occur through the process of a wholesale service provider publicly exhibiting its draft wholesale prices and supporting information as part of the process of developing its Wholesale Servicing Plans under Option 2 in Chapter 4 or as part of the price determination process under Option 3 in Chapter 4.

We are interested in stakeholders' views on whether the wholesale service providers' growth plans are the appropriate determinant of the level of subsidy to facilitation costs. We are also interested in stakeholders views on how to ensure these plans are subject to an appropriate level of scrutiny and review.

3.4.2 Calculating facilitation costs with cost-reflective developer charges

If the wholesale service provider could levy cost-reflective developer charges in line with our developer charges determination,[51] it could recover the additional system costs it incurs to supply the new development area through these developer charges. This formula would apply:

Facilitation costs=NPV[Augmentation costs]

Under a scenario of cost-reflective developer charges, there would be no cross-subsidy from postage stamp prices. That is, the difference between the lifetime costs of servicing the new development area and postage stamp price revenue would be recovered from the developer charges, and the new development

[51] IPART, *Sydney Water Corporation, Hunter Water Corporation, Gosford City Council, Wyong Shire Council Developer Charges from 1 October 2000, Determination No. 9, 2000,* September 2000.

would not be cross-subsidised by the wider customer base. Therefore, the facilitation costs would be equal to the cost of the augmentation, and the cross subsidy would be zero.

IPART seeks comments on the following

6 Do you support our proposed treatment of facilitation costs? If not, how should the pricing methodology treat facilitation costs?

7 What is the best way of determining or estimating net facilitation costs?

8 Are wholesale service providers' growth plans the most appropriate determinant of the level of cross-subsidy provided to facilitation costs? If so, how can we ensure these plans are subject to appropriate scrutiny and review? If not, what other determinant(s) should be used and why?

3.5 Wholesale customers should be free to negotiate unregulated agreements if they choose

We propose to provide wholesale customers the option to negotiate unregulated prices with the incumbent retailers if both parties agree. Under this approach, we would continue to regulate maximum prices for wholesale services. However, the determined prices (or methodology for fixing maximum prices) would not apply to wholesale customers that elect to opt out of these prices by entering into a pricing agreement with the incumbent utility for the term of that agreement.

This approach is similar to that outlined in our current (2013) Sydney Water and Hunter Water retail price determinations, where infrastructure services provided through agreements and determinations under the WIC Act's access regime are excluded. In the draft 2016 retail price determinations we recently released, we included the option for large non-residential customers to elect to enter into **unregulated pricing agreements** with their service provider if both parties agree. These agreements could provide that disputes between the parties will be resolved through commercial arbitration.

Like large non-residential customers, wholesale customers are sophisticated businesses that should be able to decide whether they need the protections offered by our determination. Therefore, they should not be compelled to pay regulated prices if they can negotiate an agreement with the incumbent retailer that leads to a mutually beneficial outcome. For example, at the Public Hearing a wholesale customer indicated it may be willing to accept a higher price in return for greater certainty.[52] We consider it should be possible to negotiate such terms.

[52] Transcript from Public Hearing, 8 December 2015, p 35.

IPART seeks comments on the following

9 Should the determination allow unregulated pricing agreements between the wholesale service provider and the wholesale customer if both parties agree? Please explain why or why not.

4 Options for implementing retail-minus (plus net facilitation costs)

As Chapter 3 discussed, our preliminary view is that we should:

- apply a retail-minus (plus net facilitation costs) pricing approach
- calculate the minus as the costs that a reasonably efficient competitor would incur to deliver the particular water and/or sewerage services from the wholesale connection point to the end-use customers, and meet the same service standards as its wholesale service provider.

In this chapter we consider options for implementing a retail-minus (plus net facilitation costs) pricing approach. Common to each option is the methodology for calculating the '**retail**' component of the price. The options then vary in terms of how to determine the **minus** and **net facilitation cost** components of the retail-minus (plus net facilitation costs) methodology. The options include:

- Option 1: IPART determining a standard, system-wide average minus (or minuses) and net facilitation costs to apply to all schemes
- Option 2: IPART determining a methodology that wholesale service providers must use to calculate the minuses and net facilitation costs for each scheme
- Option 3: IPART determining the specific minuses and net facilitation costs for each scheme.

In considering these options, we will be mindful of their ability to reflect scheme-specific characteristics and facilitate efficient entry in the water and sewerage services markets, as well as their administrative costs and feasibility.

We propose that, regardless of the option applied, wholesale service providers and customers should be able to enter into unregulated pricing agreements if they both agree (as discussed in Chapter 3). That is, regulated prices would apply unless both parties agree to an unregulated price.

Below we outline the general steps for calculating wholesale prices under a retail-minus (plus net facilitation costs) approach, including how to calculate the **retail** component. We then consider each of the options for determining the **minus** and **net facilitation costs** components.

4.1 Overview of how to calculate retail-minus (plus net facilitation costs) wholesale prices

Under a retail-minus (plus net facilitation costs) approach, there are four main steps to calculating wholesale prices:

1. Calculate the **retail component**, or the postage-stamp price retail revenue, that would be generated by the wholesale customer's end-use customers.
2. Calculate the **minus component**, or the cost a reasonably efficient competitor would incur to provide water and/or sewerage services from the wholesale connection point to the end-use customers.
3. Calculate the **net facilitation costs**, or the additional system costs the wholesale customer would create for the wholesale service provider.
4. Calculate the wholesale price by subtracting the reasonably efficient competitor costs (2) from the retail revenue (1) and adding the net facilitation costs (3) (ie, wholesale price = retail component – reasonably efficient utility costs + net facilitation costs).

$$\textbf{Wholesale Charge}_t = (\textbf{Retail}_t - \textbf{Efficient competitor costs}_t + \textbf{Net facilitation costs})$$

4.2 Calculating retail revenue

As outlined above, the first step in calculating prices under a retail-minus (plus net facilitation costs) approach would involve the wholesale service provider calculating how much revenue it would generate from charging postage-stamp prices to the wholesale customer's scheme's end-users. This is the '**retail**' component of the retail-minus approach.

To determine this component, the wholesale service provider would use:

- the number and average connection sizes of end-use customers the wholesale customer will supply, and
- the end-use customers' demand for the services (ie, both water usage and/or sewerage usage), and its current retail prices for those services.

The methodology would likely be similar to the formula below:

$$\begin{aligned}\textbf{Retail}_t = {} & \text{water usage charge}_t \times \text{wholesale water purchases}_t + \\ & \text{water service charge}_t \times \text{end-use water customers}_t + \\ & \text{sewerage usage charge}_t \times \text{chargeable wholesale sewage discharge}_t + \\ & \text{sewerage service charge}_t \times \text{end-use sewerage customers}_t + \\ & \text{applicable trade waste charges}_t\end{aligned}$$

This is how Sydney Water and Hunter Water calculate charges for their retail customers. It would require reading of water meters and counting the number of end-use customers. The 'retail' component should be calculated each time Sydney Water or Hunter Water bills a wholesale customer, based on the quantity of customers and usage in that period.

We seek stakeholders view on what specific information the wholesale service provider would require to calculate the retail component of retail-minus pricing, and how they would obtain sufficiently accurate information.

The sections below consider three different options for calculating the **minus** and **net facilitation costs** (steps 2 and 3 above) of the retail-minus (plus net facilitation costs) approach.

IPART seeks comments on the following

10 What specific information would the wholesale service provider require to calculate the retail component of retail-minus pricing?

11 How can the wholesale service provider obtain accurate information (eg, the number of end-use customers and, where necessary, their consumption volumes in a wholesale customer's scheme) in order to calculate the retail component of retail-minus prices?

4.3 A system-wide average minus and net facilitation cost approach (Option 1)

Under this option, IPART would determine the minus component as a percentage or value that reflects the **system-wide average or typical costs** a reasonably efficient competitor would incur to provide water and/or sewerage services from the wholesale connection point to the end-use customers. This minus could be set as a percentage of the retail component or a value (eg, $ and/or $ per kL).

This option has some similarities with Sydney Water's and Hunter Water's initial wholesale pricing proposals of retail minus 3% and 2% or 3%, respectively.[53]

Using a minus component that reflects the average, system-wide cost would make the methodology simple for the wholesale service provider to apply, and provides certainty to wholesale service providers and wholesale customers.

However, it would not account for differences between schemes and may result in wholesale prices that create perverse incentives. The margin for all wholesale customers would be the same, regardless of what services are provided.

[53] Sydney Water submission to IPART Issues Paper (Sydney Water), October 2015, p 106, and Hunter Water submission to IPART Issues Paper (Hunter Water), October 2015, p 11.

This may discourage wholesale customers developing more complex schemes with higher costs, even where they are the most efficient way to supply the services. Thus, it may limit the potential dynamic gains from competition. For example, under a retail minus **average costs** approach, the margin between the retail and wholesale prices for a wholesale customer providing a less expensive service (eg, using a small network to supply water in a high-density development) would be higher than the margin for a wholesale customer providing a more expensive service (eg, using a larger network to supply water in a low-density development and treating a portion of sewerage onsite).

We could, however, set a schedule of minus percentages or values to reflect different wholesale customer models and locations. Possible categories for a schedule of minus percentages or values include:

- the wholesale services provided (eg, retail services, sewerage services for pre-treated sewage and raw sewage)
- density of wholesale service area (eg, high density and low density)
- sewerage catchment of the wholesale service area (eg, inland or coastal), and
- zoning of the wholesale service area (eg, primarily non-residential and primarily residential).

This would account for some variation in costs and could be based on a reasonably efficient competitor cost for each segment. This would help promote dynamic efficiency gains, as prices would support a variety of wholesale customer models.

We are seeking stakeholder views on the appropriate schedule of typical or average minus values to use under this option (Option 1) for Sydney Water's and Hunter Water's wholesale water and sewerage prices. This includes the appropriate **categories** for a schedule of minuses, and the appropriate **values** for these minuses.

4.3.1 Net facilitation costs

The rationale for, and high level approach to, including net facilitation costs in wholesale prices is outlined in Chapter 3.

Ideally, under this option, we would include an estimate of typical or average net facilitation costs or a schedule of average net facilitation costs (eg, for different types of locations) for Sydney Water's and Hunter Water's wholesale water and sewerage services. However, we acknowledge this would likely be difficult to estimate with a reasonable degree of accuracy, which would be one of the main drawbacks of this option.

We seek stakeholder views on the feasibility of including typical or average net facilitation costs in the wholesale pricing formula and the appropriate schedule and values of such costs.

4.3.2 The length of determination period

This methodology for fixing a wholesale price is not flexible. The minus and net facilitation cost percentages or values set by IPART would be important to incentivising efficient entry and innovation, and therefore creating dynamic efficiencies. These figures may need to be periodically reviewed.

Therefore, if adopted, we consider a determination under this option should be reviewed and replaced in line with our retail price reviews (typically, every four years). This would ensure that we periodically adjust the minus percentages to optimise incentives.

IPART seeks comments on the following

12 Do you support the option of retail minus average costs (plus average net facilitation costs) (Option 1) for fixing wholesale prices? Please explain why or why not.

13 If adopted, should Option 1 have a schedule of average efficient competitor minus percentages or values for different scenarios? If so, how many should it have, how should they be set and what should these figures be?

14 Can net facilitation costs be adequately incorporated into Option 1? If so, what should be the schedule of average or typical net facilitation costs, in terms of categories and values?

15 For Option 1, do you support aligning the determination period with our retail price reviews? If not, for how long should the determination apply?

4.4 A methodology for scheme-specific minus and net facilitation costs (Option 2)

Under this option, the wholesale service provider would calculate the minus and net facilitation costs components for each scheme in accordance with a methodology specified by IPART in the determination. The wholesale service provider would need to apply the methodology through a structured, transparent process that includes consultation, and which would be outlined in our determination. A wholesale customer who is dissatisfied with the way in which the wholesale service provider has applied the methodology would have access to the dispute resolution processes set out in section 31 of the IPART Act.

This would be similar to the approach to regulating developer charges, where IPART's determinations specify a methodology for fixing a maximum price, and the incumbent utilities produce Development Servicing Plans (DSPs) outlining their developer charges for each area in accordance with the methodology. Arbitration is available if a customer (ie, a developer) is dissatisfied with how the IPART-determined pricing methodology has been applied by the service provider subject to the determination.

Under this option (as well as Option 3), we would need to consider whether an interim or default price would apply until a scheme-specific price has been set. This interim or default price could be, for example, an average price generated under Option 1 or Sydney Water or Hunter Water's non-residential retail charge(s).

This methodology would allow for variations in costs and services between schemes (see Box 4.1 and 4.2 for examples of how schemes could vary). This would generally result, for instance, in lower wholesale prices for schemes that have extensive water and/or sewerage infrastructure (providing a larger margin to accommodate the costs of the extensive infrastructure) than schemes with minimal infrastructure.

The methodology could also take account of scheme-specific net facilitation costs – ie, any new costs the wholesale customer's business creates for Sydney Water or Hunter Water, less any cost savings to Sydney Water or Hunter Water as a result of the wholesale customer's provision of services to end-use customers in the scheme.

However, relative to Option 1, this methodology is complex and may impose higher administrative costs, particular if there is a dispute surrounding the wholesale service provider's application of the methodology. The methodology would need to be as clear and specific as possible, to minimise uncertainty around prices generated by the methodology and the scope for dispute.

Elements of this option are considered further below.

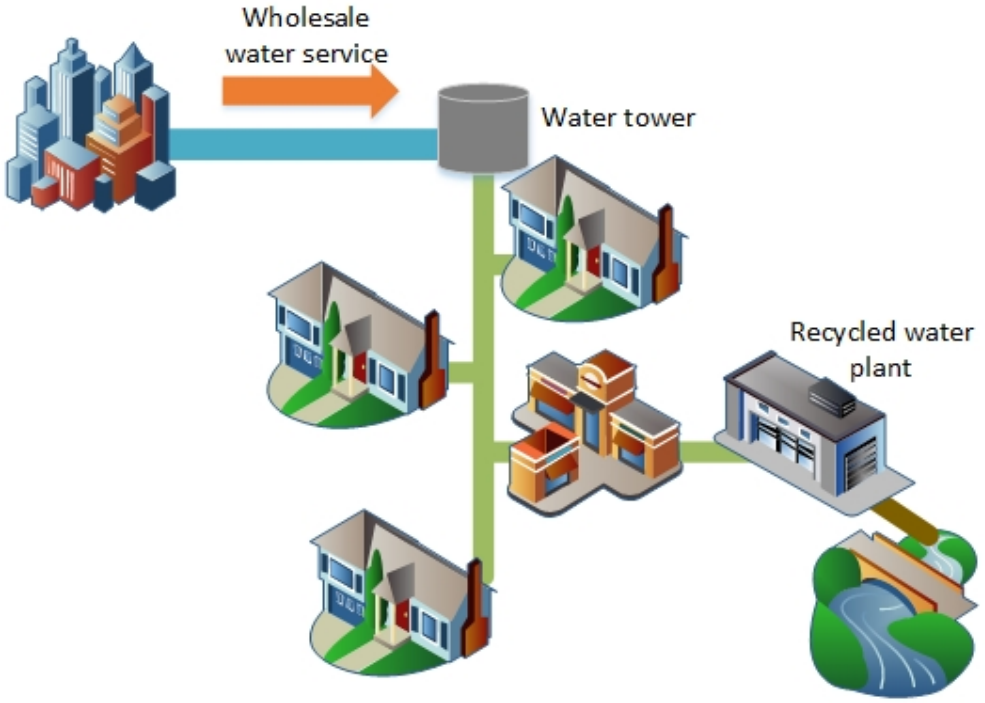
Box 4.1 Scheme servicing a high-density in-fill development

One type of wholesale customer is a scheme servicing a high-density development. In this example, the scheme purchases wholesale water supply services and wholesale sewerage treatment services from the incumbent retailer and on-supplies them to end-use customers in the development. It also treats recycled water, and supplies this directly to end-use customers.

In this scheme, the costs of delivering the services from the wholesale service connection to the end-use customers include minimal network costs, retailing costs and some sewage treatment costs. The new costs created by the scheme for the wholesale service provider could be low if the network does not need to be extended or amplified and there is spare sewerage capacity.

Box 4.2 Scheme servicing a low-density greenfield development

Another type of wholesale customer is a scheme that services a low-density development in a greenfield area. In this example, the scheme purchases wholesale water supply services and on-supplies them to end-users. It also treats and disposes of all the development's sewage, and supplies these services directly to end-use customers.



In this scheme, the costs of delivering the water services from the wholesale service connection to the end-use customers include extensive network costs and water retailing costs.

The new costs created by the scheme for the wholesale service provider may be higher than our first example because the water supply network may need to be extended to reach this greenfield development. If the scheme also purchased wholesale sewerage services, these new costs would be much higher as greenfield sites are less likely to have spare sewerage capacity and inland sewage disposal is expensive.

4.4.1 Developing a formula to calculate the minus component

As discussed in Chapter 3, the minus component should reflect the costs a reasonably efficient competitor would incur to provide the services from the wholesale connection point to the end-use customers.[54]

[54] Based on providing a service that meets the wholesale service provider's minimum system performance and water quality standards set out in its operating licence.

The methodology for determining this component would likely be similar to the formula below:

$$\text{Reasonably efficient utility costs}_t = \text{Operating expenditure}_t + \text{Capital stock}_t(\text{return on assets}_t + \text{depreciation}_t) + \text{Working Capital}_t \times \text{return on assets}_t + \text{Taxes}_t$$

4.4.2 Developing a formula to calculate the wholesale service provider's net facilitation costs

The next step is to calculate the net facilitation costs of providing wholesale services to the scheme. As outlined in Chapter 3, scheme-specific facilitation costs should:

- signal to wholesale customers the cost of providing water and/or sewerage services to different locations and schemes, which in turn:
  - helps ensure the wholesale service providers (and their retail customers) do not subsidise schemes that involve high facilitation costs (such as in developments in isolated fringe areas)
  - creates an incentive for wholesale customers and developers to build schemes where they represent the lowest cost option to supply the services
- be net of any cost savings to the wholesale service provider outside of the wholesale customer's scheme, which may arise from the activities of the wholesale customer (in servicing the relevant scheme) and which are not reflected elsewhere in the wholesale price formula
- relate to the wholesale service provider's growth plans (or other suitable determinant of the wholesale service provider's prudent and efficient expansion or augmentation of its network).

4.4.3 Structured process for applying the methodology

A methodology for calculating scheme-specific wholesale prices would be quite complex, and the wholesale service providers would need to be able to apply it in a way that is consistent and stands up to scrutiny. To support this, we would set out in our determination a series of procedural steps to ensure transparency and compliance.

These steps would be similar to those included in our current developer charges determinations. In particular, the wholesale prices would be calculated according to the specified methodology for schemes (or areas) defined in **Wholesale Servicing Plans** (Plans). The wholesale service provider could only levy wholesale charges pursuant to the methodology if it had first registered a Plan with IPART.

The process of preparing the Plan would involve:

- public exhibition and consultation of draft wholesale prices, and the inputs and calculations for those prices (including key supporting or explanatory documentation, such as the wholesale service provider's relevant growth plans), and
- consideration by the wholesale service provider of stakeholder submissions before registering the Plan,

IPART's report accompanying its determination of a methodology for scheme-specific minus and net facilitation costs would set out a recommended timeframe within which this process should be completed.

This would create transparency in the calculation of prices for wholesale services and the application of our methodology. The opportunity for consultation would allow stakeholders to highlight any concerns that they may have with the application of the methodology.

We propose that the determination would set a service fee that the wholesale service provider could charge the wholesale customer (or potential wholesale customer) for completion of a Plan.

We also propose that the determination would set out:

- which parties can initiate a Plan, and
- a procedure for wholesale customers to request a revision/update to a Plan.

4.4.4 Dispute resolution process

While our proposed process for developing a Plan should reduce the risk that the wholesale service providers apply the price methodology incorrectly, we cannot remove this risk completely. The IPART Act includes a dispute resolution process for instances where a customer is dissatisfied with the way in which a methodology has been applied, and is explained below in Box 4.3.

Box 4.3 Dispute resolution process included in the IPART Act

Section 31 of the IPART Act sets out how a customer may resolve a dispute regarding the application of a determined methodology. The process is outlined below:

- A customer may make a formal complaint to the wholesale service provider.
- The wholesale service provider's chief executive must review the complaint or have the complaint reviewed.
- If the customer is not satisfied with the outcome of the wholesale service provider's review, the customer can have the matter reviewed by way of arbitration. The *Commercial Arbitration Act 2010* will apply to any arbitration.
- The arbitrator is to be appointed by agreement between the customer and wholesale service provider. IPART can be the arbitrator appointed if both parties agree.
- The customer and the wholesale service provider will bear the costs of arbitration equally.

4.4.5 Interim or default price when the Wholesale Servicing Plan is not registered or a dispute has been raised

Under our proposed procedural requirements, there may be instances when a interim or default price is needed, such as when a wholesale customer is operating and:

- the Plan is yet to be registered with IPART, or
- the customer has raised a dispute under the IPART Act's dispute resolution process that is yet to be resolved.

An interim or default price should protect wholesale customers against monopoly power until scheme-specific prices have been determined.

The interim or default price(s) could be equal to the standard retail water and/or sewerage **non-residential charges**. That is:

- service charges based on the meter size(s) and the wholesale customer's discharge factor at the connection between the wholesale service provider and the wholesale customer
- usage charges based on water usage and sewage discharge of the scheme
- trade waste charges based on trade waste discharge of the scheme.

Alternatively, the interim or default price(s) could be generated under Option 1 above (ie, a wholesale price calculated using a system-wide average minus and net facilitation costs).

We are interested in stakeholder views on the most appropriate interim or default pricing approach if Option 2 is adopted.

Accounting for any differences between the interim price and the final price

The prospect of an interim price raises the question of what, if any, measures should be taken to account for any differences between the interim price and the final price for wholesale services provided to a specific scheme.[55]

We could include a formula in the determination to adjust final prices (positively or negatively) to account for any differences between interim prices and the final prices, or establish 'unders and overs' accounts to be factored into future prices. However, such measures would introduce further complexity into pricing arrangements and create some uncertainty for wholesale service providers and customers (which, in turn, could create a barrier to entry).

We are interested in stakeholder views on what, if any, measures would need to be put in place to account for differences between interim and final prices.

4.4.6 Length of determination period

Under this option of a methodology to calculate scheme-specific minus and net facilitation costs, our preliminary view is that the determination would apply until it is replaced by a new determination. This would be similar to our 2000 Developer Charges Determination, which operates[56] until replaced by a new determination.[57] We consider that allowing a methodology to operate for a longer period can enhance certainty and industry acceptance.

A methodology prescribes how prices are to be calculated and, where possible, can allow for the values of key parameters to be updated without the need for a new determination (eg, by referring to values listed in external sources of information, such as for the rate of return or discount rate).

However, changes in the industry or government policy may make it necessary to replace a determination. We would therefore review an open-ended determination within 10 years of its commencement, to decide whether it should continue or be replaced.

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55 With the 'final' price being the price in the Plan registered with IPART or the price following resolution of a dispute in relation to the application of the IPART-determined methodology.

56 In 2008, the then NSW Government instructed Sydney Water and Hunter Water to cease levying Developer Charges. Gosford City Council and Wyong Shire Council continue to levy Developer Charges using the 2000 Determination and a 2013 update to parameters.

57 We made minor updates to the Developer Charges Determination for Gosford City Council and Wyong Shire Council in 2013.

IPART seeks comments on the following

16 Do you support a methodology for determining scheme-specific minus and net facilitation costs (Option 2)? Please explain why or why not.

17 What procedural steps and requirements should be included in our determination to support a methodology for scheme-specific minus and net facilitation costs?

18 Do you support our proposal to include a procedure for developing and registering a Wholesale Servicing Plan in our determination? Please explain why or why not.

19 What should be included in a Wholesale Servicing Plan? Please provide details.

20 How should the costs of preparing a Wholesale Servicing Plan be recovered? Who should pay and how?

21 What should be the methodology or formula for determining the scheme-specific minus component?

22 What should be the methodology or formula for determining the scheme-specific net facilitation cost component?

23 If IPART determines a methodology to calculate scheme-specific minus and net facilitation costs, should the determination period be open-ended or set for a specific period (eg, the length of the retail price determination)?

24 If a methodology for scheme-specific minus and net facilitation costs is adopted:

- What should be the interim or default price until the incumbent utility has finalised a scheme's wholesale prices in accordance with the methodology?
- How can we ensure the incumbent utility finalises these prices in a timely manner?
- What, if any, measures should be adopted to account for differences between interim and final prices?

4.5 IPART determining scheme-specific prices (Option 3)

This option would be similar to Option 2 (a methodology for scheme-specific prices), except that IPART would determine the minus and net facilitation cost components of each scheme. An indicative process is outlined in Box 4.4 below. As with Option 1 and Option 2 above, this option would not stop wholesale customers and wholesale service providers negotiating unregulated pricing agreements if both parties agree.

IPART's price review process would be aimed at ensuring transparency in the calculation of prices for wholesale services and the application of our pricing framework.

A key element of the process would be provision of a **Wholesale Servicing Proposal** (Proposal) by the incumbent utility. This should include, at a minimum, its proposed wholesale prices calculated in accordance with our preferred methodology, with all relevant supporting and explanatory information including, for example, methodologies for cost allocation and estimation. This would be similar to the **Wholesale Servicing Plan** (Plan) under Option 2 above.

Under this option, a Proposal would effectively be the incumbent utility's pricing proposal for a scheme. That is, the starting point in determining the minus and facilitation cost components would be a review of the incumbent's proposed figures in the Plan, in addition to information provided in submissions from other stakeholders.

Box 4.4 Process for a price review of an individual wholesale scheme

Step one: The wholesale customer or wholesale service provider can write to IPART to request a price review for an existing or proposed wholesale scheme

Step two: IPART will decide if it will initiate a price review. If it does, the wholesale service provider would be given a set time period (based on the complexity of the wholesale scheme) to submit to IPART a Wholesale Servicing Proposal (Proposal), outlining:

- Proposed prices
- The infrastructure and operating requirements to provide end-users retail services from the wholesale service provided
- The net facilitation costs of supplying the wholesale customer
- The wholesale service provider's relevant growth plans

Step three: The Proposal would be publicly exhibited for stakeholder comment

Step four: IPART would hold a public hearing to discuss the Proposal and stakeholder submissions

Step five: IPART would use the Proposal and stakeholder comments to release a draft report and determination, for wholesale service provider and stakeholder comment

Step five: IPART would consider submissions and make a final report and determination, setting wholesale prices for that scheme.

4.5.1 Interim or default price in the absence of a scheme-specific determination

As with Option 2 above, there may be instances where an interim or default price(s) is needed until a scheme-specific determination has been made.

The interim or default price(s) could be equal to the standard retail water and/or sewerage **non-residential charges**, or it could be **Option 1** above.

For example, Option 1 could combine with this option (Option 3) such that:

- Option 1 applies to all wholesale schemes unless IPART determines prices to apply to a particular scheme
  - A wholesale service provider or customer could make a case to IPART to conduct a price review for a specific scheme.
  - We could make scheme-specific determinations where requested and where there is evidence that there is a material difference between prices calculated under Option 1 and an efficient price for that scheme.

Accounting for any differences between the interim price and the scheme-specific price

As noted above, the prospect of an interim or default price raises the question of what, if any, measures should be taken to account for any differences between the interim price and the price of a scheme-specific determination.

We could adjust prices in the subsequent scheme-specific determination (positively or negatively) to account for any differences between the interim price and the scheme-specific price. In doing so, we would have to consider a number of factors including over what timeframe to adjust prices to account for differences between the two sets of prices.

However, such an adjustment would introduce further complexity into pricing arrangements and create some uncertainty for wholesale service providers and customers (which, in turn, could create a barrier to entry).

We are interested in stakeholder views on what, if any, measures would need to be put in place to account for differences between interim and final prices.

4.5.2 Length of determination period

Our preliminary view is that a scheme-specific determination would apply until it is replaced by a new determination. This would be similar to our 2000 water and sewerage Developer Charges Determination, which operates[58] until replaced by a new determination.[59] We consider this would enhance certainty and industry acceptance.

Where possible, our scheme-specific determination would refer to objective figures and values that can be updated over time (such as the rate of return or discount rate). This may mean the determination remains appropriate over time, without the need for it to be updated.

However, changes in the industry or government policy may make it necessary to replace a determination. We propose to review an open-ended determination within 10 years of its commencement, to decide whether it should continue or be replaced.

IPART seeks comments on the following

25 Do you support IPART conducting scheme-specific price determinations (Option 3)? Please explain why or why not.

26 What steps should be included in IPART's price determination process?

27 What should be included in a Wholesale Servicing Proposal?

28 Do you support open-ended periods for scheme-specific determinations? Please explain why or why not.

29 If IPART conducts scheme-specific price determinations:

- What should be the interim price until such determinations occur?
- What, if any, measures should be adopted to account for differences between interim prices and subsequent scheme-specific prices?

58 Although, as previously discussed, Sydney Water and Hunter Water are currently not levying water, sewerage and stormwater drainage developer charges. Gosford City Council and Wyong Shire Council continue to levy developer charges using the 2000 Determination and a 2013 update to parameters. Sydney Water and Hunter Water continue to levy recycled water developer charges.

59 We made minor updates to the Developer Charges Determination for Gosford City Council and Wyong Shire Council in 2013.

Appendices

A The WIC Act access regime

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.[60] "Infrastructure services" under the WIC Act means:[61]

> 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.

Under the WIC Act, an infrastructure service is subject to compulsory access if:[62]

- The Minister makes a 'coverage declaration' in respect of it,[63] 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.

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60 Note – WIC Act access regime covers infrastructure services of any 'service provider' within the Sydney Water and Hunter Water areas of operations.

61 Definition of "infrastructure services" in the Dictionary to the WIC Act.

62 An infrastructure owner can voluntarily grant access outside of access undertakings or coverage declarations but cannot be compelled to provide it.

63 The Bondi, Malabar and North Head sewage reticulation networks are declared.

A.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 A.1) are met.

Box A.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 is to use his or her best endeavours to 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 sewage reticulation networks in Sydney Water's network are already subject to a deemed coverage declaration.[64] Notably, this does not include Sydney Water's sewage treatment plants serving these networks.

64 WIC Act, schedule 4, part 2.

The existing deemed 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 to refuse access to these services on reasonable terms.

A.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
- 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 A.2.[65] The principles must be implemented in a manner consistent with postage stamp pricing.[66]

Box A.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. Sydney Water chose not to ultimately seek approval of this undertaking.[67]

65 Arbitrators are bound by the same pricing principles in relation to coverage declarations.
66 WIC Act, section 41 (3).
67 Sydney Water pricing proposal to IPART, June 2015, p 244.

B 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).

Glossary

2016 retail pricing reviews for Sydney Water and Hunter Water	Review of prices for Sydney Water Corporation from 1 July 2016 and Review of prices for Hunter Water Corporation 1 July 2016
ACCC	Australian Consumer and Competition Commission
Administrative burden	The costs incurred by wholesale service providers in complying with our Determination.
Allocative efficiency	A situation where resources are assigned to the consumers who value them most highly. Where resources are assigned by a market, cost-reflective pricing is usually necessary and sufficient to achieve it.
Area of operations	For Sydney Water, means the area of operations referred to in section 10 of the Sydney Water Act. For Hunter Water, means the area of operations referred to in section 16 of the Hunter Water Act.
Augmentation	The upgrade or construction of a water supply or sewerage service asset to increase system capacity.
Augmentation costs	The costs associated with an augmentation.

Barrier to entry	Anything that makes it difficult for an efficient new firm to compete with the incumbents in a market. Barriers could take the form of legal, regulatory or administrative impediments, or cost advantages to the incumbents arising from scale economies or sunk costs.
CARC	Customer acquisition and return cost allowances in regulated retail prices for electricity.
Contestable service(s)	The service the wholesale customer is providing (or seeking to provide) to retail customers 'upstream' or 'downstream' of the wholesale services it has purchased from the incumbent utility. That is, the service between the wholesale connection point and the end user (retail) customers.
Cost of service pricing	The setting of wholesale prices to reflect the actual costs of providing a particular good or service to a particular customer.
Default price	The price that is to be charged for wholesale services when no scheme-specific price can be charged.
Depreciated replacement cost of assets	The cost of replacing an asset less depreciation.
Depreciation	The reduction in value of an asset over a period of time. Value may reduce through wear and tear or obsolescence. Depreciation charges are recognised as a cost of doing business. They permit the investor to recover the principal value of the investment over time.

Developer charge	Upfront charges from utilities paid by developers to recover part of the infrastructure costs incurred in servicing new developments. They can be charged as developer charges by Sydney Water and Hunter Water in accordance with IPART, *Sydney Water Corporation, Hunter Water Corporation, Gosford City Council, Wyong Shire Council, Developer Charges from 1 October 2000*, Determination no 9, 2000, and, IPART, *Recycled Water Developer Charges*, Determination no 8, 2006. They can be charged by WIC licensees as relevant costs related to the grant of certificate of compliance under Part 3, Division 2, Section 24AE of the *Water Industry Competition (General) Regulation 2008*.
Development Servicing Plans	Plans that include the calculation of developer charges and sufficient information to scrutinise the inputs to the calculation, as set out in in accordance with IPART, *Sydney Water Corporation, Hunter Water Corporation, Gosford City Council, Wyong Shire Council, Developer Charges from 1 October 2000*, Determination no 9, 2000, and, IPART, *Recycled Water Developer Charges*, Determination no 8, 2006.
Dominant market position	A situation where a firm has the power to set prices above cost without risk of losing market share.
Dynamic efficiency	A situation where investment decisions lead to optimal levels and types of output over the long term.
Efficient entry	Participation of new firms in a market that leads to prices reflecting least cost supply and dynamic efficiency.

End-users	Retail residential and non-residential customers that purchase water supply and/or sewerage services for purposes other than on-supply.
Facilitation costs	The additional costs incurred (positive facilitation costs) or saved (negative facilitation costs) by a wholesale service provider to supply a wholesale customer.
Government agencies	Any public or local authority which supplies services to the public or any part of the public, and includes a government department, state owned corporation, water supply authority or public utility undertaking which supplies such services, as defined in Section 3 of the IPART Act.
Government monopoly services	A service supplied by a government agency and declared by the regulations or the Minister to be a government monopoly service, as defined in Section 4 of the IPART Act.
Hunter Water	Hunter Water Corporation as established by the Hunter Water Act.
Hunter Water Act	*Hunter Water Act 1991*
Incumbent utility	In this report, Sydney Water or Hunter Water, and not other established utilities (such as existing wholesale customers).
Independent utilities	In this report, a utility that is not a wholesale service provider or a wholesale customer.

Infrastructure services	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 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. As defined in the Dictionary to the WIC Act.
IPART	The Independent Pricing and Regulatory Tribunal of New South Wales
IPART Act	*Independent Pricing and Regulatory Tribunal Act 1992*
Level playing field	In this report, a situation where Sydney Water, Hunter Water, and other low-cost utilities have an equal chance of succeeding.
Line-in-the-sand valuation	The valuation of the regulatory asset bases for Sydney Water and Hunter Water based on prevailing prices in 2000.
Local Government Act	*Local Government Act 1993* (NSW)
Marginal cost	The additional cost of producing an extra unit of a good or service.

Methodology	A determined method for Wholesale Service Providers to fix the maximum price of a product or service.
Minus component	In a retail-minus charge, the part of the charge that is subtracted from the retail-revenue. In our preferred methodology this is based on reasonably efficient competitor costs.
Monopoly power	The power to set prices above cost without risk of losing market share.
Monopoly supplier	The only supplier to a market.
Net facilitation costs	The additional costs incurred by a wholesale service provider to supply services to a wholesale customer less any cost savings to the wholesale service provider as a result of the wholesale customer's activities.
New entrant	In this report, a wholesale customer of an incumbent supplier.
Non-residential charge	The charges applied under the prevailing Sydney Water and Hunter Water Retail Price Determinations to non-residential customers.
NSW	New South Wales
Order	*Independent Pricing and Regulatory Tribunal (Water, Sewerage and Drainage Services) Order 1997*
Operating licence	The prevailing operating licences that apply for Sydney Water and Hunter Water.

Postage stamp pricing policy	The Government policy that requires Sydney Water and Hunter Water to charge most customers in their area of operations the same ongoing water and sewerage prices – regardless of differences in the cost to supply them due to their location and other site-specific factors.
Preliminary view	IPART's current position based on our consultation with stakeholders through the pricing proposals, issues papers, the public hearing, our research and analysis.
Price cap	A determined fixed maximum price.
Productive efficiency	A situation where an organisation's output is maximised for a given cost or that cost is minimised for a given output.
Rateable land	The meaning given to that term under the Local Government Act.
Reasonably efficient competitor	A benchmark firm that is efficient given its scale, but may lack some scale economies enjoyed by the incumbent utility in servicing retail customers. This approach recognises that it may be unrealistic for a new entrant to immediately achieve scale economies.
Recycled water	Water that has been treated to enable its use for certain industrial, commercial and/or household applications, but is not intended to meet the standards for drinking water required by the National Health and Medical Research Council's Australian Drinking Water Guidelines.
Regulatory asset base	The assets on which regulated firms like Sydney Water and Hunter Water are permitted to earn a return on and of in their regulated prices.

Retail component	In a retail-minus charge, the retail revenue that the wholesale service provider would generate from those customers, if it were their retail service provider.
Retail Service Provider	The utility that provides water supply and/or sewerage services to end-users.
Retail services	Water supply and/or sewerage services to end-users.
Retail-minus	An approach to price setting where the wholesale price is based on the end-user or retail price corresponding to the retail services, with a discount (or minus).
Return on assets	The earnings before interest and taxation generated by a business's assets.
Scheme-specific	Tailored to an individual scheme based on its individual characteristics.
Services Sydney	Services Sydney Pty Limited
Standalone system	In this report, a scheme that is not connected in any way to a wholesale service provider or a wholesale customer.
Sydney Water	Sydney Water Corporation as established by the Sydney Water Act.
Sydney Water Act	*Sydney Water Act 1994.*
Third-party access	Where the owner of infrastructure allows a third-party use to transport its goods using that infrastructure, as set out in the WIC Act access regime.
Trade waste charges	Charges applied to trade waste in the prevailing Sydney Water and Hunter Water Determinations.
Unregulated agreements	Private agreements between Wholesale Service Providers and Wholesale Customers outside of our Determination of wholesale prices.

Voluntary access undertaking	A document, provided voluntarily, that sets out the service provider's arrangements for the provision of third-party access to its infrastructure services, as set out in Division 5, Part 3 of the WIC Act.
Wholesale connection point	The point where a wholesale service is received by a wholesale customer. For the purpose of calculating reasonably efficient competitor costs, it excludes any infrastructure built to connect a development to the wholesale service provider's network.
Wholesale customer	See discussion in Chapter 2.
Wholesale scheme	The system operated by a wholesale customer that supplies retail services to end-users.
Wholesale service provider	Sydney Water and/or Hunter Water
Wholesale services	See discussion in Chapter 2.
WIC Act	*Water Industry Competition Act 2006*
WIC Act access regime	The access regime included in Part 3 of the WIC Act.
Wider customer base	Sydney Water's and Hunter Water's retail customers.