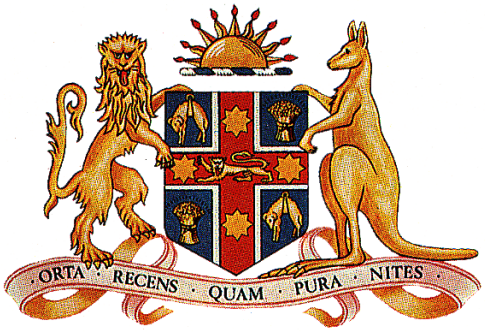

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IPART

Independent Pricing and Regulatory Tribunal
New South Wales

Maximum prices to connect, extend or upgrade a service for metropolitan water agencies

Sydney Water Corporation
Hunter Water Corporation
Central Coast Council

Final Report
Water

October 2018

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The Independent Pricing and Regulatory Tribunal (IPART)

IPART provides independent regulatory decisions and advice to protect and promote the ongoing interests of the consumers, taxpayers and citizens of NSW. IPART's independence is underpinned by an Act of Parliament. Further information on IPART can be obtained from IPART's website: https://www.ipart.nsw.gov.au/Home.

Tribunal Members

The Tribunal members for this review are:

Dr Peter J Boxall AO, Chair

Mr Ed Willett

Ms Deborah Cope

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Contents

1 Executive summary

Developer charges are upfront charges water utilities levy on developers to recover the costs of providing water, wastewater and/or stormwater infrastructure to new developments. The charges can ensure that existing customers do not face higher costs as a result of new development. They also signal the different costs of providing services to different locations and, in an environment of postage stamp prices, enhance the potential for competition in providing water and sewerage services to new developments.

The review covers developer charges and related charges levied by Sydney Water Corporation (Sydney Water), Hunter Water Corporation (Hunter Water) and Central Coast Council (formerly Gosford City Council and Wyong Shire Council, or the Councils). Prior to this review, developer charges and related charges were set out in:

- Our 2000 Determination of developer charges for Sydney Water and Hunter Water, and
- Our 2013 Determination of developer charges for Gosford City Council and Wyong Shire Council (now Central Coast Council).

In 2008, the NSW Government set water, sewerage and stormwater developer charges for Sydney Water and Hunter Water to zero. While this policy remains in place, only Central Coast Council will apply the developer charges methodology for new connections to new developments set out in this report and our Determination. However, all three metropolitan water utilities will apply the methodologies for related charges, including:

- Charges for new connections to existing properties
- Charges for upgrades to existing services.

This report outlines and presents our analysis and decisions for developer charges and related charges to apply to the metropolitan water utilities. The accompanying determination will replace the 2000 Determination and 2013 Determination for the water utilities, as well as previous backlog sewerage determinations. The new Determination will apply from 2 November 2018, or the day that it is published in the NSW Government Gazette, whichever is later.

1.1 Background to developer charges levied by the metropolitan water utilities

Our previous developer charges determinations prescribe a net present value (NPV) methodology that water utilities must use to calculate their charges. The methodology effectively calculates, on an 'equivalent tenement' (ET) basis, the cost of providing services to a new development above and beyond the retail (postage stamp) price revenue the utility will receive from customers in that area.[1]

1 'Equivalent tenement' is the measure of the demand a new development will place on the water and wastewater infrastructure compared to an average residential dwelling.

Box 1.1 provides a high-level summary of this methodology and the associated procedural requirements. Both elements are outlined in more detail in Chapters 2 and 3, respectively.

Box 1.1 Developer charges methodology and procedural requirements at a glance

A developer charge is a location-specific upfront charge that reflects the additional costs (capital and operating) of servicing that development area. The charge is designed to recover the difference between the system-wide average costs (reflected in the postage stamp price revenue of the agency) and the costs of servicing the specific development area.

Methodology

Under IPART's 2000 Determination of developer charges for metropolitan water utilities (updated in 2013 for Gosford City Council and Wyong Shire Council), the basic formula for calculating the maximum developer charge for a new development area can be simplified as:[a]

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

Inputs in the formula are:

- **Capital costs**, including past, present and future capital expenditure, required to service the development area (shared or allocated between the particular development and other customers).
- **Operating costs** expected to be incurred in servicing the new development area.
- **Forecast revenue** from servicing customers within the new development area, based on postage stamp retail prices (usage and service charges).
- **Equivalent tenements**, representing the demand the new development will place on the water and wastewater infrastructure compared to an average residential dwelling.
- **Discount rate(s)** to calculate present values, explained in Chapter 2.

Procedural requirements

Our 2000 and 2013 Determinations of developer charges set out **procedural requirements**. These require the regulated water utilities to:

- Develop a **Development Servicing Plan (DSP)** for each service area, satisfying minimum content requirements (including the DSP area, demographic information, capital works, standard of service, and calculation of developer charges).
- Publicly **advertise** and **exhibit** a draft DSP for at least 30 days and consider stakeholder submissions. The Urban Development Institute of Australia (UDIA), the Housing Industry of Australia (HIA) and any relevant developers and landowners are to be informed.
- Forward the DSP to IPART for **registration**, informing us of any submissions lodged during the exhibition period. IPART then registers the DSP.
- **Review** DSPs and developer charges every five years or as required by IPART. All elements of the DSP should be reviewed. Developer charges are constant in real terms between the DSP reviews.
- Use a calculation spreadsheet that has been **approved by IPART**.

a This is a simplified representation of the methodology described in Chapter 2.

Source: 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; IPART, *Gosford City Council and Wyong Shire Council Developer Charges, Determination No. 1, 2013*, May 2013.

To date, we have determined a **methodology** for fixing maximum developer charges, rather than setting a price, for the following reasons:

- A consistent and transparent approach to setting developer charges was needed to ensure efficiency and certainty for developers.
- Determining prices for each development area would require IPART and the water utilities to expend considerable time and resources. This could delay developments and impose significant regulatory costs.
- Prescribing a methodology enables the water utilities to establish new DSPs as they are required.

1.1.1 Zero developer charges have applied in Greater Sydney and the Hunter region since 2008

In 2008, the NSW Government set water, sewerage and stormwater developer charges for Sydney Water and Hunter Water to zero. This was facilitated by a direction from the Treasurer to Sydney Water and Hunter Water under section 18(2) of the *Independent Pricing and Regulatory Tribunal Act 1992* (NSW) (the IPART Act) (see Appendix F). This direction applies to developments that fall within the utilities' brownfield areas under existing DSPs and greenfield areas under Growth Servicing Plans[2], known as 'in-sequence' development.

Since 2008, prudent and efficient growth expenditure to service 'in-sequence' development has been added to Sydney Water and Hunter Water's notional revenue requirements. It has been recovered through their respective periodic (retail) prices to all customers.

For development that occurs ahead of the NSW Government's planned release of land, also known as 'out-of-sequence' development, Sydney Water requires developers to initially fund and construct works. In most cases, Sydney Water establishes a payment regime to a developer as lots are developed. The timing and scale of payments Sydney Water makes to the developer vary, depending on the progress of the development of lots, number of connections to Sydney Water's system and how far out of sequence the development is occurring. Hunter Water requires developers to fund assets for developments outside its 10-year Growth Plan, unless the upsized assets can be used by future or adjoining developments. In these circumstances, Hunter Water will cover some costs for upsizing.[3] The funding of 'out-of-sequence' development by Sydney Water and Hunter Water is discussed in more detail in Appendix C.

1.1.2 Central Coast Council continues to levy developer charges

The NSW Government's 2008 decision to set water, sewerage and stormwater developer charges to zero does not apply to Central Coast Council, which levies these charges consistent with our 2013 Determination.

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2 Sydney Water, *Growth Servicing Plan for 2017 to 2022*, at https://www.sydneywater.com.au/web/groups/publicwebcontent/documents/document/zgrf/mdq2/~edisp/dd_046979.pdf, 2017, accessed on 5 June 2018.

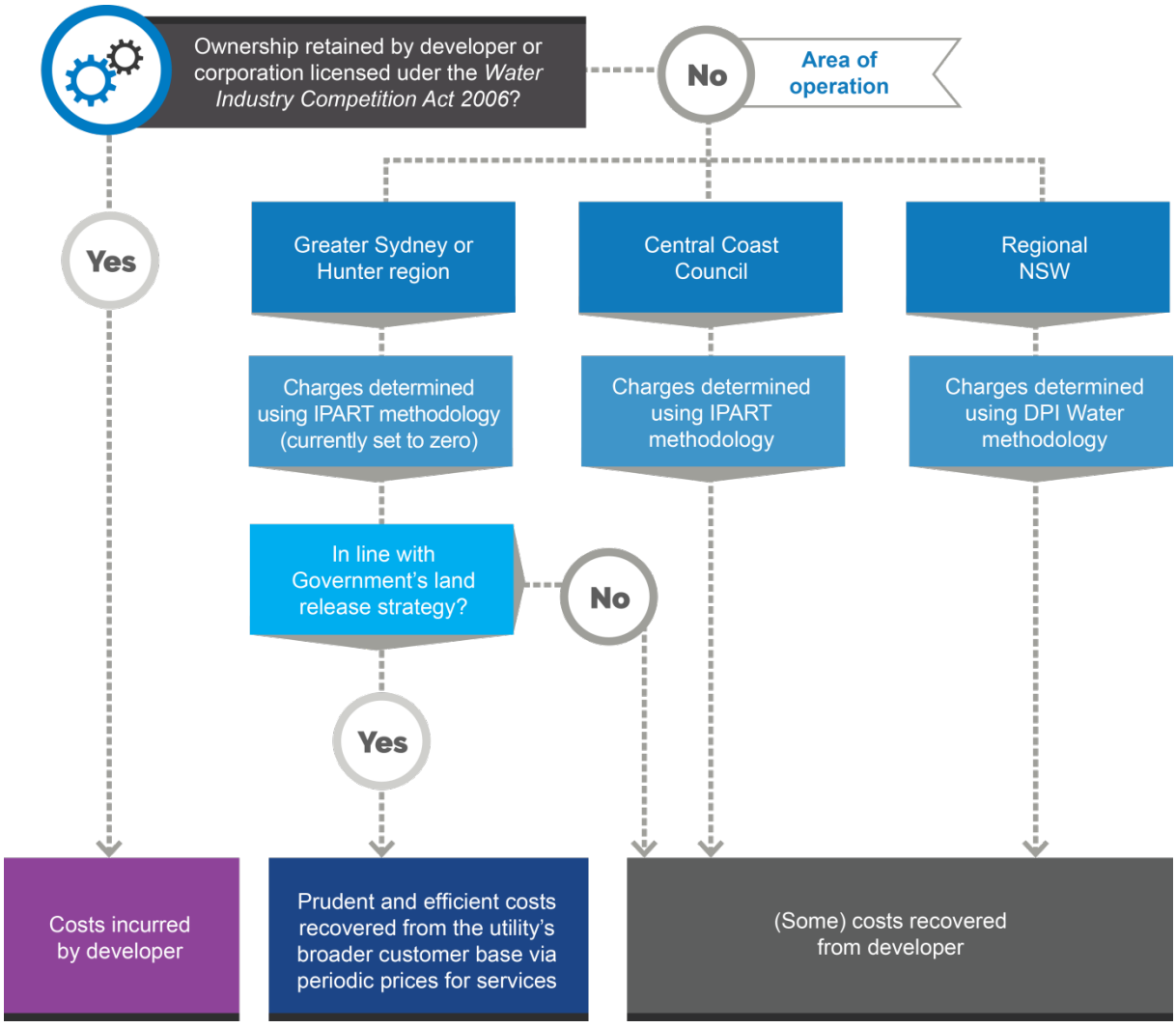
3 Hunter Water, *Funding and Delivery of Growth Infrastructure Standard*, January 2018, p 7.

In 2013, we updated our determination of developer charges for Gosford City Council and Wyong Shire Council (now Central Coast Council), to ensure that the parameters used to calculate developer charges remain current. We limited our 2013 review to updating discount rates, the average consumption measure and the Consumer Price Index (CPI) indexation factor. We also removed the cap on Wyong Shire Council's developer charges.[4]

1.1.3 Developer charges apply in NSW and beyond

Figure 1.1 provides an overview of the water developer charges regime in NSW, reflecting the Government's 2008 direction in relation to Sydney Water and Hunter Water.

Figure 1.1 Funding of water and wastewater infrastructure for new developments in NSW



Source: Adapted from IPART, NSW Planning System Review – IPART Submission on the Green Paper, September 2012, p 13.

4 IPART, *Gosford City Council and Wyong Shire Council – Review of calculation parameters for developer charges, Final Report,* May 2013, p 3.

1.2 Summary of our decisions on developer and related charges

1.2.1 This report and accompanying Determination consolidate a number of our existing determinations relating to developer charges

This review has considered a number of charges that relate to or use similar methodologies. These include our methodology for developer charges for connecting a new service to new developments, which was set under the 2000 Determination and the 2013 Determination.

We have also considered our methodology for:

- backlog sewerage charges (connecting a new service to existing properties), set under the 1997 Determination and the 2006 Determination (discussed below), and
- minor service extension charges (connecting a new service to existing properties), set under Sydney Water's 2016 Determination of periodic prices.[5]

We consider that all these methodologies should be made consistent as they all relate to the costs of making a new connection to the system.

Therefore, we have replaced all of these decisions and determinations (as they relate to charges for connecting services) with a single determination of maximum prices to connect, extend or upgrade a service for metropolitan water utilities. This will mean that the Determination applies to all utilities and all services consistently, and ensures consistent parameters, discount rates and CPI are applied to the connection charges under our regulatory remit. It is also our intention that this Determination can be applied if the NSW Government changes the 2008 direction on zero developer charges for Sydney Water and Hunter Water.

In consolidating our previous decisions and determinations, we have introduced **new terminology** that recognises common features of the various connection charges:

- connecting a new service to a new development – former developer charges
- connecting a new service to an existing property – former backlog sewerage charges or minor service extension (MSE) charges, and
- upgrading an existing service to an existing property – a new charge specifically designed to address upgrades to water flow and pressure for firefighting.

1.2.2 We have maintained the key features of the developer charges methodology established in our 2000 Determination for new connections to new properties.

The methodology calculates developer charges as the capital cost attributable to the Development Servicing Plan (DSP) area, less the future operating position (surplus or deficit) expected to be earned from the utility's periodic charges to its retail customers in the DSP area. The methodology uses a net present value (NPV) approach, which allows costs and revenues to be reconciled to a single value by discounting them to the present day's dollars.

5 While historically we have used different methodologies for setting backlog sewerage charges and minor service extension charges, we are combining these under a single methodology.

As in previous reviews, we remain of the view that setting a methodology, rather than fixing prices, continues to be the best approach.

Other core features of the 2000 methodology have also been maintained, including:

- the approach to the capital cost component, which takes into account past and future investments, excludes assets commissioned prior to 1970, includes headworks assets regardless of ownership, and uses a Modern Engineering Equivalent Replacement Asset (MEERA) approach to value existing assets
- the approach to the reduction amount, which is based on a 30-year projection of postage stamp revenues and location-specific operating costs
- the differential application of discount rates, where assets constructed prior to 1996 are converted to present values using lower discount rates, reflecting the different operating conditions for water utilities prior to 1996, and
- the use of average residential consumption as the measure of an ET, updated based on the most recent, relevant periodic price determination for each utility.

We have also made a number of updates and amendments to the developer charges methodology, to ensure it remains current and fit for purpose, including:

- updating the various (previously) fixed parameters (eg, discount rates for calculating present values) used to ensure ongoing currency
- amending the methodology to preclude negative prices, and
- allowing developers to opt-out and enter into bilateral unregulated negotiated agreements with water utilities.

Submissions to our Issues Paper and to our Draft Report supported the current, NPV-based methodology as fit for purpose and theoretically sound. However, the utilities also made comments on other components of the methodology and provided views on areas that they considered could be improved.

Sydney Water proposed an alternative approach to the capital cost component, notably:

- using disaggregated Regulatory Asset Base (RAB) values for existing assets (or DORC[6] values if RAB values are not available), to ensure consistency between the calculation of developer charges and periodic charges, and
- using its Cost Allocation Methodology (CAM) to estimate the cost contribution for existing assets in a developer charge and to apportion assets to DSPs.[7]

We consider there may be valid arguments for using alternative approaches to valuing existing assets. Under a retail minus (plus net facilitation costs) approach to wholesale (and access) pricing, a wholesale customer servicing a new release area would effectively pay RAB values for Sydney Water's existing assets plus the costs of new assets required to service it and the new development. This is equivalent to the RAB value approach for existing assets proposed by Sydney Water. In this case, the RAB value approach may put an incumbent utility and a wholesale customer on a more equal footing when seeking to service a developer

6 Depreciated Optimised Replacement Cost.
7 Sydney Water's submission to IPART Issues Paper, December 2017, pp 9, 24-25.

in a new development area. It may also produce a more equitable outcome between the prices new customers contribute, and those paid by existing customers through the RAB-based periodic charges.

While we recognise there may be merit in Sydney Water's proposal, we have decided to retain the current, MEERA-based approach for this Determination. We consider that prior to the potential adoption of any RAB-based approach to asset valuation, the method used to allocate the RAB across a utility's asset base would need to be sound. We also note that the water utilities' ability to implement a RAB-based approach in the near future is untested, and both Hunter Water and Central Coast Council supported continuing with a MEERA-based approach. As such, while we consider that there is scope to adopt a different approach to asset valuation at a future review, the use of MEERA-based values is the most appropriate at this time.

We have also made a number of adjustments to procedural requirements, to make them more flexible and responsive. In particular, we have suspended the requirement to review DSPs while the NSW Government policy on zero developer charges applies, and to allow an up to 18-month transition period if the policy is removed. During this transition period, Sydney Water and Hunter Water's developer charges would continue to be zero.

1.2.3 We have applied a uniform methodology to set prices for a new service connection to an existing property

As set out above, our previous determinations established multiple methodologies for calculating new services connections to existing properties (ie, backlog sewerage charges and service extensions).

Our decision is to standardise our approach to regulating the price of connecting a new service, whether to a new development or to an existing property (formerly referred to as backlog or service extension charges). We consider that the methodology for setting maximum prices for a new connection should apply in this case. This streamlines our regulation of capital connection charges for water, sewerage and stormwater services, bringing them under the single new determination.

In summary, our decisions are as follows:

- The net present value (NPV) methodology for calculating the costs of a new connection is appropriate for both developer charges and backlog sewerage/service extension charges.
- Maximum prices for a service extension to an existing property can be presented as a composite charge, or as a sum of two components:
  - a price to connect a new service to a new development, calculated for a Development Servicing Plan (DSP) area based on the incremental cost approach for new connections to new developments, plus
  - a price reflecting the cost to build an extension to the connecting property in this DSP area, calculated on a marginal cost basis.[8]

8 While developer charges are set to zero, this means that the connecting property will pay only its share of the cost of building the extension. When developer charges are reintroduced and DSPs updated, a connecting property after that time would pay *both* the DSP charge *and* its share of the cost of building the extension.

- This will standardise our approach to determining the price of connecting a new service, whether to a new development or to an existing property (formerly referred to as either backlog or service extension charges), and enable utilities to charge on a marginal cost basis for extending a service while the zero developer charges policy applies.
- There may be situations that justify lower connection charges to existing properties. This might occur where environmental, public health or other considerations justify a lower price for properties connecting to a sewerage system. Our approach is to assess these departures from the standard charges on a case-by-case basis, either at a periodic price review or in a scheme-specific review requested by a utility.

1.2.4 We have introduced a new charge for upgrading existing services to existing properties

Submissions from stakeholders, in particular, Fire and Water NSW (FRNSW) and Sydney Water, identified that in some cases, network upgrades may provide a least-cost solution to addressing water pressure and flow issues for firefighting. However, stakeholders also noted that the regulatory framework does not currently require least-cost solutions to addressing water pressure and flow issues for firefighting, and water utilities currently have no mechanism to recover costs upfront from impactors or beneficiaries of upgrades to existing assets.[9]

Our decision is to set a methodology to calculate a charge for upgrading existing services to existing properties. This will facilitate the funding of an efficient solution to improve firefighting capacity where property owners seek a mains upgrade (which is non 'business as usual' for the water utility[10]) as a least-cost solution to addressing water flow and pressure for their property or properties.

We propose calculating the charges according to whether the property is existing or part of a new development. In summary:

- Where the owners of an **existing property**, or a group of owners of existing properties, seek an upgrade of an existing service to increase firefighting capacity, the charge will be based on the costs of the upgrade. The charge only relates to increasing the capacity of water assets for firefighting, and not to the costs of existing assets, because the owners already pay for existing assets through their periodic prices.
- In contrast, **new developments** would pay a capital charge that would include the costs of existing assets as well as the cost of the upgrade.

While zero developer charges apply and the DSPs have not been reviewed or updated, our determination would allow utilities to levy the upgrade charges to new developments reflecting just the costs of the upgrade.

9 Sydney Water submission to IPART Draft Report, August 2018, p 28.

10 Prudent and efficient business as usual (BAU) expenditure by the water utility to provide monopoly water services should be funded by the broader customer based via regulated postage stamp prices.

1.2.5 We have considered customer impacts from our decisions

We have carefully considered potential impacts on customers from our decisions. In particular, we note that our decisions around new connections to existing properties could result in higher charges than the previous approaches to setting backlog sewerage charges, which allocated a significant proportion of the costs of backlog schemes to the broader customer base.

In recognition of the potential impacts on customers, we have:

- Maintained the annuity payment option for new connections to existing properties (encompassing former backlog charges and service extensions), and extended this to include upgrades to a service to an existing property, to manage customer impacts and affordability. The annuity payment options allows customers in existing properties to pay a fixed annual amount over a period of up to 20 years, rather than one-off lump sum payment at the time of connection.
- Grandfathered all existing charges levied under our previous determinations, to ensure that customers making annuity payments for backlog sewerage under these determinations will have the certainty of knowing that their payments will continue for the remainder of the annuity period.

1.2.6 We have deferred regulation of Sydney Water's Developer Direct services

We also consulted on Sydney Water's new Developer Direct (SWDD) charge launched in July 2017 for customers undertaking small to medium development. SWDD includes two types of services:

- application services, and
- various construction services that relate to connecting a property to the water and sewerage network.

Stakeholder submissions raised concerns that SWDD may not be competitively neutral.

Some of SWDD's application services fall within regulated services, and for which we set maximum prices at our 2016 Determination of Sydney Water's periodic prices. In 2019-20, we will undertake our next review of Sydney Water's periodic prices. At this time, we will review all SWDD application services including:

- which SWDD application services are government monopoly services and therefore subject to IPART regulation, and
- the efficient costs of delivering those application services.

We will also ensure that any SWDD application services that are not monopoly services are ring-fenced.

Our decision is to defer regulating construction services provided under SWDD to the 2019-20 Sydney Water periodic price review.

In this report, we have outlined the complaints mechanism for competitive neutrality.

1.3 Issues outside the scope of this review

Related matters that we have not covered in this review include:

- Recycled water developer charges – we will determine these charges in our 2018-19 review of recycled water prices for public water utilities[11]
- Miscellaneous fees and charges
- Water and sewerage developer charges levied by local water utilities (LWUs).

In its submission to our Draft Report, Sydney Water raised concerns about the cost reflectivity of application fees for new connections (and upgrades) to existing properties. The nature and amount of these charges will be considered in our 2019-20 review of Sydney Water's retail prices.

NSW local water utilities (LWUs) also levy water and sewerage developer charges. However, these charges are outside our regulatory remit and therefore were not considered in this review. The NSW Department of Primary Industries (DPI Water) has issued developer charges guidelines that apply to LWUs.[12] These guidelines are based on the NPV approach outlined in our 2000 Determination and 2013 Determination, but provide a more flexible methodology that is appropriate for use by LWUs (which may have access to less data) (see Appendix D).[13]

For the avoidance of doubt, we also note that the policy on zero developer charges in Greater Sydney and the Hunter area is a matter for the NSW Government and not part of this review.

1.4 Process for this review and consultation

We are conducting this review under section 11 of the IPART Act. Under the IPART Act, we are required to consider a broad range of issues, including consumer interests, economic efficiency, environmental and utility-specific concerns. The detailed matters that we are required to consider are set out in section 15 of the IPART Act (see Appendix A).

In undertaking this review, we sought stakeholder comments on all aspects and components of our previous and proposed approaches for setting developer and related charges. We have consulted with water utilities and other stakeholders via a number of processes:

- We released our Issues Paper in October 2017 and received submissions from Sydney Water, Hunter Water and Central Coast Council in December 2017.
- We then gave other stakeholders the opportunity to comment on the utilities' submissions by January 2018.
- We held a public hearing on 6 March 2018, giving all stakeholders further opportunity to provide input to this review.

11 Information on this review is available at: www.ipart.nsw.gov.au/Home/Industries/Water/Reviews/Metro-Pricing/Review-of-recycled-water-prices-for-public-water-utilities.

12 NSW Department of Primary Industries, *2016 Developer Charges Guidelines for Water Supply, Sewerage and Stormwater*, at http://www.water.nsw.gov.au/__data/assets/pdf_file/0011/663698/2016-Developer-Charges-Guidelines.pdf, 2016, accessed on 18 August 2017.

13 IPART, *Review of Water Supply, Sewerage and Stormwater Developer Charges Guidelines – Final Report to the Minister*, September 2007, pp 1-2.

- We released a Draft Determination and Draft Report in June 2018, and invited all stakeholders and interested parties to make written submissions to this Draft Report and Draft Determination.
- All submissions were considered before making our final decisions and publishing the Final Report and Determination in October 2018.

We would like to thank everyone who participated in this review, particularly stakeholders who took the time to attend our Public Hearing and prepare submissions.

1.5 Structure of this report

This report sets out our decisions and reasoning, including consideration of submissions made by stakeholders and comments at the Public Hearing, and is structured as follows:

- Chapter 2 discusses our methodology for determining maximum prices for new connections to new developments – our developer charges methodology.
- Chapter 3 discusses the procedural provisions in the Determination.
- Chapter 4 sets our decisions on maximum prices for new connections to existing properties – formerly backlog sewerage charges and minor service extension charges.
- Chapter 5 sets out our decisions on new prices to upgrade an existing service to facilitate firefighting.
- Chapter 6 discusses our approach to Sydney Water Developer Direct.

1.6 List of decisions

1.6.1 New connections to new developments – developer charges methodology

Methodology to set prices for new connections to new developments

1.6.2 Procedural requirements for new connections to new developments

Procedural requirements around development servicing plans (DSPs)

Price indexation factor

1.6.3 New connections to existing properties – prices to extent services

1.6.4 Upgrading services to existing properties

1.6.5 Other charges – Sydney Water's Developer Direct

1.7 List of recommendations

2 New connections to new developments – developer charges methodology

In this chapter, we set out the basis for our decisions on the methodology for calculating charges for new connections to new developments (ie, developer charges).

In submissions to our Issues Paper and Draft Report, we received stakeholder views on key issues and questions associated with the methodology and its elements, including:

- the capital cost component of the methodology, including which assets to include and how to apportion those costs to each development area, and
- other elements of the methodology, including the forecast period for assessing revenues and operating costs (to calculate the **reduction amount**), discount rates and projected equivalent tenements (ETs).[14]

This chapter provides the reasons for our decisions on the methodology. In Chapter 3, we discuss our decisions on the procedural steps that accompany the methodology.

2.1 Summary of our decisions on methodology

We have introduced new terminology that recognises common features of various connection charges under our review. We have maintained the core features of the methodology under our 2000 Determination of developer charges (referred to as '**the 2000 methodology**'), while updating its parameters to ensure their ongoing currency.

In summary, our decision is to:

- maintain the current net present value (NPV) methodology, which includes the capital cost components and the reduction amount, and is allocated to connecting customers based on ETs
- update the parameters of the methodology to ensure its ongoing currency
- maintain the current approach to the capital cost component
- maintain the current approach to the reduction amount
- maintain the differential application of discount rates
- maintain average residential consumption as the measure of an ET
- amend the current approach to ensure that developer charges cannot be negative, and
- allow utilities and developers to opt-out of the determination through bilateral agreements, subject to ring-fencing of unregulated costs.

14 'Equivalent tenement' is the measure of the demand a new development will place on the water and wastewater infrastructure compared to a single average residential dwelling. For a full definition of an ET, see Schedule 5 clause 3 of the Determination.

2.2 We have maintained our approach to setting the methodology

Our decision is to:

1 Maintain the key features of the 2000 methodology, which calculates capital charges, minus the reduction amount, per equivalent tenement (ET), on a net present value (NPV) basis.

The 2000 methodology calculates developer charges as the capital cost attributable to the Development Servicing Plan (DSP) area, less the future operating position (surplus or deficit) expected to be earned from the utility's periodic charges to its retail customers in the DSP area. The methodology uses a net present value (NPV) approach, which allows costs and revenues to be reconciled to a single value by discounting them to the present day's dollars.

Box 2.1 shows the 2000 methodology for calculating developer charges. The methodology calculates the developer charge per ET in a DSP area as:

- the present value (PV) of the capital costs of the existing and future assets used to service the DSP area
- less the PV of the future net operating surplus (or deficit) expected from providing the services to the DSP area – also called the **reduction amount,** and
- divided by the PV of the number of ETs in the DSP area.

Box 2.1 The 2000 methodology for developer charges

The developer charge per equivalent tenement is calculated as follows:

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

Where:

DC – developer charge per equivalent tenement

K_1 – the capital charge for pre-1996 assets that will serve the Development Servicing Plan (DSP) area calculated on an NPV basis, discounted at rate r_1 from 1 January 1996

K_2 – the capital charge for post-1996 assets that will serve the DSP area calculated on an NPV basis, discounted at rate r_2

L_1, L_2, L_3 – the present value of the number of equivalent tenements in the DSP area, or to be developed in the DSP area, calculated at discount rate r_1, r_2, r_3 respectively

R_i – the future periodic revenues expected to be received from new customers in the DSP area in each year *(i)*

C_i – the future expected annual operating, maintenance and administration costs of providing services to new customers in the DSP area in each year *(i)*

r_i – the discount rate to be used in the calculation of the net present value of pre-1996 assets

r_2 – the discount rate to be used in the calculation of the net present value of post-1996 assets

r_3 – the discount rate to be used in the calculation of the net present value of expected revenues and costs

n – is 30 years from the date of review of the developer charge as required by the 2000 Determination. It is the end of the forecast period for the assessment of expected revenues and costs.

Source: IPART, Developer Charges Determination No 9, 2000, Schedule 4.

2.2.1 Submissions from stakeholders supported the current methodology

Submissions to our Issues Paper and to our Draft Report supported the current, NPV-based methodology as fit for purpose and theoretically sound. This included submissions from Central Coast Council[15], Hunter Water[16], the Housing Industry Association[17], and Sydney Water[18]. In its submission to the Draft Report, Sydney Water stated:

> IPART's methodology is theoretically sound and has potential to provide location based cost signals to foster more efficient growth.[19]

15 Central Coast Council's submission to IPART Issues Paper, December 2017, p 5.
16 Hunter Water's submission to IPART Issues Paper, December 2017, p 35; Hunter Water's submission to IPART Draft Report, August 2018, p 7.
17 Housing Industry Association's submission to IPART Issues Paper, January 2018, p 3.
18 Sydney Water's submission to IPART Issues Paper, December 2017, p 7.
19 Sydney Water's submission to IPART Draft Report, August 2018, p 9.

In its submission to the Issues Paper, the Water Services Association of Australia (WSAA) stated:

> The elegance of IPART's method is that it explicitly seeks to recover the shortfall between the costs of servicing growth and the 'profits'.[20]
>
> The robust conceptual grounding of IPART's developer charges method is its strength: it offers location specific charges that are designed to overcome the lack of signals provided by postage stamp pricing.[21]

However, the utilities also made comments on other components of the methodology and provided views on areas that they considered could be improved. These issues are discussed in the following sections.

Stakeholders representing the development industry were concerned that our review of the developer charges methodology could facilitate a reversal of the Government policy[22] of zero developer charges in Sydney and the Hunter.[23] In its submission to the Issues Paper, WSAA noted that the water services industry supports cost-reflective developer charges, on the basis that a well-designed system of developer charges and contributions is an important element for funding growth.[24] We note that developer contributions are applied in some form elsewhere in NSW and in all other Australian jurisdictions (see Appendix E). However, the policy on developer charges in Greater Sydney and the Hunter area is a matter for the NSW Government and not part of this review.

2.2.2 Setting a methodology rather than fixing prices is still the best approach

Our 2000 Determination set a methodology instead of fixing individual prices for each DSP area. We considered that applying a methodology provided the required balance of flexibility and prescription for utilities to produce accurate, consistent, transparent and timely developer charges. This also facilitates consideration by the utility of alternative sources of supply and the best servicing solutions (see discussion later in this chapter).

If we were to fix a developer charge for each DSP, there would be significant administrative costs and the potential for delays in the approval of charges, given the large number of DSPs to be assessed using our standard consultation process.[25]

In its submission to the Issues Paper, Sydney Water provided examples of alternative options for setting developer charges, including a capped charge, a postage stamp charge, a developer charge offset, voluntary agreements, allocating costs to beneficiaries of more stringent environmental standards and developer charges with a minimum contribution.[26]

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20 Water Services Association of Australia's submission to IPART Issues Paper, January 2018, p 6. 'Profits' relate to the reduction amount – see Box 2.1.

21 Water Services Association of Australia's submission to IPART Issues Paper, January 2018, p 8.

22 In 2008, the Government directed Sydney Water and Hunter Water to set developer charges for 'in-sequence' development to zero; see Chapter 1 and Appendix C.

23 Housing Industry Association's submission to IPART Issues Pape, January 2018, p 1; Urban Development Institute of Australia's submission to IPART Issues Paper, January 2018, p 2.

24 Water Services Association of Australia's submission to IPART Issues Paper, January 2018, p 3.

25 At the last review in 2006-07, there were 75 DSPs for Sydney Water and 77 DSPs for Hunter Water. See IPART, *Review of developer charges and backlog sewerage charges for metropolitan water agencies – Issues Paper*, October 2017, p 32.

26 Sydney Water's submission to IPART Issues Paper, December 2017, pp 16-17.

A capped developer charge would limit the price to connect a new service to some specified maximum (a 'cap'). A benchmark developer charge would be set using a reference to charges raised by other utilities, or charges by the same utility in different locations. In both cases charges would be set for a specific region, which could be as narrow as a DSP area or as broad as the utility's entire area of operation.

We consider that a broad-based developer charge set via a cap or benchmark would not reflect the different costs of servicing different areas, and therefore would not send locational signals to new developments. This could mean development and the supply network is expanded to higher cost areas, at the expense (or instead) of lower cost areas. At the Public Hearing, a stakeholder recognised that capping or having a common level of developer charges, together with postage stamp retail prices, created opportunities for cherry-picking by new market entrants.[27]

Our decision is that setting the methodology to calculate location-specific developer charges continues to be the best approach. We have considered Sydney Water's proposal for unregulated agreements, and have accepted this by allowing for the utility and its customer to opt-out of our determination of connection charges if both parties can reach agreement. The opt-out provision is discussed later in this chapter.

2.3 Utilities support the parameters update

The methodology in the 2000 Determination relies on several key parameters set to a fixed value. These parameters are:

- the real discount rate for pre-1996 assets and associated ETs
- the real discount rate for post-1996 assets and associated ETs
- the real discount rate for the expected net revenues, costs and associated ETs
- the annual water consumption for an average residential customer both as the measure of an ET and as an input in the calculation of the reduction amount, and
- a forecast horizon for expected new revenues and costs.[28]

In 2013, we made a new determination to replace parts of the 2000 Determination for Central Coast Council. The 2013 Determination updated the parameter values for both Gosford City Council and Wyong Shire Council (the Councils, now constituting Central Coast Council).[29]

In our 2013 Determination, we decided to:

- keep the real discount rate for pre-1996 assets for the Councils unchanged at 0%
- update the real discount rate for post-1996 assets from 7% to the Councils' pre-tax weighted average cost of capital (WACC) referred to in the Final Report accompanying the prevailing periodic price determination

27 IPART, Developer Charges public hearing transcript, 6 March 2018, p 34.
28 IPART, Developer Charges Determination No 9, 2000, Schedule 5.
29 IPART, *Gosford City Council and Wyong Shire Council Developer Charges, Determination No. 1, 2013*, May 2013.

- update the average customer consumption value to the consumption for an average residential customer referred to in the Final Report accompanying the prevailing periodic price determination, and
- keep the forecast horizon for expected new revenues and costs unchanged at 30 years.[30]

These changes ensured that key parameters for Central Coast Council remained up to date and consistent with the prevailing retail price determinations.

The 2013 Determination for the Councils also updated the CPI indexation factor, in line with the CPI adjustment we apply in our periodic retail price determinations. That is, annual CPI adjustments to developer charges between DSP reviews is calculated using the March-on-March quarter CPI, all groups eight capital cities, as published by the Australian Bureau of Statistics (ABS).

In our Issues Paper and Draft Report, we proposed, at a minimum, the same changes to the 2000 Determination for Sydney Water and Hunter Water as we made to the 2013 Determination of developer charges for the Councils. Such changes would ensure that the developer charges methodology that applies to all utilities is up to date and is consistent with the utilities' prevailing retail price determinations. This would be important if developer charges in Greater Sydney and the Hunter region are reinstated.

In submissions to our Issues Paper and Draft Report, the water utilities expressed their general support for updating parameters of the methodology, and also submitted additional proposals regarding various elements of the methodology. Our response to these proposals, other stakeholders' views, and the reasons for our draft decisions are presented in the remainder of this chapter.

2.4 We have maintained the current approach to the capital cost component

This section discusses our approach to the capital cost component of the developer charges methodology, the views of stakeholders and our decisions. It includes:

- The categories of assets:
  - 'pre-1996 assets' commissioned prior to 1 January 1996
  - 'post-1996 assets' commissioned on or after 1 January 1996 or those that are yet to be commissioned
- the assets to include in capital costs
- apportioning shared assets, and
- the value of assets included in capital costs.

30 IPART, *Gosford City Council and Wyong Shire Council Developer Charges, Determination No. 1, 2013*, May 2013.

2.4.1 We have maintained the distinction between pre-1996 and post-1996 assets

Our decision is to:

2 Maintain our current approach of calculating capital charge components separately for pre-1996 and post-1996 assets.

The methodology in the 2000 Determination has two capital charge components: pre-1996 and post-1996 assets. A lower discount rate applies to pre-1996 assets, necessitating the different calculation of capital cost components for pre-1996 and post-1996 assets. The reasons for maintaining the lower discount rate for pre-1996 assets are discussed later in this chapter.

In their submissions to the Issues Paper and Draft Report, respectively, Central Coast Council[31] and Hunter Water[32] supported calculating capital charge components separately for pre-1996 and post-1996 assets.

In its submission to the Draft Report, Sydney Water disagreed with our approach. Sydney Water stated that if IPART used Regulatory Asset Base (RAB) values for calculating the capital charge, rather than Modern Engineering Equivalent Replacement Asset (MEERA) values, then this arbitrary distinction would not be necessary.[33] Sydney Water's proposal and the reasons for our decisions are discussed in the following sections.

2.4.2 We have maintained our current approach to asset inclusion

Our decision is to:

3 Maintain our current approach to:

- exclude pre-1970 assets from the capital charge calculation
- not limit the period of inclusion of assets yet to be commissioned, and
- the criteria for exceptions to asset inclusion.

Under the 2000 Determination (and the 2013 Determination for Central Coast Councils), new developments pay for the capacity of the **existing** and **future** assets that they will use. We have termed this approach of including the costs of existing and future assets in the capital charge an 'incremental cost' approach (see Box 2.2 below). The other key features of our approach are:

- assets constructed pre-1970 are excluded
- headworks assets are included regardless of ownership, and
- existing assets are valued using a Modern Engineering Equivalent Replacement Asset (MEERA) approach.

In its submission to the Issues Paper, Sydney Water proposed an alternative option, which was to:

- include all assets regardless of when they were commissioned

31 Central Coast Council submission to IPART Issues Paper, December 2017, p 8.
32 Hunter Water's submission to IPART Draft Report, August 2018, p 16.
33 Sydney Water's submission to IPART Draft Report, August 2018, p 18.

- change the methodology used for asset valuation for existing assets from MEERA to the disaggregated RAB values, or the Depreciated Optimised Replacement Cost (DORC) values if the disaggregated RAB values are not available
- use a single discount rate – the prevailing WACC – for all assets, and
- use its Cost Allocation Methodology (CAM) to apportion the costs of assets between DSP areas and to establish the disaggregated RAB values of assets.[34]

In the following section, we discuss the views of Sydney Water and other stakeholders.

We have maintained the incremental cost approach to include both existing and new assets

In our Issues Paper, we sought comment on our preliminary position to maintain the 'incremental cost' approach to capital costs, which includes both existing and new assets in the capital charge. We considered that using a purely forward-looking (or marginal cost) approach to capital costs could give the incumbent an advantage at the expense of dynamic efficiency gains associated with new entrants and competition for providing water and wastewater services to new development areas.[35] Box 2.2 below outlines what we mean by 'incremental cost' and 'marginal cost', and the differences between these two approaches.

In response to our Issues Paper and Draft Report, Sydney Water[36], Central Coast Council[37] and Hunter Water[38] supported our current incremental cost approach for new connections to new developments. We note that the NSW Local Water Utilities (LWUs) apply a similar approach, levying developer charges under DPI Water's guidelines.[39]

34 Sydney Water's submission to IPART Issues Paper, December 2017, pp 8-9, 19, 24-27.
35 IPART, *Review of developer charges and backlog sewerage charges for metropolitan water agencies – Issues Paper*, October 2017, p 16.
36 Sydney Water's submission to IPART Draft Report, August 2018, p 25.
37 Central Coast Council's submission to IPART Issues Paper, December 2017, p 5.
38 Hunter Water submission to IPART Draft Report, August 2018, p 7.
39 NSW Department of Primary Industries, *2016 Developer Charges Guidelines for Water Supply, Sewerage and Stormwater,* at http://www.water.nsw.gov.au/__data/assets/pdf_file/0011/663698/2016-Developer-Charges-Guidelines.pdf, 2016, accessed on 18 August 2017.

Box 2.2 'Incremental' and 'marginal' approach to capital costs

In our Issues Paper we introduced the concepts of **'incremental cost'** and **'marginal cost'** approaches to the assets included in the calculation of the capital charge component.

- We have termed the approach of including existing assets (in addition to new assets) into the capital charge an **'incremental cost'** approach.
  - New customers make an upfront contribution to the costs of existing assets, to the extent that these assets form part of the servicing solution for the new development.
  - New customers thus make a greater contribution to the costs of existing assets than they would if these costs were only reflected in periodic prices.
- Alternatively, developer charges can be forward-looking and cover only the capital expenditure incurred on new assets in providing service to a particular development. We have termed this approach a **'marginal cost'** approach.
  - New developments would not make an upfront contribution the costs of existing assets, which would be recovered over time from periodic charges.
  - A marginal cost approach would lead to lower developer charges where there is excess existing infrastructure capacity.
  - While providing a short-term signal for the lowest cost connection, the marginal cost approach may put new entrants at a competitive disadvantage to incumbent utilities.

Source: IPART, *Review of developer charges and backlog sewerage charges for metropolitan water agencies – Issues Paper*, October 2017, p 16.

We have maintained the current list of exceptions to asset inclusion

Under the 2000 Determination, the main criterion for including an asset in a DSP is a nexus (ie, close connection) between the development and the assets. All assets or parts of assets that service a DSP area must be included in the calculation of a developer charge, **except**:

- that part of an asset provided for a reason other than to service growth (eg, to accommodate amendments to environmental legislation)
- that part of an asset that services other DSP areas (ie, assets must be apportioned between DSP areas)
- the capacity of an asset that was made available by changes in land use patterns, or by changes in average demand
- any asset that was unreasonably oversized relative to system and capacity requirements, based on available demographic data at the time it was commissioned
- any asset commissioned before 1 January 1970
- assets funded by developers and transferred free of charge to the agency, and
- assets or parts of assets without a nexus to the development they are intended to serve.[40]

Pre-1970 assets continue to be excluded from the capital costs

In our first determination of developer charges in 1995, we argued that it was not appropriate to charge developers for some assets because:

40 IPART, *Sydney Water Corporation, Hunter Water Corporation, Gosford City Council, Wyong Shire Council Developer Charges from 1 October 2000, Report No. 9, 2000*, September 2000, pp 15-16.

- a change in land use may mean the service capacity of existing assets far exceeds their use, and
- assets such as very old dams continue to contribute service capacity long after their construction costs have or should have been recovered.[41]

Excess capacity will most commonly exist in infill development of long-established areas. From the outset, our methodology was designed to generate price signals in favour of infill development, as against continued urban sprawl (ie, in favour of areas where there is excess capacity).[42]

In our 2000 Determination, we continued to exclude pre-1970 assets from the capital charge calculation. However, we clarified that the cost of augmenting a pre-1970 asset could be included (but not the cost of the whole asset).[43]

In our Draft Report, we proposed to continue excluding pre-1970 assets, on the basis of the following:

- any revenues from servicing new developments more than 30 years into the future would have been heavily discounted and would have been unlikely to have affected past decisions to build the asset or its size
- any legacy assets unreasonably oversized at the time of commissioning or funded by third parties, and their holding costs, should not be included in an efficient capital charge (this is one of the key reasons for drawing a line-in-the-sand and establishing RABs based on discounted cash flows in 2000)
- it would be difficult to establish the nexus between an investment decision made before 1970 and the contemporary development, and
- incorporating such assets in a consistent way would increase data requirements, both in terms of capital costs and the historical ETs.[44]

Central Coast Council[45] and Hunter Water[46] supported the current exclusion of pre-1970 assets.

Sydney Water disagreed with our proposal to exclude pre-1970 assets. Sydney Water proposed that all assets with a nexus to development should be included in the charge calculation.[47] Sydney Water provided the following reasons for its position:

41 Government Pricing Tribunal, *Sydney Water Corporation Prices of Developer Charges for Water, Sewerage and Drainage Services, Report No 9*, December 1995, p 7.
42 Government Pricing Tribunal, *Sydney Water Corporation Prices of Developer Charges for Water, Sewerage and Drainage Services, Report No 9*, December 1995, p 7.
43 IPART, *Sydney Water Corporation, Hunter Water Corporation, Gosford City Council, Wyong Shire Council Developer Charges from 1 October 2000, Report No. 9, 2000*, September 2000, p 16.
44 IPART, *Maximum prices to connect, extend or upgrade a service for metropolitan water agencies – Draft Report*, June 2018, p 24.
45 Central Coast Council's submission to IPART Issues Paper, December 2017, p 5.
46 Hunter Water's submission to IPART Issues Paper, December 2017 p 36; Hunter Water's submission to IPART Draft Report, August 2018, p 7.
47 Sydney Water's submission to IPART Draft Report, August 2018, p 9.

- Assets commissioned before 1970 would have been sized for growth that is now occurring. Many assets have an economic life of 100 years, and assets constructed today under Sydney Water's growth programme are recovered over a similar timeframe in postage stamp prices.
- The decision will lead to inequitable cost sharing between existing customers and new connection charges. The capacity available in major trunk assets constructed prior to 1970 should not be provided for free to new connections. The reason that some infrastructure has capacity to service growth, yet may already have been paid for, is that no forecast of growth, demand and cost-recovery is completely accurate.
- Existing customers bear the risk, and increased bills, when a forecast leads to under recovery of the cost to service growth. Therefore, it is equitable for these customers to benefit when a forecast leads to the cost of an asset that has capacity to service further growth has already been fully recovered.
- The IPART methodology is inconsistent with the approach used to calculate customer bills. Sydney Water proposed to use its draft cost allocation methodology to determine notional RAB values for all existing assets. A non-zero RAB value would imply that all costs have not yet been recovered.[48]

Further to the reasons from our Draft Report set out above, and in response to the issues raised by Sydney Water in its submission to the Draft Report, we note the following reasons for maintaining our decision to exclude pre-1970 assets:

- We remain of the view that establishing a nexus between very old assets (including those with long economic lives) and new development is difficult. We also consider that the administrative costs of doing so would outweigh the benefits of the relatively minor impact on cost sharing between new and existing customers from including these assets in developer charges. Both new and existing customers will continue to contribute to the ongoing recovery of any residual costs of pre-1970 assets through periodic charges. As such, we also note that it is not the case that the capacity in existing assets is provided to new customers for free, as suggested by Sydney Water.
- Under our 'incremental cost' approach to establishing developer charges, new customers will cover at least the cost of the new infrastructure required to service their development, and make an upfront contribution towards the costs of existing capacity. Under this framework, and given our decision to set the developer charge at zero if the calculated price is negative (discussed later in this chapter), existing customers will always benefit from new customers connecting to the network. We consider that this framework appropriately shares the risks of investments in capacity to service growth between new and existing customers.
- We do not consider that it is necessary for the methodology for calculating developer charges to be consistent with the approach to setting periodic prices. As set out in Box 2.3 below, revenue collected from developer charges is deducted from the RAB and results in lower periodic prices.

48 Sydney Water's submission to IPART Draft Report, August 2018, pp 9, 17.

- It is not necessarily the case that a non-zero RAB under the approach proposed by Sydney Water would mean that the cost of the asset has not been fully recovered, as there could be a number of factors influencing whether or not to allocate a RAB value (or a zero RAB value) to a particular asset.

Further discussion of the use of a RAB-based or MEERA-based approach to calculating the capital charge is set out below.

Consideration of a '30-year rolling window' for asset inclusion

In our Issues Paper, we also consulted on whether there were reasons to modify the period of exclusion of assets from the current 'pre-1970 assets' to those commissioned 30 years prior to the time of the DSP review.

In its submission to the Issues Paper, Hunter Water supported limiting the period of inclusion of post-1970 to 30 years back from the time of the DSP review (ie, a 30-year rolling window). Hunter Water argued that such an approach would shift the weight in the capital charge formula from existing assets towards forward-looking assets. In its submission to the Draft Report, Hunter Water accepted the draft decision, but suggested that IPART review this issue in any future reviews given the passage of time since 1970.[49]

Central Coast Council supported the current inclusion period, considering the approach appropriate.[50] Central Coast Council estimated that the current methodology, which excludes pre-1970 assets, excludes about 25% of its asset base. If the period of inclusion was reduced to 30 years, Central Coast Council estimated that it would exclude a little over 50% of its asset base from the calculation of developer charges.[51]

We have decided to maintain the current approach. We note that as asset lives are generally longer than 30 years, a 30-year rolling window would exclude a large share of assets still servicing developments that are not yet fully funded. However, we agree with Hunter Water that it may be appropriate to review this issue again in future reviews.

We have maintained not limiting the period of inclusion of future assets

The 2000 methodology does not have a cut-off date for including assets yet to be commissioned to calculate developer charges.

In our Issues Paper, we sought comment on possible reasons to limit the inclusion period for future assets and, if so, the appropriate periods (eg, 5 or 10 years).

In response to the Issues Paper:

- Central Coast Council proposed a rolling 10-year period for future capital costs, while supporting a 30-year horizon for demand projections.[52]

49 Hunter Water's submission to IPART Draft Report, August 2018, p 7.
50 Central Coast Council's submission to IPART Issues Paper, December 2017, p 5.
51 IPART, Developer Charges public hearing transcript, 6 March 2018, p 10.
52 Central Coast Council's submission to IPART Issues Paper, December 2017, p 6.

- Hunter Water also supported a period of 10 years for including uncommissioned assets in DSPs when they are supported by a growth plan or other appropriate documentation.[53]
- Sydney Water supported not limiting the period for including future assets. It stated that incremental costs should be calculated over a period that aligns with its growth planning or asset utilisation horizons (currently 30 years). Sydney Water's view is that where prudence and efficiency can be demonstrated, any future costs should be included in the calculation.[54]

In our Draft Report, we proposed to maintain this approach on the basis that developers have the ability to scrutinise water utilities' forecasts, DSPs are regularly reviewed, and a dispute resolution process is in place if a developer and water utility disagree on the level of charges.[55]

In response to the Draft Report, Sydney Water[56] and Hunter Water[57] agreed with the approach. Hunter Water also suggested that IPART include some guidance on the evidence that would be required to include capital projects beyond a ten-year planning horizon.[58]

As noted in our Draft Report, the accuracy of capital forecasts diminishes with longer forecast horizons and, in practice, utilities have used 5 to 10-year forecasts for capital expenditure where forecasts are reasonably robust. It is a matter for the water utilities to demonstrate that any forecasts of expenditure used to calculate developer charges are prudent and efficient. Similar to when we undertake a review of prices for a water utility, we would expect forecast expenditure to service growth to be supported by appropriate forecasting models, consideration of geographical differences, identification of network constraints, and regular reviews of actual versus forecast growth.[59]

2.4.3 Headworks are included regardless of ownership or funding arrangements

Our decision is to:

4 Maintain our current approach to including headworks assets regardless of their ownership or funding arrangements.

The 2000 and 2013 Determinations include the cost of headworks infrastructure attributable to a new development area in the calculation of developer charges.[60] Hunter Water and

53 Hunter Water's submission to IPART Issues Paper, December 2017, p 36.
54 Sydney Water's submission to IPART Issues Paper, December 2017, p 22.
55 IPART, *Maximum prices to connect, extend or upgrade a service for metropolitan water agencies – Draft Report*, June 2018, pp 25-26.
56 Sydney Water's submission to IPART Draft Report, August 2018, p 9.
57 Hunter Water's submission to IPART Draft Report, August 2018, p 7.
58 Hunter Water's submission to IPART Draft Report, August 2018, p 7.
59 Jacobs, *Hunter Water Expenditure Review*, February 2016, pp 29-30.
60 The term 'headworks' means significant assets at the end of water, sewerage and drainage systems that provide services to two or more DSP areas. Water headworks can include a system of dams, major storage reservoirs, major pumping stations and mains, water treatment works, sewage treatment plants, ocean outfalls and major mains.

Central Coast Council own their headworks and in their submission to the Issues Paper noted that they support including headworks costs in developer charges.[61]

Sydney Water does not own all of its headworks. When developer charges last applied in the Greater Sydney area, Sydney Water produced a separate DSP covering developer charges for headworks infrastructure.[62] Its other major works (such as water and sewerage pumping stations, service reservoirs, large water mains and sewer carriers), reticulation and lead-in works were covered under separate system or development-specific DSPs.

In its submission to the Issues Paper, Sydney Water noted that it supports including headworks in the calculation of developer charges in principle. Sydney Water agreed that there are advantages to specifying a separate headworks charge, to allow a like-for-like comparison of the costs of centralised and decentralised solutions.[63] However, Sydney Water also stated that it does not support the deduction of the headworks component of the developer charge from its RAB, if it does not own these headworks:

> If Sydney Water's developer charges recover a headworks component, there is the potential for the RAB to be over-deducted, as the capital costs related to that development were not incurred by Sydney Water, and the pass through of such headworks costs (from WaterNSW) would likely be captured under annual operating costs.[64]

Sydney Water also noted that it perceives advantages in maintaining the current situation of recovering headworks costs through postage stamp prices rather than a separate charge.[65]

In its submission to the Issues Paper, WaterNSW also opposed including headworks costs in Sydney Water's developer charges, as its total costs (both operating and capital) are passed through as an operating expenditure into Sydney Water's cost base and recovered through Sydney Water's prices.[66]

Stakeholders' comments appear to be based on the implicit assumption that Sydney Water must transfer funds to WaterNSW for the component of Sydney Water's developer charges associated with headworks owned by WaterNSW. In the following section, we demonstrate that this does not have to be the case.

When Sydney Water collects and keeps the headworks portion of the developer charge, its customers are compensated for carrying the spare capacity of the headworks that will service growth. This is the same treatment as that of Sydney Water's own assets. WaterNSW's efficient costs are not affected and are still subject to a cost pass-through.

We note that developer charges are currently set to zero. Hence, all growth expenditure – including headworks, other capital costs and any additional operating expenditure to service growth – is borne by the broader customer base (see Box 2.3 on the relationship between developer charges and periodic prices).

61 Hunter Water's submission to IPART Issues Paper, December 2017, p 36; Central Coast Council's submission to IPART Issues Paper, December 2017, p 6.
62 Sydney Water, *Development Servicing Plan – Developer Charges for Headworks Infrastructure*, 2001, p 7.
63 Sydney Water's submission to IPART Issues Paper, December 2017, p 22.
64 Sydney Water's submission to IPART Issues Paper, December 2017, p 23.
65 Sydney Water's submission to IPART Issues Paper, December 2017, p 23.
66 WaterNSW's submission to IPART Issues Paper, January 2018, p 1.

Box 2.3 What is the relationship between developer charges and periodic prices?

Full cost recovery is one of our key pricing principles

- The total efficient cost of providing a new development with water-related services should be recovered through a combination of periodic charges and developer charges.
- The two pricing processes are linked, so that for the same level of cost recovery, higher developer charges will result in lower periodic prices (and vice versa).

IPART sets periodic prices using the building block approach

- We determine a water utility's overall revenue requirement, which consists of efficient operating costs and a return on, and of, efficient capital costs. The revenue requirement is recovered from customers through usage and fixed periodic charges.
- Periodic prices are linked to developer charges through the Regulatory Asset Base (RAB) – the value of the water utility's assets on which it earns allowances for a return on and of its assets through periodic prices. Under IPART's approach to periodic price setting, all capital expenditure (for the existing system and for growth) is added to the RAB. However, the RAB is adjusted downwards over time by the amount of developer charges revenue received from developers. Since periodic prices depend on the size of the RAB, the collection of developer charges by the water utilities results in lower periodic prices in a future period (holding average operating costs constant).

Water utilities set developer charges using IPART's determined methodology

- The developer charges methodology calculates the value of the capital costs per ET of assets serving a particular development area, less the net operating surplus water agencies earn from periodic charges from the customers or ETs in the development area. The operating surplus is calculated from periodic charge revenue and operating costs. This avoids 'double dipping' for the capital charge component of the developer charge.
- The calculation of developer charges requires a value for periodic prices to calculate the operating surplus and, in turn, periodic prices require a value for developer charges to calculate the developer charges revenue to deduct from the RAB.

Source: IPART analysis.

How headworks charges work in practice

In making the 2000 Determination, we decided that all headworks should be included in the DSP, regardless of whether they are owned by the agency. We reached this decision because excluding the Sydney Catchment Authority's[67] assets from Sydney Water's charges would distort the latter's charges in relation to other agencies. Hunter Water and Central Coast Council included the costs of headworks in calculating their developer charges.[68] The same rationale applies today.

Before developer charges were set to zero in 2008, Sydney Water recovered its WaterNSW costs through a combination of developer charges and periodic prices. At that time, the then Sydney Catchment Authority's costs were also passed through into Sydney Water's prices.[69]

67 The former Sydney Catchment Authority is now part of WaterNSW.

68 IPART, *Sydney Water Corporation, Hunter Water Corporation, Gosford City Council, Wyong Shire Council Developer Charges from 1 October 2000, Report No. 9, 2000*, September 2000, p 16.

69 IPART, *Review of prices for Sydney Water Corporation's water, sewerage, stormwater and other services from 1 July 2008*, Determination No 1 2008, and Final Report, June 2008.

We note that including headworks costs in Sydney Water's developer charges would not affect the regulatory cost pass-through of WaterNSW's costs into Sydney Water's prices. When Sydney Water levies developer charges for headworks costs, at the next review of Sydney Water's periodic prices we would reduce Sydney Water's RAB by the amount of its developer charges revenue. This would result, all other things equal, in lower periodic prices to Sydney Water customers in subsequent price periods. WaterNSW would stay indifferent as its costs and revenues are not affected.

Sydney Water would also be indifferent about whether it receives a new development's share of headworks costs as an upfront capital charge (with a lower RAB and hence lower periodic prices in future periods) or as higher periodic prices (due to a higher RAB).[70]

Box 2.4 presents an example of how the headworks charges for WaterNSW's assets would work in calculating Sydney Water's developer charges.

In its response to the Draft Report, Sydney Water noted that it agreed with our proposed approach in principle, but raised concerns that the administrative costs to include WaterNSW water headworks charges may be higher than the potential benefits considering that headworks charges are likely to be the same across all water systems.[71]

Sydney Water's concerns about the extent of benefits from including headworks assets appear to be based on concerns about the impact on locational signals. All customers receive services from the same headworks assets, and therefore there would not be any impact on the difference in developer charges between DSP areas. However, we note that:

- Locational signals are still provided by ensuring that developer charges are calculated consistently across service areas (eg, between Sydney and the Hunter region)
- In addition to providing locational signals, the purpose of developer charges is to equitably share infrastructure costs between existing and new customers, and promote competition for supply to new developments.

70 In this discussion, we ignore the effects on timing of cash flows, tax allowances and the accounting positions of these utilities. IPART, *Review of developer charges and backlog sewerage charges for metropolitan water agencies – Issues Paper*, October 2017, pp 18-19.

71 Sydney Water's submission to IPART Draft Report, August 2018, p 10.

Box 2.4 Treatment of headworks under our methodology – why ownership does not matter

There are two approaches to dealing with headworks assets in a DSP:

1. Treating headworks assets **like any other asset** included in a DSP, ie:

- **assign a portion** of the headworks to a DSP, based on expected utilisation
- calculate the **capital charge** (that includes headworks in K_1 or K_2)
- calculate the **reduction amount** *R-C*, where:
  - postage stamp **revenue** *R* includes, among other things, the efficient capital and operating costs of the headworks (either directly, if owned by the utility, or via a cost pass-through if owned by someone else)
  - location-specific **operating costs** *C* include the operating costs of headworks and other (non-headworks) assets. To avoid double-counting, the headworks operating costs in the formula should be pure operating costs net of capital costs. Thus,
    - if system average headworks operating costs and the location-specific headworks operating costs are the same, they cancel each other out in calculating *R-C*
    - any difference between system average and location-specific headworks operating costs is added to the developer charge, on an NPV basis. This is the same treatment of excess operating costs, for headworks and non-headworks assets alike, and
- calculate the resulting **developer charge** for a DSP.

2. Calculating **a separate headworks capital charge** per ET, in a 'headworks DSP', to be added to the capital charge calculated for a DSP which includes relevant non-headworks assets. In this case:

- to avoid double-counting, the 'headworks DSP' should calculate the capital charge only, ignoring the reduction amount
- the headworks capital charge should be added to the capital charge for the non-headworks assets in those DSPs that share these headworks, and
- the reduction amount *R-C* should be applied fully at the (non-headworks) DSP level, as discussed above.

Source: IPART analysis.

Treatment of finance leases and other funding arrangements under our methodology

Central Coast Council noted in its submission to the Issues Paper that the current methodology does not address developer charges for infrastructure services funded under Build Own Operate (BOO) and Build Own Operate Transfer (BOOT) arrangements. Central Coast Council proposed that the methodology address this issue.[72]

Funding under BOO and BOOT arrangements can appear as operating or finance leases on utilities' balance sheets. For example, Sydney Water has contractual arrangements with the owners or operators of water filtration plants at Prospect, Macarthur, Illawarra and Woronora for the filtration of bulk water.[73] Lease payments can be treated as operating expenditure or capitalised, depending on the accounting treatment of the financial arrangements.

72 Central Coast Council's submission to IPART Issues Paper, December 2017, p 6.
73 *Sydney Water Annual Report 2016-17*, p 103.

In our 2016 periodic review of Sydney Water's prices, instead of passing through finance lease payments as operating expenditure, we decided to value Sydney Water's finance leased assets and add this value to the RAB.[74] Our operating cost allowance excluded any capital and interest payments associated with these finance leases; thus, they reflected pure operating costs.[75] Including the residual value of the assets in the RAB means that Sydney Water can earn an appropriate rate of return on the asset, and that it has a depreciation allowance that reflects the economic value and life of the asset.[76] Our approach in our 2016 Determination for Sydney Water reflected our view that assets used to provide a monopoly service should be treated consistently, regardless of their ownership or funding arrangements.

Under our developer charges methodology, assets provided under finance lease arrangements should be treated in a similar way to assets owned by a utility. The return on and of these assets and the (system average) efficient operating costs should be included in periodic prices. Location-specific operating costs in a DSP area should include the pure operating costs of using these assets to service the area (similar to the example presented in Box 2.4). The calculation of the capital charge component should include the efficient capital cost of the assets servicing the development under the finance lease arrangements. Assets are to be valued at MEERA, as discussed in the following section.

Expenditure under operating leases is currently treated as an operating cost, which would be netted out in the reduction amount.

We understand that under Australian Accounting Standard AASB 16 'Leases,' effective from 1 January 2019, the accounting treatment of operating lease payments will change. We will consider if this affects our current regulatory treatment of operating leases at the next periodic price reviews.

Similarly, we will decide how to treat a particular BOO or BOOT arrangement in a periodic price review. If we decide to treat it as a finance lease, it will be treated like any other asset for the developer charge calculation.

Under our developer charges methodology, the current treatment of these funding arrangements can be summarised as follows:

- For assets under a finance lease:
  - the assets are included in the capital charge
  - the pure operating costs net of any capital costs, *C*, are used to calculate the reduction amount *R*-*C*, and
  - the total costs of these assets are recovered through a combination of periodic prices and developer charges.
- For assets under an operating lease:
  - the assets are not included in the capital charge

74 IPART, *Review of prices for Sydney Water Corporation from 1 July 2016 to 30 June 2020 – Final Report*, June 2016, p 121.
75 IPART, *Review of prices for Sydney Water Corporation from 1 July 2016 to 30 June 2020 – Final Report*, June 2016, p 73.
76 IPART, *Review of prices for Sydney Water Corporation from 1 July 2016 to 30 June 2020 – Final Report*, June 2016, p 122.

- the efficient costs of the lease have been allowed to pass through into postage stamp prices, *R*
- the costs under an operating lease are included in *C* as a location-specific operating cost, and
- these costs net out in the reduction amount *R-C*, provided that location-specific costs are not substantially different from average costs.

Sydney Desalination Plant's assets will not be treated as headworks

Our decision is to:

5 Exclude the Sydney Desalination Plant's assets from headworks assets for Sydney Water.

In our Issues Paper, we noted that the assets of the Sydney Desalination Plant (SDP) could be treated the same way as WaterNSW's headworks assets serving Greater Sydney. However, SDP's primary role is drought response, whereas WaterNSW operates at all times and caters for future growth.[77] Given SDP's role in responding to drought rather than being a permanent water supply source, we consider that under current operating rules, SDP's assets would not pass the 'nexus to development' test.

Because SDP's costs are included as pure operating costs in both the revenue and cost components of the reduction amount in the developer charges formula, they cancel each other out and do not affect the resulting developer charges for Sydney Water.

Hypothetically, if SDP were a permanent water supply source, its costs would need to be treated similarly to other headworks costs.

Submissions to our Draft Report from Hunter Water[78] and Sydney Water[79] supported our decision.

2.4.4 Shared assets continue to be apportioned between DSP areas using ETs

Our decision is to:

6 Maintain our current approach to apportion shared assets between DSP areas using expected utilisation based on ETs.

Assets or parts of assets must be apportioned so that only the costs attributable to a particular DSP area are recovered from that area's developer charge. Apportionment is needed where:

- an asset is built for a dual purpose; for example, to meet higher environmental standards and to service growth areas
- an asset is replaced and the new asset services both existing and new developments, and
- an asset services more than one DSP area.

77 IPART, *Review of developer charges and backlog sewerage charges for metropolitan water agencies – Issues Paper*, October 2017, pp 18-19.
78 Hunter Water's submission to IPART Draft Report, August 2018, p 16.
79 Sydney Water's submission to IPART Draft Report, August 2018, pp 10, 18.

Under our 2000 methodology, the capital charge for an asset that services several DSP areas should be apportioned to each DSP area based on its share of total expected utilisation of this asset. Expected utilisation is based on the forecast ETs and average consumption in the relevant DSP areas.

In their submissions, Hunter Water[80] and Central Coast Council[81] supported continuing to apportion assets across DSPs, using the ET measure. Central Coast Council also noted that it would prefer that, as far as practicable, a standard definition of ET is used. However, it acknowledged that developing a standard definition and having a third party keep it up to date would be problematic.[82]

In its submission to the Issues Paper, Sydney Water proposed that we consider not prescribing the unit of measurement for apportioning costs, and instead adopt a principles-based approach, giving utilities the flexibility to choose what is appropriate for their business, eg, a cost allocation methodology (CAM). Sydney Water considered that this would give developers and other stakeholders sufficient information to assess the reasonableness of the developer charge in each DSP area.[83]

In our Draft Report, we have decided not to accept Sydney Water's alternative approach for the following reasons:

- This approach would impose additional data requirements in terms of developing a CAM. Sydney Water is currently more progressed than other utilities in this area.
- This approach would not be suitable for Central Coast Council or Hunter Water, as they do not have a similar CAM. We note that Central Coast Council is the only metropolitan utility currently levying developer charges for water and sewerage services. Hunter Water and Central Coast Council supported the current methodology, with amendments, which are discussed below.
- We note that Sydney Water does not currently have a CAM for all services in its area of operations.

Given the lack of uniformly better alternatives and the predominant stakeholder support for the current apportionment of assets based on expected utilisation by ETs, we made a draft decision to maintain the current approach.

Submissions to our Draft Report from Hunter Water[84] and Sydney Water[85] supported our decision.

Further assessment of the measure and definition of ETs is set out in Section 2.7 below.

80 Hunter Water's submission to IPART Issues Paper, December 2017, p 36; Hunter Water's submission to IPART Draft Report, August 2018, p 16.
81 Central Coast Council's submission to IPART Issues Paper, December 2017, p 6.
82 Central Coast Council's submission to IPART Issues Paper, December 2017, p 6.
83 Sydney Water's submission to IPART Issues Paper, December 2017, pp 9, 24-25.
84 Hunter Water's submission to IPART Draft Report, August 2018, p 16.
85 Sydney Water's submission to IPART Draft Report, August 2018, pp 10, 16.

2.4.5 MEERA valuation of assets is used to calculate capital charges

Our decision is to:

7 Maintain our current approach to valuing assets already commissioned on a Modern Engineering Equivalent Replacement Asset (MEERA) basis, and assets yet to be commissioned on an estimated efficient costs basis.

Under our 2000 Determination, assets already commissioned (both pre-1996 and post-1996) must be valued on a MEERA basis. Future assets are valued on an estimated efficient costs basis – which is effectively MEERA.

In our Issues Paper, we recognised that periodic revaluations of assets to reflect MEERA values would lead to higher developer charges than using other measures, such as depreciated optimised replacement costs (DORC).[86] As a result, when the amount received via developer charges is deducted from the water utility's RAB, the reduction could exceed the equivalent share of the current regulatory value of existing assets. The consequence would be lower future periodic prices for existing customers (see Box 2.3 above for an outline of the relationship between developer charges and periodic charges). The Issues Paper asked if it was still appropriate to use MEERA to value existing assets.

Hunter Water supported continuing to use MEERA to value assets, which would ensure that the cost of assets covered by developer charges reflects the most efficient asset combination to provide the service.[87] Central Coast Council also supported using MEERA to value assets.[88]

In its submission to the Issues Paper, Sydney Water proposed an alternative approach, comprising:

- using disaggregated RAB values for existing assets, if available, to ensure consistency with periodic charges, and so that developers do not pay more than their fair share of the costs to service their development
- using the DORC when disaggregated RAB values are not available, and
- using its CAM to estimate the cost contribution for existing assets in a developer charge and to apportion assets to DSPs.[89]

Sydney Water is required to develop a CAM for its wastewater systems declared under the *Water Industry Competition Act 2006* (the WIC Act). We understand that its CAM, once finalised, would allow the estimation of notional RAB values for all existing wastewater assets. Sydney Water suggested that these estimated RAB values be used in the developer charges calculation, replacing existing methods for including existing assets and ensuring that developers pay their fair share of costs.[90]

86 IPART, *Review of developer charges and backlog sewerage charges for metropolitan water agencies – Issues Paper*, October 2017, p 20.
87 Hunter Water's submission to IPART Issues Paper, December 2017, p 37; Hunter Water's submission to IPART Draft Report, August 2018, p 16.
88 Central Coast Council's submission to IPART Issues Paper, December 2017, p 7.
89 Sydney Water's submission to IPART Issues Paper, December 2017, pp 9, 24-25.
90 Sydney Water's submission to IPART Issues Paper, December 2017, p 15.

Summary of our draft decision

In our Draft Report, we noted that we consider that departing from MEERA valuations and calculating capital charges using regulatory values would not be desirable from a competition perspective. We observed that an incumbent's lower developer charges generated by RAB valuations may make it more difficult for a potential competitor to enter the market to service a new development (eg, a *Water Industry Competition Act 2006* (WICA) licensee).

In our submission to the Harper Review of competition policy, we stated that the ability of large, government-owned incumbent water utilities to cross-subsidise their provision of services to new development areas impedes more extensive competition for water markets.[91] Removing developer charges has created an additional barrier to competitive entry in areas of postage stamp pricing.[92] In this case, the lack of developer charges generates a cross - subsidy from existing to new customers.

We therefore made a draft decision not to accept Sydney Water's alternative approach because setting capital charges based on RAB values might have negative implications for competition to supply new developments. We considered MEERA to be an appropriate method for valuing existing assets because it:

- ensures that developer charges encourage competition by providing an even footing for alternative servicing solutions (eg, by WICA licensees)
- enables developer charges to be compared across utilities, and
- is used by NSW local water utilities in calculating developer charges, with reference values available for water, sewerage and stormwater infrastructure.[93]

We also noted that compared to other utilities, Sydney Water is more advanced in developing its CAM. We understand that Sydney Water's CAM is designed to bridge the disconnect between the RAB (which has been set at a line-in-the-sand valuation) and individual assets listed in its Fixed Asset Register (which we understand are subject to periodic revaluation on a MEERA basis). We also understand that Sydney Water has not developed a CAM for all of its services and geographic locations at this stage.

Sydney Water's submission to our Draft Report

In its submission to the Draft Report, Sydney Water reiterated its position from its submission to the Issues Paper:

> Disaggregated RAB values should be used for existing assets, if available, to ensure consistency with periodic charges, and that developers do not pay more than their fair share of costs to service their development. Where disaggregated RAB values are not available, depreciated optimised replacement cost (DORC) should be used.[94]

91 IPART, *Opportunities for further reform: IPART's submission to the Competition Policy review – Issues Paper*, June 2014, p 15.
92 IPART, *Opportunities for further reform: IPART's submission to the Competition Policy review – Issues Paper*, June 2014, p 18.
93 Department of Primary Industries, NSW Office of Water, *NSW Reference Rates Manual - Valuation of Water Supply, Sewerage and Stormwater Assets*, June 2014.
94 Sydney Water's submission to IPART Draft Report, August 2018, p 10.

Sydney Water also stated that:

- The use of MEERA valuation (rather than RAB or DORC) prioritises promotion of competition over efficient servicing solutions. This will create upward pressure on customer bills.[95]
- IPART's draft decision to only allow one method for the calculation of developer charges results in a significant disincentive for utilities to progress their cost allocation capability.[96]

Sydney Water recommended that the methodology and approach be reviewed before any re-introduction of non-zero developer charges.[97]

We have maintained our decision to use MEERA valuation for existing assets

After reviewing Sydney Water's submission to the Draft Report and further consideration of the issues, we remain of the view that, for this determination, it is appropriate to value existing (post-1970) assets at MEERA values, for the reasons outlined below.

Under a retail minus (plus net facilitation costs) approach to wholesale (and access) pricing, a wholesale customer servicing a new release area would effectively pay RAB values for Sydney Water's existing assets plus the costs of new assets required to service it and the new development. This is equivalent to the RAB value approach for existing assets proposed by Sydney Water. Therefore, in a sense, the RAB value approach would put Sydney Water and a wholesale customer on an equal footing when seeking to service a developer in a new development area.

However, in the event a new entrant is not a wholesale customer – ie, they are not connected to Sydney Water's network – the use of RAB values to set developer charges would likely result in prices that are lower than a new entrant could sustain. This is because the line-in-the-sand approach to setting the RABs of the water utilities resulted in RAB values that are lower than the book values of the assets.

Such a new entrant could theoretically compete with an incumbent if developer charges were set using DORC values; just as in any capital-intensive industry. However, given the significant scale of the incumbent water utilities, the extent to which they rely on legacy assets to deliver services, and regulated prices which are adjusted each period to reflect depreciation, using DORC values would likely restrict competition to new entrants large enough to sustain prices below those that would provide a return on new, or nearly new, assets for an extended period of time.

Having said this, and in response to Sydney Water's comment that the use of MEERA valuation prioritises competition over efficient servicing solutions, it is important to note that not all existing assets are valued at MEERA in the developer charges methodology. Relative to valuing all existing assets at MEERA, the exclusion of pre-1970 assets and the use of a lower discount rate for pre-1996 assets, reduces the difference between the current MEERA approach and the RAB or DORC values approaches.

95 Sydney Water's submission to IPART Draft Report, August 2018, p 18.
96 Sydney Water's submission to IPART Draft Report, August 2018, p 17.
97 Sydney Water's submission to IPART Draft Report, August 2018, p 16.

Regardless, we acknowledge that there may be some merit in setting charges based on RAB values (or DORC values). For example, it could:

- Improve allocative and productive efficiency, by basing developer charges on the costs to the water utility of delivering services. However, this would need to be considered against the potential impacts on competition and hence dynamic efficiency (as discussed above).
- Improve the ability of IPART, and developers, to verify the level of developer charges, as the value of assets used to calculate charges would equate to the RAB. However, this would only apply where RAB values where used, not DORC values.
- Simplify some components of the calculation of developer charges, by removing the requirement to adopt different discount rates for assets constructed in different periods and exclude pre-1970 assets. However, the need for a robust CAM and the inclusion of all assets might increase complexity.
- Provide impetus to the utilities to assign regulatory values to their assets by allocating their RABs, which (subject to how they undertook this) could be useful for wholesale/access pricing, the treatment of asset disposals and component costing.

We are also mindful that the utilities' ability to implement a RAB approach in the near future is untested. Central Coast Council and Hunter Water both support a MEERA approach, and in our recent review of our asset disposals policy Hunter Water cited its difficulty in determining regulatory (RAB) values for its pre line-in-the-sand assets.[98]

We note Sydney Water's view that the water utilities should not be required to all use the same method for calculating developer charges, as this stifles innovation and reduces the incentive to develop cost allocation capabilities. However, we consider that it is important that developer charges be calculated on the same basis by the water utilities, so that they provide appropriate locational signals both within and across Service Areas.

We also see merit in being able to better understand the potential impact of moving to a RAB based approach (on both the level of charges and the administrative costs to the utilities), as well as the principles of RAB allocation. Our current work on reviewing Sydney Water's CAM and component costing are steps in this direction.

On the basis of the above, we have decided to maintain our current approach to estimating the capital component of developer charges for this determination. This reasoning also applies to our decision to apply different discount rates for pre-1996 and post-1996 assets, and to exclude pre-1970 assets. However, we recognise that there may be merit in alternative methods of asset valuation, including using RAB values, and agree that these should be considered again at the next review of developer charges. At that stage, Sydney Water should have an approved CAM in place and IPART would have done further work on component costing.

98 Hunter Water's response to IPART Asset Disposal Paper, November 2017, p 5.

2.5 We have maintained the current approach to the reduction amount

Our decision is to:

8 Maintain our current approach to the reduction amount component of developer charges, which relates to postage price stamp revenues and location-specific operating costs, for a period of 30 years.

The 'minus' component of the developer charges formula is the reduction amount, which is equal to the present value of the net operating position (net 'profits'), arising from the utility servicing the new development. The net operating position is the difference between the postage stamp retail price revenue and location-specific operating costs over a 30-year period, in present value terms.

When capital costs and the reduction amount are combined, the developer charge effectively equals, on an NPV basis:

- The total cost of connecting new customers (both capital and ongoing operating costs specific to the development area), **less**
- The utility's retail (postage stamp) price revenue from servicing the new customers.

That is, the higher the location-specific operating costs are, the higher the resulting developer charge.

We note that operating costs in a new development area could be higher or lower than system average costs. Previously, when DSPs were regularly reviewed – before the introduction of zero developer charges in Sydney and the Hunter region – the operating costs in a number of DSPs increased between reviews.[99] The higher developer charges reflected differences in either capital or operating costs, or both. This was in line with the objective of developer charges being cost-reflective, and therefore signalling the different costs of developing different areas.

Under the 2000 and 2013 Determinations, projected revenue depended on the prevailing retail price determination. When calculating the net operating position, water utilities use the relevant retail price applied to an average customer's consumption in the relevant customer class.

Sydney Water and Hunter Water supported the current approach to the reduction amount.[100] Central Coast Council also agreed in principle with the current approach, but suggested reducing the forecast period for future operating costs, capital costs and revenue to 10 years. Central Coast Council also argued that the operating cost allowance should include operating costs on assets free of charge (AFOC) and costs of bringing assets to legislated standards.[101]

In response to the issues raised in Central Coast Council's submission, we note that:

99 IPART, *Review of developer charges and backlog sewerage charges for metropolitan water agencies* – Issues Paper, October 2017, p 22.

100 Sydney Water's submission to IPART Issues Paper, December 2017, pp 26-27; Hunter Water's submission to IPART Issues Paper, December 2017, p 37.

101 Central Coast Council's submission to IPART Issues Paper, December 2017, p 7.

- Reducing the period for calculating the reduction amount would shift the developer charge away from the cost-reflective level. We consider that a 30-year period remains appropriate and is supported by other utilities.
- Our standard practice is to consider all efficient costs directly incurred by a regulated business in relation to AFOC when setting the notional revenue requirement using the building block approach. Operating costs related to AFOC would be reflected in the postage stamp price revenue and/or location-specific operating costs in the DSP area.
- Any part of an asset provided for a reason other than servicing growth (eg, to accommodate changes in legislated standards) is excluded from the calculation for developer charges. A nexus to the development cannot be established in this case.[102]

2.6 We have maintained the differential application of discount rates

Our decision is to:

9 Maintain the current differential application of discount rates to pre-1996 and post-1996 assets.

10 Maintain the discount rates for pre-1996 assets at:

- the real pre-tax rate of 3% for Sydney Water and Hunter Water, and
- the real pre-tax rate of 0% for Central Coast Council.

11 Update the discount rates for post-1996 assets and for the reduction amount to the utility's real pre-tax WACC referred to in the Final Report accompanying the prevailing periodic price determination.

In the developer charges methodology, discount rates are used to convert past and future costs and revenues into current values.

Under the 2000 Determination, the hard-coded discount rates for NPV calculations were set at:

- 3% for pre-1996 assets for Sydney Water and Hunter Water
- 0% for pre-1996 assets for the former Gosford City Council and Wyong Shire Council
- 7% for post-1996 assets for all utilities, and
- 7% for calculating the present value of the expected net revenues and costs.

The levels under the 2000 Determination were chosen for the following reasons:

- At the time, we decided that the utilities did not expect a full commercial return from developer charges before we introduced our methodology in 1996.[103]

102 However, any future asset constructed to service growth, would need to be designed to meet the changed legislated standards to service that growth. As such, assets to service growth that are yet to be commissioned would be valued on the basis that they would meet the new standards.

103 The real discount rate on future expenditures and benefits was 9%, compared to the rate of 3% applied to past expenditures. See Government Pricing Tribunal (GPT), *Sydney Water Corporation Prices of Developer Charges for Water, Sewerage and Drainage Services, Report No 9*, December 1995, p 7.

- The 7% real pre-tax discount rate for post-1996 assets reflected a commercial return in 2000.

In 2013, we replaced part of the 2000 Determination for both Gosford City Council and Wyong Shire Council (now Central Coast Council).[104]

We decided to:

- keep the real discount rate for pre-1996 assets for the Councils unchanged at 0%
- update the real discount rate for post-1996 assets from 7% to the Councils' pre-tax WACC referred to in the Final Report accompanying the prevailing periodic price determination[105], and
- update the real discount rate for the expected net revenues and costs from 7% to the Councils' pre-tax WACC referred to in the Final Report accompanying the prevailing periodic price determinations.[106]

In our Issues Paper, we sought comment on whether the discount rates for Sydney Water and Hunter Water should be reviewed in line with the changes we made in the 2013 Determination of developer charges for the Councils. That is, rather than hard-coded discount rates, we proposed using the real pre-tax WACC in the Final Report accompanying each utility's prevailing periodic price determination.

We consider the WACC to be an appropriate discount rate. We now use a real post-tax WACC in our periodic price determinations because we explicitly provide a tax allowance for the utilities we regulate when calculating their notional revenue requirement.

Developer charges are calculated on a pre-tax basis[107] and should be discounted at the pre-tax WACC. We consider it appropriate to apply the real pre-tax WACC established in each water utility's prevailing price review to discount real pre-tax cash flows (capital costs and net operating position) and ETs.

In our Issues Paper, we sought comment on whether it was still appropriate to distinguish between pre-1996 and post-1996 assets, and to apply differential discount rates (holding costs) to these asset classes. Our preliminary approach was to continue to apply a lower discount rate to pre-1996 assets. In line with our 2013 Determination for the Councils, the discount rate for pre-1996 assets for Sydney Water and Hunter Water would remain unchanged from the value set for these utilities in our 2000 Determination (that is, 3% real pre-tax).

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104 IPART, *Gosford City Council and Wyong Shire Council Developer Charges, Determination No. 1, 2013*, May 2013.

105 IPART, *Gosford City Council and Wyong Shire Council Developer Charges, Determination No. 1, 2013*, May 2013.

106 IPART, *Gosford City Council and Wyong Shire Council Developer Charges, Determination No. 1, 2013*, May 2013.

107 Under our post-tax framework for regulatory price determinations, we include an amount for tax in the estimation of regulated entities' efficient costs for price setting. Payments received by water utilities from developers contribute to regulated revenues, and therefore contribute to regulated income for the purpose of estimating the regulated tax liability. Because we calculate the tax liability at the entity level, we consider it appropriate to adjust for tax impacts at the entity level, which requires developer charges to be calculated on a pre-tax basis.

Hunter Water and Central Coast Council supported the current approach of using different discount rates for pre-1996 and post-1996 assets. Hunter Water supported a 3% real pre-tax rate for pre-1996 assets and proposed updating the discount rate to the prevailing WACC for post-1996 assets, and expected revenues and costs.[108] Central Coast Council supported the current approach (applying 0% to its pre-1996 assets and the prevailing WACC to its post-1996 assets).[109]

In its submission to the Issues Paper, Sydney Water proposed an alternative, which would apply the prevailing pre-tax WACC to all assets.[110] This is linked to its proposal (discussed above) to value assets at their regulatory (RAB) value – Sydney Water's alternative proposal was a package of issues.

In its submission to the Draft Report, Sydney Water reiterated its position that it would prefer that the methodology be based on RAB values rather than MEERA values, noting that:

> The use of three discount rates is unnecessary and may require Sydney Water to simultaneously implement two cost allocation methodologies which are inconsistent with each other (if developer charges are re-introduced).[111]
>
> IPART should allow use of the pre-tax real WACC for the periodic price determination to utilities who have an approved Cost Allocation Manual (CAM). This would allow for charges to be set such that end-use customers and developers both pay an equal allocation and fair share of the costs of investment.[112]

Sydney Water also stated in its submission to the Draft Report that it:

- Accepts the update to the discount rate for post-1996 assets, and agrees that the use of a pre-tax WACC is appropriate, but noted its strong preference that this single discount rate is used for all assets with a nexus to development (ie, where assets are valued under a RAB-based approach).
- Supports the decision to not include a WACC adjustment provision in the methodology as this would introduce significant complexity in administration of the charges with very little potential benefit.[113]

Notwithstanding the above, Sydney Water agreed that if the current methodology is to be retained, it is appropriate to update the parameters of the methodology such as discount rates.[114]

We agree with Sydney Water that under a RAB-based approach to setting the capital component of developer charges, the use of a single discount rate is likely to be appropriate. However, we remain of the view (and Sydney Water agrees), that the current approach to applying different discount rates is appropriate when MEERA valuation forms the basis of the capital component of charges. Differential discount rates reflect that investment decisions pre-corporatisation were not always made on a commercial basis. To take account of this in the 2000 Determination, instead of applying some reduction to the value of pre-1996 assets,

108 Hunter Water's submission to IPART Issues Paper, December 2017, p 35.
109 Central Coast Council's submission to IPART Issues Paper, December 2017, p 8.
110 Sydney Water's submission to IPART Issues Paper, December 2017, p 28.
111 Sydney Water's submission to IPART Draft Report, August 2018, p 18.
112 Sydney Water's submission to IPART Draft Report, August 2018, p 10.
113 Sydney Water's submission to IPART Draft Report, August 2018, p 19.
114 Sydney Water's submission to IPART Draft Report, August 2018, p 16.

we decided to apply a lower WACC to these assets. The same rationale for this decision still applies.

2.6.1 Developer charges would not be subject to a WACC adjustment mechanism

Our decision is to:

12 Not apply a WACC adjustment once the developer charges are calculated.

In our periodic price reviews, we usually decide on the WACC to be used in establishing the notional revenue requirement. We have recently modified this approach to allow an ex-post true-up of the cost of debt (see Box 2.5).

Box 2.5 IPART WACC adjustment mechanism

In our recent review of the WACC methodology, we decided to:

- update the cost of debt annually over the regulatory period, using a trailing average approach
- determine on a case-by-case basis whether to:
  - update prices to reflect the updated cost of debt annually, or
  - use a regulatory true-up in the notional revenue requirement for the next period, and
- make this decision as part of our periodic price review process.

Where we decide to use a true-up, we will:

- use the initial WACC as the discount rate for calculating the true-up, and
- pass the calculated true-up through to prices at the beginning of the next period.

Source: IPART, *Review of our WACC method – Final Report*, February 2018, p 5.

In its submission to the Issues Paper, Central Coast Council proposed that the WACC (used as a discount rate to calculate developer charges for a DSP) be adjusted following the same method used in the periodic price review.

Central Coast Council:

> …considers that more flexibility should be included if there has been a material change in the fiscal environment subsequent to the determination.[115]

We consider that Central Coast Council's proposal is technically not feasible, because:

- The WACC is locked in for the duration of the DSP plan (currently, five years).
- The WACC is applied as a discount factor to a range of inputs, including capital costs and revenues (based on prevailing prices), for a period of 30 years.
- Any adjustments to the WACC would require the NPV model to be recalculated and the level of charge to be re-established.
- The level of charges would no longer be valid if the NPV basis was constantly revised.

115 Central Coast Council's submission to IPART Issues Paper, December 2017, p 8.

- Any refunds due to, or recoverable from, developers would be difficult and costly to administer. Administrative costs would likely outweigh the materiality of the refund.

As discussed earlier, utilities' services to new developments are funded through a combination of developer charges and periodic prices. Making WACC adjustments in a periodic price review should be sufficient to properly compensate the utility. Annual adjustments to calculated developer charges (above CPI indexation) would add complexity without materially changing the way the utility is compensated. If, instead of chasing up past developers to collect or distribute the refund, the adjustment was applied to the developer charges after the DSP review, an inter-generational issue would arise. New developers would face the costs of compensating, or receiving refunds from, the cohort of developers that contributed to the DSP during the past period.

The materiality of the adjustment is likely to be low. An annual adjustment to prices, due to an updated cost of debt, and the resulting update in the discount factor, would move in the same direction, likely offsetting each other in the **reduction amount** component of the formula. The effect of a WACC adjustment may be more pronounced in the capital charge component of the formula, because a different WACC would result in a different discount rate and hence a different capital charge. However, a utility will be no better or worse off as a result – as all revenue received from developer charges is deducted from the RAB. With regular reviews of DSPs, there is little merit in adding the complexity of a WACC adjustment to the developer charges methodology. Any adjustments to the WACC should be addressed in periodic price reviews.

Based on the above, our decision is not to include a WACC adjustment provision in the methodology for developer charges.

In their submissions to our Draft Report, Hunter Water[116] and Sydney Water[117] supported our decision.

2.7 We have maintained the measure of an equivalent tenement (ET)

Our decision is to:

13 Maintain the annual consumption of an average residential dwelling as our measure of an equivalent tenement (ET).

14 Update the ET value with the consumption for an average single residential dwelling referred to in the Final Report accompanying the prevailing periodic price determination.

Our current determinations use the concept of the ET, which is defined as:

> … the demand a development will place on the infrastructure in terms of the water consumption and discharge for an average residential dwelling.

116 Hunter Water's submission to IPART Draft Report, August 2018, p 17.
117 Sydney Water's submission to IPART Draft Report, August 2018, p 11.

Under the 2000 Determination, the annual demand for a single residential dwelling for each utility was a hard-coded parameter.[118] This was replaced in the 2013 Determination for Central Coast Council with the consumption of an average residential customer, which is referred to in the Final Report accompanying the prevailing periodic price determination.[119]

In our Issues Paper, we considered that establishing a developer charge on a per ET basis has worked reasonably well. We sought comment on other potential measures of demand.

We received submissions on this issue from the three metropolitan utilities in response to the Issues Paper:

- Sydney Water supported maintaining average consumption as an appropriate measure for an ET.[120]
- Hunter Water considered that the ET measure is generally acceptable but could be modified to include peaking factors. However, Hunter Water recognised the trade-off between a technically more correct approach that includes peaking factors and the availability of data.[121]
- Central Coast Council considered that an ET is appropriate and proposes standardising the measure.[122] However, it also recognised that developing a standard definition and having a third party keep it up to date would be problematic.[123]

In our Draft Report, we made a draft decision to maintain the current ET measure as the annual consumption of an average residential customer, based on the prevailing periodic price review.

In its submission to the Draft Report, Sydney Water agreed with the draft decision, but also requested that IPART provide further guidance as to how ETs relate to non-residential and multi-unit residential property types. Sydney Water stated that its preference is for ETs to be defined according to the demand placed on infrastructure by each property type relative to an average **single** residential property.[124] Sydney Water stated that this would be consistent with allowing non-residential properties to be assessed on a flows basis, such is the case for recycled water developer charges.[125]

We agree with Sydney Water that each property should be defined with respect to the average use of a single residential property, and consider that the wording in our draft determination provides for this. However, for the avoidance of doubt, we have amended the wording of the determination to specify that an ET refers to a **single** residential dwelling, as follows:

Equivalent Tenement means:

118 Under the 2000 Determination Schedule 5, average consumption values were 240 kilolitres for Sydney Water, 210 kilolitres for Hunter Water, 207 kilolitres for Gosford City Council, and 205 kilolitres for Wyong Shire Council.
119 IPART, *Gosford City Council and Wyong Shire Council Developer Charges, Determination No. 1, 2013*, May 2013.
120 Sydney Water's submission to IPART Issues Paper, December 2017, pp 29-30.
121 Hunter Water's submission to IPART Issues Paper, December 2017, p 38. The peaking factor is the ratio of the maximum flow to the average daily flow in a system.
122 Central Coast Council's submission to IPART Issues Paper, December 2017, pp 8-9.
123 Central Coast Council's submission to IPART Issues Paper, December 2017, p 6.
124 Sydney Water's submission to IPART Draft Report, August 2018, p 16.
125 Sydney Water's submission to IPART Draft Report, August 2018, p 19.

(a) the Equivalent Tenement value specified in the Final Report accompanying the Prevailing Periodic Determination for the relevant Agency; or

(b) where the Final Report accompanying the Prevailing Periodic Determination for the relevant Agency does not specify an Equivalent Tenement value, that Agency's estimate of the total demand that an average single residential dwelling places on the relevant System.

2.8 We have precluded negative prices

Our decision is to:

15 Amend the methodology so that if the calculated price is negative, it is set to zero.

In its submission to the Issues Paper, the Water Services Association of Australia (WSAA) commented that while our 2000 methodology has a number of strengths, its major weakness when it previously operated in Sydney was that it generated negative developer charges across significant parts of the city.[126]

Negative developer charges arose in Sydney city and coastal DSPs, especially for sewerage. This was due to the large operating surplus to service these areas compared to the system average costs, which offset the capital charge, drawing it to below zero. However, in practice, zero charges applied in those instances.

Negative prices result from postage stamp prices (of servicing all customers) and location-specific costs (of servicing new customers). Postage stamp pricing implies that customers in the areas with low servicing costs subsidise customers in higher cost areas. In making the decision to preclude negative developer charges, we have exercised our judgment and assigned the benefits of establishing new connections in low cost areas (reflected in a negative price under the current methodology), to the broader customer base.

In our Draft Report, we made a draft decision to amend the methodology and set maximum prices at zero when the price would otherwise be negative.

Submissions to the Draft Report from Hunter Water[127], Sydney Water[128] and the Public Interest Advocacy Centre (PIAC)[129] supported our decision, therefore we have maintained this decision for our Final Report.

2.9 We have considered other issues

In our Issues Paper, we consulted on other potential issues relating to the developer charges methodology, such as:

- customer impacts
- whether there are any implications for our developer charges methodology relating to wholesale customers or other WICA licensees, and
- developer charges for stormwater.

126 Water Services Association of Australia's submission to IPART Issues Paper, January 2018, p 3.
127 Hunter Water's submission to IPART Draft Report, August 2018, pp 7, 18.
128 Sydney Water's submission to IPART Draft Report, August 2018, pp 11, 16.
129 PIAC's submission to IPART Draft Report, August 2018, p 1.

During the consultation on our Issues Paper, stakeholders raised several new issues, including:

- how the current methodology fits with the Integrated Water Cycle Management (IWCM) approach
- the possibility of unregulated agreements between large developers and utilities, and
- whether the developer charges methodology can enable the funding of infrastructure augmentation to facilitate firefighting capacity.

The issue of establishing prices to upgrade water services to higher water flow and pressure standards to facilitate firefighting is discussed in Chapter 5. The remaining issues are covered below.

2.9.1 Our methodology keeps Central Coast Council neutral

Our methodology effectively maintains the methodology that Central Coast Council currently applies to calculate its water and sewerage developer charges. Therefore, there will be no implications arising from this determination for the level of Central Coast Council's developer charges. Parameter values may change when Central Coast Council reviews DSPs or when we calculate new periodic prices – however, these changes would not arise from this determination.

With respect to Sydney Water and Hunter Water, the updates from the previous determination (the 2000 Determination) for calculating developer charges for these utilities include:

- Updating the discount rates for post-1996 assets and for the reduction amount (from the previously fixed pre-tax real 7%) to the utility's real pre-tax WACC referred to in the Final Report accompanying the prevailing periodic price determination.
- Updating the annual consumption that must be used in calculations for an average residential customer for an ET from the previously fixed values (240 kL and 210 kL for Sydney Water and Hunter Water, respectively) to the figure set out in the prevailing periodic price review
- Precluding negative developer charges.

However, while the current zero developer charges policy continues to apply, these changes will have no practical implications for Sydney Water and Hunter Water.

We consider there is no impact on general price inflation from our determination.

2.9.2 Given policy settings, our methodology does not disadvantage wholesale customers or other WICA licensees

This review is of developer charges levied by metropolitan public water utilities – Sydney Water, Hunter Water and Central Coast Council.

However, from the commencement of the *Water Industry Competition Act* (WICA) in 2008, developers and end-use customers in new development areas can also be serviced by parties

other than Sydney Water, Hunter Water or Central Coast Council. Parties licensed under WICA can purchase 'wholesale' water and/or sewerage services from the public water utilities to on-sell to end-use customers in new developments in the Sydney, Central Coast, and Hunter regions. WICA licensees can also supply to end-use customers in new developments in these regions without purchasing wholesale services from public water utilities.

The current policy setting of zero developer charges for Sydney Water and Hunter Water may make it more difficult for potential market entrants to compete with incumbent water utilities in some cases. Our Determination does not affect this policy setting.

In 2017, we completed our first review of Sydney Water's and Hunter Water's wholesale prices.[130] Our Final Report included the following pricing decisions:

- Non-residential retail prices should apply to water and sewerage services that are not on-sold to end-use customers and only used to supply a wholesale customer's recycled water scheme.[131]
- Retail-minus prices should apply to water and sewerage services that are on-sold, with the 'minus' component based on the costs a 'reasonably efficient competitor' would incur in providing services from the point of wholesale purchase to end-use customers.
- Wholesale prices should also reflect prudent and efficient 'net facilitation costs' where these are not reflected elsewhere in wholesale prices or recovered by Sydney Water or Hunter Water via another mechanism.

Facilitation costs are additional costs or cost savings incurred by Sydney Water or Hunter Water (referred to as wholesale service providers) in supplying a wholesale customer. For example, Sydney Water or Hunter Water may save costs if a wholesale customer's recycled water production defers a scheduled augmentation of their water and/or wastewater network. These cost savings would result in negative facilitation costs and hence in lower wholesale prices. Alternatively, wholesale service providers may incur costs if the network needs to be upgraded to provide services to a wholesale customer. As such, there could be positive facilitation costs, resulting in higher wholesale prices.

We also decided that facilitation costs relating to augmentation of Sydney Water's or Hunter Water's network to supply a wholesale customer should reflect the current status of the policy on developer charges. As Sydney Water's and Hunter Water's developer charges are currently set to zero for 'in-sequence' development, prudent and efficient growth expenditure is funded through their retail prices. To reflect this, facilitation costs would not include any additional augmentation costs related to development that would otherwise be subject to a zero developer charge and funded through Sydney Water's or Hunter Water's retail prices.

Under the current developer charges policy, facilitation costs would range from zero for 'in-sequence' development to the full cost of augmentation for an 'out-of-sequence' development outside the growth servicing plan.

130 IPART, *Prices for wholesale water and sewerage services – Sydney Water Corporation and Hunter Water Corporation*, Final Report, June 2017.

131 The wholesale price review considered two services supplied to wholesale customer's recycled water schemes: drinking water top-up; and disposal of recycled water waste.

In submissions to our Issues Paper, Hunter Water and Sydney Water generally agreed that our developer charges methodology does not negatively affect WICA licensees.[132] Hunter Water noted that positive, cost-reflective developer charges encourage private sector entry and competition in the provision of water and wastewater services to new developments.[133] However, in its submission to our Draft Report, Sydney Water reiterated its view that the use of MEERA valuation of existing assets and exclusion of pre-1970 assets promotes competition over the efficient provision of services to end-use customers.[134]

We consider that, if applied, our methodology promotes efficient new entry and competition in the water, wastewater and stormwater services market. In particular, it ensures that maximum prices for new developments to connect to the public utility supply system are set in a competitively neutral way. Under our approach to pricing service extensions and service upgrades to existing properties (Chapter 4 and Chapter 5, respectively), the competitive neutrality principle also prevails.

Our response to Sydney Water's proposal to adopt RAB values for existing assets and include all assets in the capital cost component is set out in section 2.4 above.

2.9.3 Our methodology applies to declared stormwater services

Our 2000 Determination of developer charges applies to extending the monopoly services to new developments, providing the new properties with new connections. To the extent that stormwater (drainage) services are declared monopoly services for a metropolitan water utility, they are covered by our methodology and determination.

2.9.4 Our methodology is consistent with the IWCM approach

Some stakeholders that made submissions to our Issues Paper were concerned about the timing of our review, given that the NSW Government had announced its review of pricing and regulatory arrangements for recycled water[135] and in light of the benefits of IWCM.[136] Sydney Water submitted that any change to the developer charges methodology should not inadvertently reduce the potential for IWCM approaches to enhance the liveability of growing cities in NSW.[137]

IWCM recognises the links between recycled water, wastewater and stormwater. Our current regulatory position is to ring-fence recycled water schemes operated by Sydney Water, Hunter Water and Central Coast Council. Recycled water is excluded from this review of the methodology for developer charges.

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132 Sydney Water's submission to IPART Issues Paper, December 2017, p 10; Hunter Water's submission to IPART Issues Paper, December 2017, p 39.
133 Hunter Water's submission to IPART Issues Paper, December 2017, pp 19-21.
134 Sydney Water's submission to IPART Draft Report, August 2018, p 19
135 The Hon Don Harwin, *Media Release – Independent review to save water and money*, 30 June 2017, at https://www.metrowater.nsw.gov.au/sites/default/files/Independent%20review%20to%20save%20water%20and%20money.pdf, accessed 20 September 2018
136 Flow Systems' submission to IPART Issues Paper, January 2018, p 1; Housing Industry Association's submission to IPART Issues Paper, January 2018, p 2; Urban Development Institute of Australia's submission to IPART Issues Paper, January 2018, p 2.
137 Sydney Water's submission to IPART Issues Paper, December 2017, p 5.

However, we note that our 2006 Determination of recycled water developer charges applies a similar methodology, with the main difference being that it recognises avoided water and wastewater costs (as a cost reduction or offset) resulting from recycled water schemes.[138] Our aim is to create a regulatory framework (and pricing signals) that promotes the efficient delivery of water, wastewater and stormwater services to customers.[139]

We will review recycled water developer charges as part of our current 2018-19 review into pricing arrangements for recycled water and related services for Sydney Water, Hunter Water, Central Coast Council and Essential Energy (in Broken Hill). Our last reviews into recycled water pricing were in 2006, when we established guidelines for recycled water and also set a determination for developer charges for recycled water.[140] On 4 September 2018, we released our Issues Paper inviting stakeholders to provide submissions (due by 12 October 2018) on how we should set regulated recycled water and related charges.[141] We expect to release our Final Report and Determination on recycled water prices in June 2019.

2.9.5 Our methodology allows sophisticated developers to opt out

Our decision is to:

16 Allow utilities and developers to opt-out of the determination through bilateral agreements, subject to ring-fencing of unregulated costs.

In its submission to our Issues Paper, Sydney Water commented that the current developer charges determination does not specifically allow developers to enter into voluntary agreements to deliver additional infrastructure that may benefit their development and/or the wider community. Sydney Water stated that it is particularly interested in working with developers to ensure that current and future stormwater infrastructure delivers as much benefit as possible to the wider community. In favour of voluntary agreements, Sydney Water:

- highlighted that IPART already allows unregulated agreements (the 2017 wholesale price determination and the 2016 retail price determination)
- argued that voluntary agreements could allow a utility and a developer to deliver infrastructure at a higher standard than that which might be considered prudent and efficient for the purposes of regulated prices, and
- recognised that changes in costs resulting from any unregulated pricing agreements with developers would need to be ring-fenced.[142]

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

139 We note that the Government's direction to set zero developer charges in Greater Sydney and the Hunter region does not apply to recycled water. By virtue of non-zero developer charges, connecting to recycled water infrastructure is not on an equal footing with alternative service solutions that involve water, wastewater or stormwater.

140 The methodology and procedural requirements under our 2006 Determination of recycled water developer charges are consistent with the 2000 Determination of developer charges for water, wastewater and stormwater, with additional recognition of avoided costs in the former.

141 IPART, *Review of recycled water prices for public water utilities – Issues Paper*, September 2018.

142 Sydney Water's submission to IPART Issues Paper, December 2017, pp 17-18.

Stakeholders support voluntary agreements

At our Public Hearing, Sydney Water's proposal was supported by UDIA, which supports unregulated agreements for larger proponent-led developments that are likely to be integrated with recycled water solutions. UDIA noted that it would be less inclined to support unregulated agreements for a state-led development on a smaller scale (eg, 100 or 200-lot subdivisions), where efficiencies from an unregulated agreement would not be achievable.[143]

Hunter Water also noted at the Public Hearing that it conceptually supports allowing unregulated agreements that result in a win-win situation. For example, large customers could take their services in a slightly different manner and avoid incurring operating costs or capital costs, which could then be passed into the agreed price. Hunter Water commented that unregulated agreements would be consistent with competition, which was partly introduced to encourage innovation. They would also be consistent with encouraging public water utilities to meet their customers' needs, and understand what developers want, and then meeting those demands.[144]

Sydney Water[145] and Hunter Water[146] reiterated their support for voluntary agreements in their submissions to our Draft Report.

Voluntary agreements need to be properly ring-fenced to avoid cross-subsidies

A stakeholder at the Public Hearing raised concerns about the potential effect of unregulated agreements on competition, on the basis that:

- The current system of no developer charges favours incumbent utilities rather than competitors.
- If there is competition and unregulated agreements are allowed, an incumbent is most likely to offer charges at the lower end of the range to capture the market if the remainder of its costs are recovered through periodic prices from its wider customer base.
- There is concern an incumbent utility could volunteer to set its charges very low and undercut the market.[147]

Our decision is to allow the utilities and developers to opt-out of our determination of developer charges, through bilateral agreements, subject to the appropriate ring-fencing of costs. The charges raised under these agreements would also be subject to ex-post review during periodic price reviews or at other times, as directed by IPART.

To prevent anti-competitive levels of unregulated charges and any cross-subsidy between the existing customers and the unregulated developer charges, the utilities will be required to:

- Ensure that the unregulated developer charges reflect the full efficient cost of providing the service, based on MEERA valuations and an incremental (as opposed to marginal) cost approach.

143 IPART, Developer Charges public hearing transcript, 6 March 2018, p 21.
144 IPART, Developer Charges public hearing transcript, 6 March 2018, pp 25-26.
145 Sydney Water's submission to IPART Draft Report, August 2018, p 19.
146 Hunter Water's submission to IPART Draft Report, August 2018, p 18.
147 IPART, Developer Charges public hearing transcript, 6 March 2018, pp 27-28.

- Ensure that costs and revenues of unregulated developer charges are clearly identified and ring-fenced and, as part of their submission to the periodic price review, report unregulated charges and revenues against what regulated charges and revenues would have been and explain the differences.

3 Procedural requirements for new connections to new developments

Our 2000 Determination includes procedural requirements that accompany the developer charges methodology. The same procedural requirements continued to apply to Central Coast Council under the 2013 Determination.

The core procedural requirement for utilities is to prepare and exhibit a development servicing plan (DSP). The DSP for a particular development area contains all inputs and parameters to calculate prices to connect a new service to a new development (ie, developer charges) for this area. Procedural requirements for utilities making, reviewing and consulting on DSPs aim to ensure sufficient transparency and scrutiny around the calculation of developer charges.

In our Issues Paper, we sought comment on the current procedural requirements, particularly how to enhance them. This chapter outlines our decisions on procedural requirements.

3.1 Summary of our decisions on procedural requirements

The utilities' and some other stakeholder[148] submissions and stakeholder comments at the public hearing[149] confirmed that procedural requirements continue to be appropriate. To date, the combination of the methodology and procedural requirements has fared well in balancing transparency, scrutiny and administrative burden on the water utilities and their customers (developers). Stakeholders proposed three amendments to the current requirements, which are to:

- provide more flexibility for the DSP review period
- suspend the requirement to review DSPs while the NSW Government's zero developer charges policy for Sydney Water and Hunter Water applies, and
- introduce a transition period to comply with the determination if and when the zero developer charges policy is removed.

We have accepted stakeholder proposals and decided to make these amendments to the procedural requirements.

We have also decided to maintain, with minor amendments, the current procedural provisions relating to:

- the format and content of DSPs
- advertising, publicly consulting and registering DSPs, and
- the dispute resolution process.

148 Housing Industry Association's submission to IPART Issues Paper, January 2018, p 3.
149 IPART, Developer Charges public hearing transcript, 6 March 2018, p 12.

Our decisions on the procedural requirements and our consideration of stakeholder views are outlined in further detail below.

3.2 Development servicing plans (DSPs) remain the core requirement

Our decision is to:

17 Maintain the current DSP content requirement, with minor amendments.

Under our 2000 Determination, utilities must prepare and adopt DSPs for each service area. The Determination specifies the format and content of DSPs. The DSP requirements in the 2000 Determination are aimed at enhancing transparency and scrutiny around developer charges, and assisting developers in understanding the cost of service provision and in deciding where to undertake land development.

The 2000 Determination specifies that DSPs should include information on:

- land use planning
- the extent of the DSP area, including the basis on which boundaries have been established
- the services required over the development period
- estimates of future capital and operating costs
- standards of service to be provided to customers and asset design parameters
- estimates of future lots, dwellings and ETs, including demographic assumptions
- the timing of works and expenditures relating to anticipated development and demographic assumptions
- assets, including total asset capacity in ETs (if applicable)
- the calculated developer charge per ET and the basis on which it is calculated
- how the calculated developer charge compares with the existing charge, and
- other DSPs where there is an overlap or co-usage of assets, including the number of ETs served by assets shared by several DSPs.

We consider that the current requirements still meet the objectives of achieving transparency by enabling scrutiny by developers without imposing undue administrative burden. Because we set the methodology and not the actual prices, it is important that DSPs contain sufficient information to support the calculation of prices using our methodology. The utilities' submissions to our Issues Paper generally supported the current requirements.[150]

In our Draft Report, we outlined our draft decision to maintain the current requirements, with minor amendments. These minor amendments included requirements to:

- specify which system or systems (water supply, sewerage or drainage) the DSP relates to, and

150 Central Coast Council's submission to IPART Issues Paper, p 11; Hunter Water's submission to IPART Issues Paper, December 2017, p 4; Sydney Water's submission to IPART Issues Paper, December 2017, pp 11, 33.

- provide a comparison of the maximum price for connecting a new development to a system with the maximum price which applied previously.

In their submissions to our Draft Report, Hunter Water[151] and Sydney Water[152] supported our draft decision.

Therefore, our decision is to maintain the current DSP content requirement, with minor amendments outlined above.

3.3 We require utilities to exhibit, advertise and consult on DSPs

Our decision is to:

18 Maintain the current requirement to exhibit, advertise and consult on DSPs, with minor amendments.

To comply with our 2000 Determination, utilities must advertise and exhibit a DSP for each service area. A utility is required to:

- exhibit a draft DSP for at least 30 working days before adopting it
- consider stakeholder submissions before finalising the DSP
- advertise the date when a DSP is to be made or reviewed and the start date of the exhibition period
- inform the Urban Development Institute of Australia (UDIA), the Housing Industry of Australia (HIA), and any relevant developers and landowners of the start date of the exhibition period at least 10 working days before that start date, and
- forward the DSP to IPART for registration, informing us of any submissions lodged during the exhibition period and its responses to the submissions. We will then register the DSP.

The utilities' submissions to our Issues Paper generally supported the current approach.[153] However, Hunter Water commented that the need for the degree of specificity regarding DSP content might have to a large degree dissipated. Utilities are becoming increasingly customer-oriented. Hunter Water noted that its capital works programmes are included in the published Growth Plans.[154]

The current DSP content requirements appear to work well for Central Coast Council, where developer charges are active.

In our Draft Report, we outlined our draft decision to maintain the current requirement, with minor amendments. These minor amendments included:

- modernising procedural and consultation requirements to take advantage of the internet

151 Hunter Water's submission to IPART Draft Report, August 2018, pp 7, 18.
152 Sydney Water's submission to IPART Draft Report, August 2018, pp 12, 20.
153 Central Coast Council's submission to IPART Issues Paper, December 2017, p 11; Hunter Water's submission to IPART Issues Paper, December 2017, p 4; Sydney Water's submission to IPART Issues Paper, December 2017, pp 11, 32-33.
154 Hunter Water's submission to IPART Issues Paper, December 2017, p 17.

- requiring utilities to include the critical data and models used to calculate the developer charges in the draft DSP, and
- updated references to repealed legislation.

In its submission to the Draft Report, Hunter Water supported the draft decision.[155]

In its submission to the Draft Report, Sydney Water agreed that the proposed DSP consultation requirements and dispute resolution process are largely sound. It also suggested minor improvements to aid clarity and streamline consultation. Specifically, Sydney Water submitted that the new requirement to make all background information (including the models used to calculate charges publicly available), may add administrative burden and be unworkable in practice. Sydney Water noted that it did not consider that it would be appropriate for water utilities to make any commercially sensitive information public and nor is there value in making information of a highly technical nature available to the public. Sydney Water stated its preference that more detailed information be made available 'on request' as this would provide a more targeted approach.[156]

The Draft Determination (Schedule 4, clause 2(a)(2)) required water utilities to:

> …prepare and make available on the Agency's website all of the critical data behind the draft DSP, including the models used to calculate the prices for the Determination Services, so that interested parties can assess the draft DSP and make informed written submissions on that draft DSP to the Agency.

In response to Sydney Water's concerns around administrative burden, we note that the wording of the determination requires only data that the water utilities consider is critical for the calculation of prices, and which would allow interested parties to assess the draft DSP. As such, it is open to the water utility in the first instance to make a judgement about the level of detail required to meet this obligation. We do not consider that this would necessarily require the publication of highly technical data or include commercial-in-confidence information.

The rationale for providing developers with the opportunity to scrutinise the prices still holds. The DSP content requirement ensures that the inputs into the calculation of developer charges are clearly specified and can be verified by developers. For any disagreements, there is a dispute resolution process for developers to follow, as discussed below.

We also note that the other water utilities, including Central Coast Council, raised no objections to this requirement.

Therefore, as per our Draft Determination, our decision is to maintain the current requirement to exhibit, advertise and consult on DSPs, with minor amendments.

3.4 The current dispute resolution process is sound

The IPART Act sets out a process for resolving disputes in applying a methodology in an IPART determination such as the developer charges methodology.

155 Hunter Water's submission to IPART Draft Report, August 2018, pp 7, 18.
156 Sydney Water's submission to IPART Draft Report, August 2018, pp 12, 20-21.

Under the 2000 Determination, developers can view and, if necessary, forward any complaints about the charges to the utility during the 30 working days of the exhibition period.[157] Under section 31 of the IPART Act, a customer (in this case, a developer) who is dissatisfied with the way in which a water utility applies the methodology in our determination may complain to the utility. The Chief Executive Officer of the utility must review any complaint (or delegate someone to conduct a review). If the customer is still dissatisfied, they can require that the matter go to arbitration. The arbitrator is appointed by agreement between the customer and the water utility, and both equally share the costs of arbitration.[158]

There were no stakeholder submissions opposing the dispute resolution provisions in:

- the Draft Determination - a 30-day exhibition period for all DSPs in which utilities must accept written submissions from stakeholders, and
- the IPART Act – providing a process for direct review of the complaint by the utility's Chief Executive Officer, and if still unsatisfied, a formal arbitration process.

We consider that the arbitration process provides an administratively efficient option for developers to resolve any disputes with the utility, and therefore have retained it for our determination.

3.5 We have made the DSP review requirement more responsive

The 2000 Determination requires utilities to review their DSPs only once every five years, or as we require. After the review, water utilities must publicly exhibit their draft DSPs for at least 30 working days before adopting the charges.

The utilities' submissions to our Issues paper and Draft Report indicated that the current requirement could be improved. Stakeholders proposed amending the current DSP review requirement to make it more flexible, including:

- more frequent reviews of DSPs if required, and having an option to defer a DSP review, with our approval, and
- removing the requirement to review DSPs while the zero charges policy applies.

We have considered stakeholders' views and a discussion of our decisions follows.

3.5.1 'Once and only once in 5 years' requirement has been made more flexible

Our decision is to:

19 Require a DSP review once every five years, however, this requirement can be shortened, extended or waived, as approved or directed by IPART.

In its submission to the Issues Paper, Central Coast Council proposed coordinating the timing of its review of developer charges with its price submission for periodic water and sewerage charges. This would require changing the current five-year frequency of DSP reviews, to align

157 2000 Determination, Schedule 3, clause B.

158 If the parties cannot agree on the appointment of the arbitrator, one party can apply to the Supreme Court to appoint an arbitrator.

them with the period of the retail price determination. Central Coast Council also proposed allowing more frequent reviews of DSPs (ie, more often than once every five years) if there were material changes to DSPs. It also argued that it would be desirable to provide an option to defer a review of DSPs if a price review was deferred. It argued that adopting such an approach would reduce the need for repeated operating and capital costs forecasts. A common forecast would be used for both developer charges and pricing determinations. Central Coast Council submitted that this would improve transparency for customers and developers in setting costs at a common time.[159]

In its submission to the Issues Paper, Hunter Water supported this proposal, seeing merit in incorporating greater flexibility into the review period; for example, by allowing more than one DSP review within the five-year window, with our approval.[160]

In practice, the timing of DSP reviews and price reviews does not perfectly align. After reviewing DSPs, water utilities must publicly exhibit their draft DSPs for at least 30 working days before adopting the charges. The final prices and other parameters (such as the weighted average cost of capital (WACC) and average residential consumption) become available when we release our Final Report and Determination of periodic prices. These parameters can then be used as inputs in a draft DSP, which is then subject to the exhibition requirement. As a result, new DSPs may not be available on the commencement date of a new price determination.

However, this consideration does not undermine stakeholders' arguments for allowing more frequent reviews of DSPs, which could coincide with price reviews. Likewise, if we approved deferring a price review, a request to defer a DSP review could also be lodged. If the parameters and inputs of a DSP materially changed, the utility could ask us to approve its early review.

In our Draft Report, we made a draft decision to allow more flexibility in the frequency of DSP reviews, subject to our approval or direction. This change would reduce the administrative burden on utilities and allow for more accurate inputs into DSPs.

Submissions to the Draft Report from Hunter Water[161] and Sydney Water[162] supported our draft decision. Sydney Water noted that the draft decision:

> will allow timely changes to be introduced should there be any significant deviation, within a five-year period, from the assumptions used to create a DSP. It would also allow for longer periods between reviews if those assumptions remain valid at the end of a five-year period.[163]

Therefore, our decision, consistent with our Draft Determination, is to increase the flexibility around the requirement for review of a DSP.

159 Central Coast Council's submission to IPART Issues Paper, December 2017, p 14.
160 Hunter Water's submission to IPART Issues Paper, December 2017, p 17.
161 Hunter Water's submission to IPART Draft Report, August 2018, pp 7, 18.
162 Sydney Water's submission to IPART Draft Report, August 2018, pp 12, 21.
163 Sydney Water's submission to IPART Draft Report, August 2018, p 21.

3.5.2 DSP review requirement is suspended while the zero charges policy applies

Our decision is to:

20 Suspend the DSP review requirement while the NSW Treasurer's direction on zero developer charges is in place.

In its submission to our Issues Paper, Hunter Water requested that we add review clauses to the determination to reflect the 'inactive' status of developer charges for Sydney Water and Hunter Water. Hunter Water noted that it understands that strictly applying the 2000 Determination would require it to review, exhibit and register DSPs in its entire area of operations every five years. Hunter Water requested that we consider amending the current determination to make it explicit that utilities do not have to update DSP information while the Treasurer's direction on setting developer charges to zero is in place.[164]

Applying this provision should not affect Central Coast Council, which is not subject to the zero developer charges policy.

Our decision is to accept Hunter Water's proposal to suspend the obligation to update DSPs while the zero developer charges policy applies. We consider this a practical measure to save administrative costs and ensure ongoing compliance with our determination.

Submissions to the Draft Report from Hunter Water[165] and Sydney Water[166] supported our decision. Hunter Water noted that the decision is consistent with its submission to the Issues Paper, while Sydney Water recognised that it is a practical measure that will save unnecessary administrative costs.

3.6 We have allowed a transition period to reactivate the determination

Our decision is to:

21 Provide for a transition period of up to 18 months to apply in the event that the Government's nil developer charges policy is removed, and set maximum prices to zero until the end of that period, or until the relevant utility complies with the relevant procedural requirements set out in the determination, whichever occurs earliest.

In its submission to our Issues Paper, Hunter Water proposed a 12 to 18-month transition period to implement an updated determination following any NSW Government decision to reactivate developer charges.[167]

We consider this a reasonable request, given the large number of DSPs that have not been reviewed since 2006-07. Even with the potential to consolidate DSPs into zones, a significant administrative effort would be required to produce new DSPs.

Our decision is to accept Hunter Water's proposal to allow an 18-month transition period, which would be a reasonable length of time to make and review DSPs if the zero developer charges policy were to be reversed. Our decision is that during the transition period, zero

164 Hunter Water's submission to IPART Issues Paper, December 2017, p 17.
165 Hunter Water's submission to IPART Draft Report, August 2018, pp 7, 18.
166 Sydney Water's submission to IPART Draft Report, August 2018, pp 12, 21.
167 Hunter Water's submission to IPART Issues Paper, December 2017, p 18.

maximum charges would apply for Sydney Water and Hunter Water. A delayed step increase in price would also allow the developers to incorporate the future charges in their business planning decisions.

In its submission to the Draft Report, Hunter Water supported our decision.[168]

In its submission to the Draft Report, Sydney Water noted that the allowance is important given the administrative effort that would be required to implement charges. Sydney Water also noted its position that the determination should be reviewed again prior to any reintroduction of the charges to take into account any improvements that could be made or other policy changes.[169]

While we recognise that there may be a need to review the developer charges framework again in the future, we do not consider that it is necessary to commit to doing so upon the reintroduction of non-zero developer charges. The intent of our determination is that it should be able to accommodate the reintroduction of developer charges for the metropolitan utilities.

This provision will not affect Central Coast Council, which is not subject to the zero developer charges policy.

3.7 Our approach to regulating DSP areas remains light-handed

Our decision is to:

22 Maintain our current role in approving the calculation spreadsheet and registering the DSP.

Under the 2000 Determination, we approve the calculation spreadsheet a water utility uses to calculate developer charges.[170]

Once a water utility has adopted a DSP, it must forward it to us to include in our register of DSPs for the metropolitan water utilities we regulate.[171] When it forwards a DSP, the utility must inform us of its responses to all of the submissions lodged during the exhibition period.[172]

We also supply water utilities with the CPI multiplier they must use to inflate their developer charges each year. Developer charges are kept constant in real terms between DSP reviews (see section on CPI indexation of prices below).

We consider this approach continues to provide an appropriate level of IPART scrutiny. Developers, who are most directly impacted by developer charges, play the primary role in scrutinising the charges. We have also decided to provide additional guidance to the utilities and developed a template spreadsheet that utilities can use on a voluntary basis.

168 Hunter Water's submission to IPART Draft Report, August 2018, pp 7, 18.
169 Sydney Water's submission to IPART Draft Report, August 2018, pp 12, 21.
170 2000 Determination, Schedule 2, clause C.
171 IPART, *Water Registers – Government utility licensing development servicing plans*, https://www.ipart.nsw.gov.au/Home/Industries/Water/Legislation-registers/Government-Utility-Licensing-Development-Servicing-Plans, accessed on 5 June 2018.
172 2000 Determination, Schedule 3, clause D.

3.7.1 We have released a template spreadsheet to improve transparency

Our decision is to:

23 Release a template spreadsheet that utilities can use, on a voluntary basis, to calculate developer charges.

In its submission to our Issues Paper, Sydney Water proposed that we develop a standard Excel spreadsheet or model for utilities to use to calculate developer charges. Sydney Water stated that such a template could enhance transparency and accountability, while reducing administrative burden.[173] Hunter Water did not see significant benefits of standardising calculation worksheets.[174] Central Coast Council commented that additional administrative requirements would increase costs.[175]

Consistent with Sydney Water's proposal, we made a draft decision to provide additional guidance to utilities and to develop a template spreadsheet that utilities can use on a voluntary basis, and released the template to accompany our Draft Report.

In its submission to our Draft Report, Sydney Water supported our decision. However, Sydney Water also noted that some of the terminology in the draft spreadsheet template prepared by IPART was not consistent with the draft determination. Sydney Water recommended that the spreadsheet and determination be reviewed for consistency before being finalised. [176]

In its submission to our Draft Report, Hunter Water supported our decision. Hunter Water noted that it considers the provision of a spreadsheet template for use by the water utilities represents a reasonable compromise in terms of Hunter Water's concerns regarding the need to accommodate regional differences and flexibility to accommodate automatic data population (raised by Hunter Water in its submission to the Issues Paper[177]).[178]

Our decision is to release a template spreadsheet that utilities can use, on a voluntary basis, to calculate developer charges.

We have also made minor amendments to the wording of the determination as set out in Table 3.1 below, and reviewed the consistency of the spreadsheet and the determination for the Final Report and Determination.

173 Sydney Water's submission to IPART Issues Paper, December 2017, p 34.
174 Hunter Water's submission to IPART Issues Paper, December 2017, p 41.
175 Central Coast Council's submission to IPART Issues Paper, December 2017, p 11.
176 Sydney Water's submission to IPART Draft Report, August 2018, pp 12, 22.
177 Hunter Water's submission to IPART Issues Paper, December 2017, p 41.
178 Hunter Water's submission to IPART Draft Report, August 2018, pp 7, 19.

Table 3.1 Issues raised by Sydney Water concerning clarity of the terms and wording used in the draft determination

Issues raised by Sydney Water	Response
The intended start and end dates for calculation of the Equivalent Tenements (that is, to calculate L_1, L_2, L_3, L_4 and L_5 in the Draft Determination)	▼ Pre-1996 means prior to 1 January 1996 (L_1) ▼ Post-1996 means 1 January 1996 onwards (L_2) ▼ The reduction amount is calculated over 30 years from the financial year (ie, commencing 1 July) in which the DSP is registered (L_3) ▼ Extensions are forecast over 30 years from the financial year (ie, commencing 1 July) in which the extension is completed (L_4) ▼ Upgrades are forecast over 30 years from the financial year (ie, commencing 1 July) in which the upgrade is completed (L_5).
Whether utilisation of assets should be based on total utilisation at the point in time the asset reaches capacity or the present value of the Equivalent Tenements which will use the asset over a set period	Utilisation for the purpose of apportionment of assets should be based on total utilisation at the point in time the asset reaches capacity.
Whether ET should be proportional to the demand of an average residential dwelling or an average single residential dwelling.	As noted in Chapter 2, above, we have clarified that the ET measure relates to a single residential dwelling.
The start date for calculation of the Operating Revenues (Ri), whether this should be 1 July or from the exact date the DSP is registered with IPART.	Operating costs for the purpose of calculating the reduction amount are calculated over 30 years from the financial year (ie, commencing 1 July) in which the DSP is registered.
Whether rounding should occur to the nearest cent. Past practice has been to round to the nearest dollar. Rounding to the nearest cent would be of little value to customers and leads to time consuming processes to enable refunds or adjustments if customers are accidently over or under paid by a matter of less than one dollar.	Retain the draft determination, with rounding to nearest cent, to maintain consistency with IPART's other pricing determinations. We consider that the likelihood and additional administrative costs arising from under or overpayment are outweighed by the benefits of maintaining consistency.

Source: Sydney Water's submission to IPART, Draft Report, August 2018, pp 22-23.

3.7.2 Utilities continue to establish DSP areas

Our decision is to:

24 Maintain our current approach of not prescribing how the DSP areas are set.

Our 2000 Determination set a methodology for calculating developer charges for each DSP area. Our current determinations do not prescribe how to set DSP areas. In our Issues Paper we outlined that Sydney Water and Hunter Water have a large number of DSPs that have not been reviewed since 2007: 75 and 77, respectively. Without consolidation, they would need to revise all these DSPs if developer charges were reintroduced. In addition, new DSPs would need to be prepared and adopted for new development areas that have emerged since 2006.[179]

[179] IPART, *Review of developer charges and backlog sewerage charges for metropolitan water agencies* – Issues Paper, October 2017, p 32.

Developer charges should signal the location-specific costs of development; however, there is a balance. If DSP areas are too small, the administrative costs of the developer charges regime may be too high and there may be undue price variations between areas and even, over time, within an area. On the other hand, if DSP areas are too large, costs could be averaged across disparate areas, lowering administrative costs but nullifying the price signal. Our current approach is to not prescribe how to set DSP areas; therefore, utilities can balance cost-reflectivity and administrative costs.

Submissions to our Draft Report from Sydney Water[180] and Hunter Water[181] supported our decision.

3.7.3 Future consolidation of DSPs towards a zonal approach is likely

Some of the utilities have indicated they would prefer to aggregate DSPs into wider areas (ie, to adopt a more zonal approach to developer charges).[182]

In 2014, Central Coast Council consolidated its DSPs from 23 to three.[183] According to Central Coast Council, this amalgamation has reduced administrative costs and allowed timely sharing of costs between developers within the same DSP. Central Coast Council's water supply system is interconnected, running as a single system; however, its sewerage system is geographically disconnected. Central Coast Council considers that the proposed single level of developer charges encourages economic development and has the support of developers.[184]

In its submission to our Issues Paper, Hunter Water stated that DSP boundaries should be set taking into account price signalling, administrative efficiency and transparency, while providing certainty for developers and sufficient flexibility to reflect different circumstances.[185] Hunter Water noted that it may optimise its DSPs from 18 to six for water, and from 59 to 19 for wastewater. It plans to confirm its preferred approach to developer charges – after consulting developers and other stakeholders – closer to the time when charges are reactivated.[186]

Sydney Water noted that its proposed principles for establishing DSP areas were based on taking into account the incremental costs of servicing an area, minimising administrative costs and vesting risk with the party best able to manage it.[187]

Based on the utilities' submissions and comments at the public hearing, some degree of consolidation by Sydney Water and Hunter Water is likely to occur at the next round of setting DSP areas and calculating developer charges.

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180 Sydney Water's submission to IPART Draft Report, August 2018, pp 13.
181 Hunter Water's submission to IPART Draft Report, August 2018, p 19.
182 IPART, Developer Charges public hearing transcript, 6 March 2018, pp 4-5; Hunter Water's submission to IPART Issues Paper, December 2017, p 12.
183 IPART, *Review of developer charges and backlog sewerage charges for metropolitan water agencies – Issues Paper*, October 2017, p 32.
184 Central Coast Council's submission to IPART Issues Paper, December 2017, pp 10-11.
185 Hunter Water's submission to IPART Issues Paper, December 2017, p 39.
186 Hunter Water's submission to IPART Issues Paper, December 2017, p 12.
187 Sydney Water's submission to IPART Issues Paper, December 2017, pp 11, 32.

3.7.4 Our regulatory involvement is appropriately balanced

All utilities agree that our current light-handed approach to regulating developer charges, and our not having a role in setting DSP areas, continues to be appropriate.

Hunter Water submitted that the reasons we allow public water utilities the flexibility to set DSP boundaries still apply: the utilities' engineering expertise allows them to establish the correct boundaries that preserve the asset nexus; and consultation on exhibited DSPs safeguards against excessive amalgamation.[188]

Sydney Water supports the status quo and considers that we should continue our oversight role and register DSPs.[189]

Central Coast Council considers that our current role is appropriate and sees no reason for us to become more involved.[190]

The utilities' view was supported by other stakeholder submissions. WSAA commented that making the methodology operational reveals some of its limitations, most of which relate to the method's data intensity.[191]

> Paradoxically, the effort to improve the accuracy of developer charges increases rather than decreases the chance of them being challenged.
>
> A methodology that relies on specifying exactly what infrastructure is going to be built at what time in a defined [DSP] area [is] more open to challenge by developers as future forecasts will never be completely accurate.[192]

We agree that a balance must be achieved between signalling the location-specific costs of development and the administrative costs of maintaining many DSP areas. With too many disaggregated areas, there may be undue price variations between areas and even, over time, within an area. On the other hand, if DSP areas are too large, costs could be averaged across disparate areas, lowering administrative costs but nullifying the price signal. Utilities are best positioned to establish DSP areas and to consult with their customers and developers on an area and the charges. Under our Determination, we continue to not prescribe how DSPs areas are determined.

3.8 We have made the CPI indexation of prices consistent

Our decision is to:

25 Update the CPI indexation factor for annual adjustments to prices between DSP reviews, to March-on-March quarter CPI, ABS all groups eight capital cities.

Our 2000 Determination used an annual average measure of inflation based on four quarter-on-quarter values of the Consumer Price Index (CPI), as the weighted average of eight capital cities published by the Australian Bureau of Statistics (ABS).

188 Hunter Water's submission to IPART Issues Paper, December 2017, p 40.
189 Sydney Water's submission to IPART Issues Paper, December 2017, pp 11, 32.
190 Central Coast Council's submission to IPART Issues Paper, December 2017, p 11.
191 Water Services Association of Australia's submission IPART Issues Paper, January 2018, p 8.
192 Water Services Association of Australia's submission IPART Issues Paper, January 2018, p 9.

Our 2013 Determination for Gosford City Council and Wyong Shire Council updated the CPI adjustment factor from the annual average measure to our standard March-on-March quarter CPI index, using the same ABS series. This measure is now used as an inflation adjustment factor in our determinations of retail prices for the water utilities we regulate.

In our Issues Paper, we sought comment on whether the indexation factor should be consistent between our determinations. We also consulted on whether CPI indexation is appropriate for Central Coast Council's developer charges.

All utilities supported consistent indexing across our determinations, and the proposed March-on-March quarter CPI indexation consistent with the indexation of retail prices.[193] Greater consistency of CPI indexation between our determinations would eliminate the confusion and reduce the possibility incorrectly applying a CPI index from a 'wrong' determination to escalate a particular price expressed in real terms.

193 Sydney Water's submission to IPART Issues Paper, December 2017, p 28; Hunter Water's submission to IPART Issues Paper, December 2017, p 40; Central Coast Council's submission to IPART Issues Paper, December 2017, p 11.

4 New connections to existing properties – prices to extend services

Backlog sewerage and minor service extension (MSE) charges recover some of the capital costs associated with connecting existing (rather than new) properties to the water or sewerage system of a utility. These charges apply, for example, where a property had relied on a septic tank but can now connect to the reticulated sewerage system.

Extending sewerage services to backlog customers benefits these customers through direct cost savings from no longer needing to maintain on-site sewerage systems, such as septic and pump-out systems, greater amenity and increases in property value.

Connecting existing properties to the sewerage system can also benefit the broader community (ie, it can result in external benefits or positive externalities). For example, extending sewerage services to backlog properties can reduce pollution in receiving waterways.

In our Issues Paper, we recognised that significant capital investment is required to construct backlog sewerage schemes for existing communities.[194] Given that most backlog communities are likely to be both small and isolated from existing infrastructure, the costs per property are likely to be relatively high. This raises questions about affordability and how much customers are willing to pay for the service.

The potential for a new development in a backlog area to help co-fund extending the infrastructure might also be limited by topography or planning rules. Backlog sewerage services have been therefore often funded through a combination of charges paid by backlog customers, the broader water and sewerage customer base, and/or Government contributions.

This chapter presents the current regulatory regime for backlog sewerage and minor service extension charges, and discusses our decisions for the draft determination. Our draft position is as follows:

- The net present value (NPV) methodology for calculating the costs of a new connection (discussed in Chapter 2) is appropriate for both developer charges and backlog sewerage/service extension charges. In the first instance, the price for connecting a new service to an existing property would be set using the same methodology as the price for connecting a new service to a new development.
- Maximum prices for a service extension to an existing customer can be presented as a composite charge, or as a sum of two components:

194 IPART, *Review of developer charges and backlog sewerage charges for metropolitan water agencies – Issues Paper*, October 2017, p 36.

- a price to connect a new service to a new development, calculated for a Development Servicing Plan (DSP) area based on the incremental cost approach outlined in Chapter 2, plus
- a price reflecting the cost to build an extension to the connecting property in this DSP area, calculated on a marginal cost basis.[195]

- This will standardise our approach to determining the price of connecting a new service, whether to a new development or to an existing property (formerly referred to as either backlog or service extension charges), and enable utilities to charge on a marginal cost basis for extending a service while the zero developer charges policy applies.
- There may be situations that justify lower connection charges to existing properties. This might occur where environmental, public health or other considerations justify a lower price for properties connecting to a sewerage system. Our approach is to assess these departures from the standard charges on a case-by-case basis, either at a periodic price review or in a scheme-specific review requested by a utility.

4.1 Multiple methodologies for backlog sewerage charges and charges for service extensions have previously applied

4.1.1 There were three different methodologies for calculating backlog charges

In July 1997, we determined a methodology for fixing backlog sewerage capital contributions for backlog customers for Sydney Water, Hunter Water, Wyong Shire Council and certain properties in the Gosford City Council area.[196]

In 2006, we reviewed the 1997 Determination and updated the methodology for backlog sewerage charges for Gosford City Council. The 2006 Determination applied to backlog customers who had not previously contributed to a sewerage financing scheme. Our 1997 Determination continued to apply for other backlog customers of the former Gosford City Council.

The above means that **three** different methodologies were used to calculate the maximum backlog sewerage charge:

- two for properties in the former Gosford City Council[197] area of Central Coast Council (under our 2006 Determination), depending on whether they were either Priority Sewerage Program (PSP) properties, or non-PSP properties, and
- one for properties serviced by Sydney Water, Hunter Water and the remaining properties in Central Coast Council's area of operations (under our 1997 Determination).

195 Where developer charges are set to zero, properties will only pay the marginal cost charge.

196 In the mid-1970s, Gosford City Council established a regional sewerage scheme that continued until the mid-1990s. This scheme applied to a defined area where the Council planned to eventually provide water and sewerage services. For a 20-year period, property owners within this area paid 'sewerage loan charges' on the assumption that they would eventually be connected to the system. While the sewerage financing scheme area covered the majority of the Gosford area of operations, there were some remote communities that were not included. These included; Fishermans Parade at Daleys Point, Mooney Mooney, Cheero Point, Little Wobby, Bar Point, Patonga Creek, and areas within Bensville, Empire Bay and South Kincumber. These properties were the subject of the backlog sewerage determination.

197 Backlog properties within the former Gosford City Council area that did not previously contribute to a sewerage financing scheme.

The key aspects of the previous methodologies for calculating backlog service charges are set out in Box 4.1.

Sydney Water, Hunter Water and Central Coast Council (the 1997 Determination)

Our 1997 Determination set the maximum backlog charge at the lesser of:

- $3,000 per property, and
- 25% of the total net capital cost per property of the backlog works.[198]

This methodology meant that water utilities fund at least 75% of the net capital costs of backlog works, typically through higher bills to their broader customer base. That is, most of the capital costs of a given backlog scheme were funded by other customers.

Backlog customers in the former Gosford City Council area of Central Coast Council (the 2006 Determination)

Our 2006 Determination for Gosford City Council updated the methodology, which meant that certain backlog customers paid a greater share of the cost of the backlog scheme.

Our 2006 methodology applied to customers who had not previously contributed to a Gosford City Council sewerage funding scheme. The following maximum backlog charges were set for:

- **PSP areas:** $5,400 plus 67% of the remainder of the capital costs (net of subsidies), and
- **non-PSP areas:** the full cost (equal to a developer charge).[199]

Unlike our 1997 methodology, the 2006 Determination allocated most of the costs to backlog customers, with a lower amount of the costs spread across the broader customer base.

198 IPART, *Pricing of Backlog Sewerage Services – Sydney Water Corporation, Gosford City Council, Hunter Water Corporation, Wyong Shire Council Determination No 4 1997,* July 1997, p 3.

199 IPART, *Pricing of Backlog Sewerage Services for Gosford City Council, Determination No 1 2006*, February 2006, pp 3, 5.

Box 4.1 Methodologies for calculating backlog sewerage contribution charges

Sydney Water, Hunter Water and some backlog customers within Central Coast Council

The 1997 Determination of backlog sewerage services for metropolitan water utilities set the formula for calculating the maximum backlog sewerage capital contribution charge (BSCC) as:

$$BSCC = \max\left(\frac{25\%\ of\ K}{N}, \$3{,}000\ nominal\right)$$

Inputs on the formula are:

- $BSCC$ – backlog sewerage capital contribution charge
- K – actual capital cost of sewerage infrastructure attributed to the backlog properties
- N – total number of existing properties in the backlog area

Former Gosford City Council area of Central Coast Council

Under our 2006 Determination of Gosford City Council's backlog sewerage services (for backlog customers who had not previously contributed to a sewerage financing scheme),[a] we set two different methodologies, depending on whether a property was in a designated PSP area.

Non-PSP properties

The formula for calculating the Non-PSP Contribution Charge, $NPCC$, was the same as that for calculating developer charges under our 2000 Determination, as set out in Chapter 2:

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

This methodology set maximum contribution charges, which recovered the full capital costs of a backlog sewerage scheme, including recognising the capital component of future recurrent bills.

PSP properties

The formula for calculating the PSP Area Contribution Charge, $PACC$, recognised the positive environmental and social benefits of the works accruing to the wider community.

$$PACC\ =\ Initial\ Fixed\ Contribution\ (IFC)\ up\ to\ \$5{,}400 + \frac{PV\left(k_{net\ of\ subsidies}\right) - PV(IFC\ \times\ Lots)}{PV(Lots)} \times 0.67$$

a For backlog customers within the former Gosford City Council who had previously contributed to a sewerage financing scheme, the 1997 Determination continued to apply.

Source: IPART, *Pricing of Backlog Sewerage Services – Sydney Water Corporation, Gosford City Council, Hunter Water Corporation, Wyong Shire Council Determination No 4 1997,* July 1997, p 2; IPART, *Sydney Water Corporation, Hunter Water Corporation, Gosford City Council, Wyong Shire Council Developer Charges from 1 October 2000, Schedule 4, Determination No 9 2000*, September 2000; IPART, *Pricing of Backlog Sewerage Services for Gosford City Council, Determination No 1 2006*, February 2006, pp 3, 27.

4.1.2 A separate methodology applied for Sydney Water's minor service extension charges

We set a methodology to determine the minor service extension (MSE) charge in Sydney Water's 2016 Determination. The charge applied when Sydney Water extended a sewerage system and/or water supply system to a property (that is not connected but is capable of being connected) at the owner's request. Sydney Water's MSE charge recovered the cost of the capital investment to extend the water or sewerage system to a property or group of properties.

We note that the MSE methodology was based on a 'marginal' capital cost approach (ie, it did not include the capital costs of existing assets the connecting customer will use after the extension is built).

The MSE charge methodology mirrored the methodology for calculating developer charges and was as follows:

$$MSE = \left[\frac{PV(K) - PV(R - C)}{PV(S)}\right]$$

Where:

- MSE - minor service extension charge
- K - capital cost
- R - revenue from customers served by the MSE
- C - operating costs of servicing MSE customers, and
- S - equivalent tenements (ETs) served by the MSE.

In its submission to our Issues Paper, Sydney Water noted the significant administrative effort required to implement MSEs. Sydney Water proposed charging a flat rate per ET that seeks to connect, on the basis that it would be simpler and less administratively costly. Sydney Water did not oppose including MSEs in the developer charges determination, as long as this did not create the impression that the charge would be set to zero for existing properties wishing to connect.[200]

Based on our communications with Sydney Water, we understand that about 6,000 properties in the Greater Sydney area are currently not connected to services that are available in the area and could request a service extension at some point in future. These properties would be affected by a change in the method for calculating the charge.[201]

4.1.3 Hunter Water has previously proposed a separate major service connection charge

Hunter Water has a small number of existing properties in areas with sewerage services that are not connected to its network. These properties are typically non-residential and have an on-site sewerage treatment system.

In our 2015-16 review of Hunter Water's periodic retail prices, Hunter Water proposed a methodology for calculating charges for connecting existing properties to its sewerage system, rather than setting a specific price (or prices). Hunter Water noted that given the size and characteristics of some of these properties, it may need to augment its sewerage system to connect them to its network. The methodology proposed by Hunter Water was based on our 2000 Determination of developer charges (with some amendments).[202] In the 2015-16 review,

200 Sydney Water's submission to IPART Issues Paper, December 2017, p 38.
201 Email communication with Sydney Water, 13 April 2018.
202 Hunter Water, *Submission to IPART on prices to apply from 1 July 2016*, June 2015, pp 87-88.

we decided to consider Hunter Water's proposed major service connection charge as part of our later consolidated review of developer charges (this review).[203]

4.2 Our previous determinations may have set charges below cost-reflective levels

Our previous backlog sewerage determinations (1997 Determination for Sydney Water, Hunter Water and Central Coast Council, and the 2006 Determination for some areas in the former Gosford City Council) set charges that may have been below cost-reflective levels. Hunter Water agreed with this point in its written response to our Issues Paper.[204] It stated that the customer cap of $3,000, or 25%, does not reflect the actual costs of backlog sewerage connections, which are $55,000 on average per connected lot.[205] Hunter Water further noted:

> There may be instances where a majority of existing property owners in a township or village are prepared to fund a substantial share of the capital costs of a backlog sewerage scheme. In those circumstances, IPART's determination … should not prohibit an arrangement that allows those property owners to voluntarily fund a contribution that exceeds $3,000 per property.[206]

At the public hearing, the Public Interest Advocacy Centre (PIAC) made similar comments:

> We certainly agree that the areas most in need would need to have some sort of cost relief, and we strongly suggest that needs to be a means-tested approach. So the people who cannot afford to pay for their own solutions are the ones who are actually getting the benefit from that reticulation being extended to them. For people who can afford to pay for it themselves, who are more likely to benefit from the improved value of their property, and so on, in having that sewerage attached, it is quite fair that they should be able to pay.[207]

The level of customer contribution provided in the previous determinations were not adequate for funding backlog services without socialising the costs across a wider customer base.

4.3 Backlog sewerage charges are not applied uniformly across utilities

Not all utilities charge their customers backlog sewerage charges. Where charges do apply, not all properties pay these charges. The following sections provide more details about each utility's charging practices.

4.3.1 Sydney Water does not levy backlog sewerage charges

Since 2000, the NSW Government has agreed to fund the cost of customers connecting in PSP areas.[208] Sydney Water's earlier PSP customers were funded by Community Service Obligations (CSOs), set as a $3,000 contribution as per the capped charge in the 1997 Determination.[209] In 2011, the Minister directed Sydney Water to accelerate the PSP and

203 IPART, *Review of prices for Hunter Water Corporation – Final Report*, June 2016, p 144.
204 Hunter Water's submission to IPART Issues Paper, December 2017, p 31.
205 Hunter Water's submission to IPART Issues Paper, December 2017, p 31.
206 Hunter Water's submission to IPART Issues Paper, December 2017, p 31.
207 IPART, Developer Charges public hearing transcript, 6 March 2018, p 44.
208 Sydney Water's submission to IPART Issues Paper, December 2017, p 35.
209 Sydney Water's submission to IPART Issues Paper, December 2017, p 36.

provided Sydney Water with funding of $6,000 per dwelling, exceeding the cap set in the 1997 Determination.

Sydney Water has delivered the backlog sewerage program and the PSP on behalf of the NSW Government. Six areas listed in its Operating Licence remain to be connected. Three of these areas – Austral (50 lots), Menangle (100 lots) and Menangle Park (120 lots) – are likely to be connected when the surrounding areas are serviced over the next 10 years.[210]

Sydney Water does not levy backlog sewerage charges. Currently, it is neither constructing nor waiting to construct backlog or PSP schemes under its capital program.[211]

4.3.2 Hunter Water's approach depends on the type of property connecting to the sewerage system

In 2012, Hunter Water implemented its *Provision of backlog sewer services policy*.[212] The NSW Environment Protection Authority (EPA) helped Hunter Water establish its priorities and the benefits of a backlog sewerage program.[213] The following outlines the differences in the way Hunter Water applies the policy for townships and villages compared to urban infill areas:

- Once Hunter Water has established the priorities for backlog sewerage schemes for **townships and villages**, it makes a case to the NSW Government for funding to cover connecting customers' contributions to the schemes, seeks the Minister's direction to carry out the schemes and applies to recover any remaining costs in its pricing submission to IPART.[214] It has:
  - an Environmental Improvement Charge (EIC) and a Clarence Town levy in place to recover the costs of its backlog sewerage programs from its broader customer base, [215] and
  - a current backlog of 2,500 properties in 18 towns. The estimated connection costs exceed $130 million. With each lot costing between $25,000 and $85,000, the average cost is $55,000 per lot.[216]
- In **urban infill areas,** the environmental and health benefits of backlog services are localised. Some costs of the backlog schemes are recovered from connecting customers through charges set under IPART's 1997 Determination.
  - Hunter Water estimates there are 260 residential infill backlog properties.
  - Hunter Water cites a recent example of the application of the 1997 Determination in Hickson Street, Merewether, Newcastle. The owners of the 12 connecting properties fully funded the backlog works over a 10-year period, under the periodic payment provision at Hunter Water's prevailing cost of debt.[217]

210 Sydney Water's submission to IPART Issues Paper, December 2017, p 36
211 Sydney Water's submission to IPART Issues Paper, December 2017, p 35.
212 Hunter Water's submission to IPART Issues Paper, December 2017, p 29.
213 Hunter Water's submission to IPART Issues Paper, December 2017, p 25.
214 Hunter Water's submission to IPART Issues Paper, December 2017, pp 29-30. At the time of writing, the relevant Minister is the Minister for Energy and Utilities.
215 Hunter Water's submission to IPART Issues Paper, December 2017, p 41.
216 Hunter Water's submission to IPART Issues Paper, December 2017, p 27.
217 Hunter Water's submission to IPART Issues Paper, December 2017, p 30.

4.3.3 Central Coast Council levies backlog sewerage charges

Central Coast Council has been levying backlog charges in Cockle Bay towns and Mooney Mooney Cheero Point.[218] These were levied under the 2006 Determination, which stated that benefitting property owners pay the majority of the costs after subsidies are applied.[219] Any remaining costs are spread among the wider customer base.

4.4 We have applied a uniform methodology to set prices for a new service connection

Our decision is to:

26 Apply a uniform methodology to set maximum prices for a new service connection to an existing property.

We have introduced new terminology that recognises common features of various connection charges under our review. The developer charges methodology discussed in Chapter 2 allows the utilities to calculate maximum prices for connecting new services to new developments. Our decision is to standardise our approach to regulating the price of connecting a new service, whether to a new development or to an existing property (formerly referred to as backlog or service extension charges). We consider that the methodology for setting maximum prices for a new connection discussed in Chapter 2 should apply in this case. We have streamlined our regulation of capital connection charges, bringing them under the single new determination.

This approach provides consistency for residents living in these areas, addressing the concerns raised by the Housing Industry Association in its submission to our Issues Paper.[220]

Applying the standard methodology ensures that all connection charges are cost-reflective. Our methodology will lead, all other things being equal, to higher charges if compared to the backlog sewerage charges under our previous determinations.

There may be situations that justify lower connection prices to existing properties

While we determine the maximum price for backlog sewerage charges through our determinations, utilities may seek approval to depart from this methodology. This may occur, for instance, where environmental or public health benefits justify a lower price for properties connecting to a sewerage system. We refer to these environmental or public health benefits as **positive externalities**.

218 Central Coast Council's submission to IPART Issues Paper, December 2017, p 11.
219 IPART, *Pricing of Backlog Sewerage Services for Gosford City Council, Determination No 1 2006*, February 2006, p 10.
220 Housing Industry Association's submission to IPART Issues Paper, January 2018, p 3.

In their submissions to the Issues Paper, Central Coast Council[221], Sydney Water[222] and PIAC[223] all proposed more flexibility in sharing the connection costs with the broader community.

At the public hearing, NSW Health emphasised the importance of sewerage services to public health.[224] PIAC spoke at the public hearing about the environmental and health benefits of sewerage.[225] PIAC emphasised the importance of considering these benefits when determining who should pay the cost of connecting to the sewerage system, while also taking into account people's ability to pay.[226]

For example, we received a submission from Newcastle City Council that referred to Hunter Water levying an annual EIC to fund the Wyee backlog scheme.[227] This submission argued in favour of extending the funding arrangements to the township of Hexham, which is located in an environmentally sensitive area. Newcastle City Council nominated connecting Hexham to the sewerage system as an environmental and public health priority, which NSW Health and the NSW EPA both endorsed.[228]

In this example, and more generally, water utilities are able to charge lower connection prices to connecting properties and recover these costs from either the broader customer base or the NSW Government (through contributions or as a shareholder of the state-owned utilities), by seeking approval:

- from IPART at a periodic price review (eg, the scheduled 2020 Hunter Water retail price review)
- by applying to IPART for a scheme-specific review, or
- from the NSW Treasurer under section 18(2) of the IPART Act.

At each of the above points, the utility could seek approval to charge less than the maximum price determined by the methodology in this determination, for connecting a property or a defined group of properties (eg, by DSP area). This could take effect through IPART setting a new determination for these properties (to replace this determination, for those properties), or the NSW Treasurer providing the utility with approval to charge less than the maximum price determined by IPART (per section 18(2) of the IPART Act).

221 Central Coast Council's submission to IPART Issues Paper, December 2017, p 12.
222 Sydney Water's submission to IPART Issues Paper, December 2017, p 35.
223 IPART, Developer Charges public hearing transcript, 6 March 2018, pp 44-45.
224 IPART, Developer Charges public hearing transcript, 6 March 2018, p 42-43.
225 IPART, Developer Charges public hearing transcript, 6 March 2018, p 44.
226 IPART, Developer Charges public hearing transcript, 6 March 2018, p 44.
227 Hunter Water levies an EIC ($38.37 per annum in $2015-16) on properties in its area of operation connected to, or for which a connection is available to, the sewerage system. This charge contributes to the cost of providing sewerage to backlog areas. These costs are also partly funded through NSW Government CSO payments. In November 2014, the NSW Government announced that the township of Wyee was to be connected to Hunter Water's sewerage network, with the costs funded through the EIC levied on Hunter Water's sewerage customers ($23.6 million) and a NSW Government contribution ($2.4 million). In our 2016 Determination of Hunter Water's prices, we accepted its proposal to extend the EIC beyond its original sunset date to cover the costs of providing backlog sewerage services to Wyee. Our view in the 2013 Determination was to abolish the EIC in 2019. However, in 2016, we considered it appropriate to extend the EIC in line with Hunter Water's proposal, given the Government's announcement in relation to Wyee. See IPART, *Review of prices for Hunter Water Corporation from 1 July 2016 to 30 June 2020 – Final Report*, June 2016, pp 118-120.
228 City of Newcastle's submission to IPART Issues Paper, January 2018, pp 1-2.

A decision would then need to be made whether the difference between the utility's costs of providing the connection and the charges actually levied to connecting customers is recovered from:

- the broader water and wastewater customer base, via periodic prices to be determined by IPART at the next periodic price review, and/or
- the broader NSW community, via a NSW Government contribution (either a direct contribution or a contribution as shareholder of the state-owned utilities).

Generally, we favour a funding approach based on the following cost allocation hierarchy:

- In the first instance, we prefer that the impactor pay (ie, the party that created the need to incur the cost should pay).
- If that is not possible, the beneficiary should pay (with direct beneficiaries paying before indirect beneficiaries), although the impactor and the beneficiary are sometimes the same.
- As a last resort, taxpayers should pay.[229]

Applying this principle, we consider that:

- A connecting customer, as an impactor, should pay the full cost of the connection. However, if it is not appropriate or possible to levy the full charge on connecting customers (eg, because of affordability or a social policy objective), there may be a case to move to the next level of the funding hierarchy – the beneficiary (first direct, then if that is not possible, indirect beneficiaries).
- If the utility's broader customer base benefits from extending the connection, there may be a case to include the relevant costs in retail (periodic) prices, to be funded by the broader customer base (or even potentially geographic segments of the broader customer base, for example).
- On the other hand, if the benefits are realised by the broader community or environment, there may be a case for the NSW Government to fund these costs (or a share of these costs) on behalf of the broader community.

In summary, we recognise that there may be situations that justify lower connection prices to existing properties. This might occur where environmental, public health or other considerations justify a lower price for properties connecting to a sewerage system. We will consider these issues on a case-by-case basis.

The flexibility of this approach would address the concerns of Central Coast Council, which argued in its submission to the Issues Paper that the cost of connection can be unaffordable for many potential users. Central Coast Council stated that three of its proposed schemes (Patonga Creek, Little Wobby and Bar Point) did not go ahead as planned due to a lack of customer support in these areas, meaning the benefits to the wider community from these schemes were not realised. Central Coast Council was of the view that the outcome may have been different if the costs to connecting customers were lower.[230]

229 IPART, *Review of Rural Water Cost Shares for WaterNSW and Water Administration Ministerial Corporation – Issues Paper*, April 2018, pp 10-11.

230 Central Coast Council's submission to IPART Issues Paper, December 2017, p 12.

4.4.2 Submissions to our Draft Report

Submissions to the Draft Report generally supported our decision, but noted a range of implementation issues in transitioning from the previous approaches.

Sydney Water submission to the Draft Report

In its submission to the Draft Report, Sydney Water:

- Agreed that it is preferable that a single method be used for all properties and that the incremental cost approach to capital costs should apply in all cases, but noted that it considered that IPART's net present value (NPV) methodology could be improved.[231]
- Noted that IPART's proposal is a significant change from the existing price regime for PSP properties as it shifts the cost burden to connecting customers in the first instance. This differs significantly from the historical approach (where water utilities fund at least 75% of the net capital costs of backlog works).[232]
- Agreed that externalities could justify apportioning some costs of new connections to wider beneficiaries if the connection provides additional value to the wider community. Sydney Water supported IPART's proposal to assess these on a case-by-case basis, although noted that this may not provide certainty for customers.[233]
- Noted that the formula set out in the Draft Report to calculate charges differed from Sydney Water's current minor service extension (MSE) formula, in that connecting properties will no longer get credit for the future periodic charges they would have paid after connecting. This will result in a step increase of around $6,000 for water and $7,500 for wastewater minor service extension (MSE) charges for a residential property.[234]

In response to Sydney Water's submission, we note:

- Sydney Water's proposed changes to the methodology for calculating developer charges are centred on its view that it would be preferable to use RAB (or DORC) rather than MEERA values for calculating capital charges. At this point in time we have decided not adopt Sydney Water's proposed approach. These issues and the reasons for our decision are covered in detail in Chapter 2.
- The adoption of a consistent methodology based on the incremental cost approach for developer charges will result in higher charges for customers that would have otherwise been subject to backlog charges under the 1997 Determination and the 2006 Determination. As set out above, the proposed approach is consistent with our cost allocation hierarchy, which we consider will promote efficient outcomes. Impacts on customers may be addressed through the following mechanisms, which are discussed in the subsequent sections of this chapter:
  - The ability for customers to pay charges as a 20-year annuity
  - Consideration of whether costs should be shared among the broader community on the basis of factors such as positive externalities (either at a periodic price

231 Sydney Water's submission to IPART Draft Report, August 2018, pp 13, 24.
232 Sydney Water's submission to IPART Draft Report, August 2018, p 3.
233 Sydney Water's submission to IPART Draft Report, August 2018, pp 24-25.
234 Sydney Water's submission to IPART Draft Report, August 2018, pp 4, 24.

review or scheme-specific review, or via an application to the NSW Treasurer under section 18(2) of the IPART Act)

- Government subsidies and CSO payments.

- We agree that amendments to the formula set out in the Draft Report to calculate prices for service extensions could be made to more clearly reflect the change in operating cost and revenue due to the new connection. We cover this issue in the following sections of this chapter.

Hunter Water submission to the Draft Report

In its submission to the Draft Report, Hunter Water supported the application of the methodology to backlog schemes and major service connections, and noted that exceptions can be sought where broader public benefits (or externalities) can be demonstrated.[235]

However, Hunter Water also raised a number of issues concerning the application of the proposed approach:

- The capital works required to providing services to different locations can vary significantly. In some cases, it may be more cost effective to build new localised systems rather than to connect to Hunter Water's existing system. However, the definition of extension in Schedule 7 (of the Determination) only refers to "system additions". Accordingly, Hunter Water suggested that IPART clarify the definition of infrastructure that falls within the scope of works that would be covered by the proposed marginal cost based charge.[236]

- The Final Report should clarify how any scheme-specific determinations that occur outside of periodic price review would be implemented. For example, if IPART were to determine in a scheme-specific review that a contribution from the broader customer base was warranted, it is not clear whether that contribution would be automatically included in the following periodic price determination.[237]

- With respect to major service connections:
  - Hunter Water ceased levying capital contributions after IPART's 2015-16 review of Hunter Water's prices. This decision was based on the cost of determining the contribution amounts in the absence of updated DSPs.
  - For the reasons outlined in its response to the Issues Paper, Hunter Water sees merit in applying a major services connection charge to existing properties if the NSW Government were to reinstate developer charges. However, it does not support IPART's current proposal that would enable it to levy its major service extension charge on a marginal cost basis while the zero developer charges policy applies.
  - Hunter Water does not offer services for connections to existing properties. Accordingly, under Hunter Water's existing policy, the marginal cost of connecting to its system is already covered by the relevant property owner who has access to a competitive market for connection services. Hunter Water considers that this approach is more efficient than requiring Hunter Water to

235 Hunter Water's submission to IPART Draft Report, August 2018, p 19.
236 Hunter Water's submission to IPART Draft Report, August 2018, p 8.
237 Hunter Water's submission to IPART Draft Report, August 2018, p 9.

organise the design and installation of the service extension and apply a connection charge.

  - Hunter Water would support the proposal with modifications that allow it to continue its current business practices that result in efficient service provision (ie, if IPART were to specify that the charge for new connections to existing properties only applies where the relevant services are provided by the utility).[238]

- Hunter Water does not support the application of the developer charge to minor service connections based on administrative cost and the likely disincentive it would provide for existing properties to connect to Hunter Water's system.[239]
- Hunter Water requires all existing properties to organise and fund their connections to its system, and does not offer design and construction services. Therefore, Hunter Water proposed that the determination should make clear that this charge for new connections to existing developments would only apply where the relevant services are provided by utility.[240]

In terms of the issues that Hunter Water raised for clarification, we note:

- The intent of the Determination is that any extension to the water utility's network would be covered by the charging methodology, where "Extension" is defined under clause 1 of Schedule 7 of the determination as "the construction of an additional component, or components, of a System". We do not consider that it is necessary or appropriate to provide arbitrary thresholds for the size or nature of assets that would be included under the charging framework.
- Where a scheme-specific review resulted in a share of the efficient costs of a service extension being allocated to the broader customer base, these efficient costs would be considered as part of our assessment of the overall revenue requirement in the next price review for the water utility.

We note Hunter Water's concerns about the application of the standard developer charge to existing properties connecting to a new service. However, we consider that this is consistent with the overall developer charges framework, and it would not be appropriate to exempt one group of customers from the charge. If we were to do so, then these costs would need to be recovered from the broader customer base, which would not be consistent with our cost allocation hierarchy (with the exception of when accounting for positive externalities, as outlined above). We do not consider that there would be significant administrative costs in applying the charge for minor customers relative to large customers, as the standard developer charge component of the charge for the new connection would be calculated in the same way as developer charges for all other new customers in a DSP connecting to the network.

Furthermore, the connection charge sends a signal to all new connections regarding the costs of consuming capacity in existing system assets. The resulting cost-reflective charge will allow all customers, both large and minor, to weigh up the relative merits of connecting to a system or maintaining alternative on-site facilities.

238 Hunter Water's submission to IPART Draft Report, August 2018, p 11.
239 Hunter Water's submission to IPART Draft Report, August 2018, pp 12, 19.
240 Hunter Water's submission to IPART Draft Report, August 2018, p 19.

We also note that Hunter Water requires new connections to organise and fund connections to its network. We consider that Hunter Water's approach is broadly consistent with our new charging methodology, in that regardless of who undertakes the work, customers are ultimately responsible for funding the new infrastructure required to connect. The only difference is that our new methodology includes adjustments for:

- Any capacity in the service extension that will be used by other customers, and
- Differences between operating costs and revenue for customers serviced by the extension and operating costs prevailing in the DSP before the extension (see Box 4.2, below, for a summary of the calculation for the new methodology).

We note that Hunter Water does not provide new connection services, and therefore its customers are required to arrange for the design, construction and funding of service extensions. Our decision would not require Hunter Water (or any utility) to organise the design and construction of works for a new connection to an existing service. In cases where it is the water utility's policy that customers are responsible for the design, construction and funding of service extensions, we consider that our new charging methodology should still be applied. In this case, the resulting charge would include the value of existing assets only, as construction of assets funded directly by customers are excluded entirely from the calculation of the charge. With reference to the formula in Box 4.2, if a customer funded the capital component of the charge, then this component of the charge (K_4) would be zero, with a transfer between the utility and the customer to account for any difference between the expected operating revenues and costs from the new connection ($R_i' - C_i'$).

PIAC submission to the Draft Report

PIAC submitted that benefits to community health and the environment in connecting to the sewerage system should be a factor when considering how to allocate costs, and that significant positive externalities could justify more costs being be borne by the broader customer base or the NSW Government.[241]

Prices for a new service extension include an adjustment for operating costs and revenue from the new connection

As noted above, in its submission to the Draft Report, Sydney Water noted that the new methodology differs from its previous pricing formula for minor service extensions (MSEs) in that these properties will no longer get credit for the future periodic charges they would have paid after connecting.[242]

The formula in the Draft Report calculates prices based on marginal capital costs, with an adjustment for the difference in operating costs of servicing the new connection relative to the average operating cost of servicing customers in the DSP area, as set out below.

New developments requiring a service extension would pay the standard developer charge DC plus the capital charge for an extension DC'. That is, a price to connect a new service to an existing property is calculated as $DC + DC'$, where:

241 PIAC's submission to IPART Draft Report, August 2018, p 1.
242 Sydney Water's submission to the IPART Draft Report, August 2018, pp 4, 24.

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

Calculated as per the formula outlined in Chapter 2, and

$$DC' = \frac{K_4}{L_4} - \frac{NPV(C_i - C_i')}{L_4} \; for\; i = years\; 1, \ldots, n$$

Is the costs of extending services to existing properties, calculated on a marginal cost basis, where:

K_4 – the Present Value of estimated efficient capital costs of the extension.

L_4 – the Present Value of the number of Equivalent Tenements in the service extension area within the DSP that will use the extension (including new developments and existing properties), calculated at discount Rate $r_4 = r_3$.

C_i' – the estimated future operating, maintenance and administration costs expected to be spent on customers serviced by the service extension.

C_i – the estimated future operating, maintenance and administration costs of servicing these customers at the cost prevailing in the DSP area before the extension.

Under the formula set out in the Draft Report, the marginal capital cost for a service extension would be adjusted to reflect differences in operating costs of servicing customers connecting to the extension, relative to the cost prevailing in the DSP area before the extension occurred. No adjustment would be made for differences in revenue from customers served by the extension.

The basis for this approach was that the DSP and standard developer charge (DC) already included forecasts of new customer growth, the costs of serving new customers, and revenue from new customers. Therefore, there would be no need to also account for the operating costs and revenue of the new customer in the marginal component of the charge (DC'), as this would be double counting.

However, in light of Sydney Water's comments, we have reviewed our approach. Based on our analysis, we have decided to amend the formula to include the full amount of the additional operating costs and additional revenue from the new customer in the marginal component of the charge. The reasons for this amendment are as follows:

- The marginal component of the charge only applies where the assets being constructed for the service extension are not already included in a DSP. This would mean that the assets (and possibly also the connection of the customer) were not foreseen by the water utility at the time it established the DSP.
- Forecasts of customer growth (and consequently, the operating costs and revenue from new customers) are typically based on forecasts of population and urban density (as required by clause 7 of Schedule 5 of the Determination). As such, we consider that these forecasts would be unlikely to include customer growth driven by **existing** customers connecting to a new service, and therefore existing customers would not be accounted for in the demographic assumptions used to develop forecasts of new connections in a DSP.

Reflecting this adjustment, the revised formula and our decision on prices for connecting a new service to existing properties are summarised in Box 4.2

Box 4.2 Methodology for maximum prices for a new connection to an existing property

The maximum price for connecting a new service to an existing property, per equivalent tenement (ET), is calculated as follows:

If a DSP has been made or reviewed, to include the assets for extension

- the relevant extension assets are included in K_2
- a price to connect a new service, DC, is calculated using the formula outlined in Chapter 2:

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

If a DSP has not been made or reviewed, to include the assets for extension

- the relevant extension assets are not included in K_2

  A price to connect a new service to an existing property is calculated as $DC + DC'$, where

$$DC' = \frac{K_4}{L_4} - \frac{NPV(R_i' - C_i')}{L_4} \; for \; i = years \; 1, \dots, n$$

  is the costs of extending services to existing properties, calculated on a marginal cost basis.

In this case,

- K_4 – the present value of estimated efficient capital costs of the extension
- L_4 – the present value of the number of ETs in the service extension area within the DSP that will use the extension (including both new developments and existing properties), calculated at discount rate $r_4 = r_3$.
- C_i' – the estimated future operating, maintenance and administration costs of servicing customers serviced by the service extension in each year (i)
- R_i' – the future periodic revenues expected to be received from customers serviced by the service extension in each year (i).
- When the zero developer charges policy is in place, $DC = 0$ and only DC' is payable.
- If and when the zero developer charge policy is removed, $DC + DC'$ would be payable until such time that a DSP is reviewed to include the extension (with a nexus to development).

4.5 We have grandfathered existing backlog sewerage and minor service extension charges

Our decision is to:

27 Grandfather existing backlog sewerage and minor service extension charges calculated and applied on an annuity basis under our:

- 1997 and 2006 Determinations of backlog sewerage charges, and
- 2016 Determination of retail prices for Sydney Water.

Our decision to grandfather existing charges ensures that customers making annuity payments for backlog sewerage under the existing determinations will have the certainty of knowing that their payments will continue for the remainder of the annuity period. Utilities

also benefit from this approach, as they can rely on their existing forecasts for annuity payments.

Our approach ensures administrative simplicity and stability, as existing schemes will not have to be converted to a new regulatory framework.

In its submission to the Draft Report, Hunter Water supported our draft decision.[243]

In its submission to the Draft Report, Sydney Water accepted our decision, but proposed the determination should also grandfather any existing MSE projects and PSP schemes where Sydney Water has received a valid application but the scheme has not yet moved to construction and/or the customer has not yet connected.[244]

In support of its proposal, Sydney Water noted that:

- The draft decision would exclude many current MSE cases and PSP schemes. For example, current MSE applications that have not been finalised and existing MSE cases where a quote has been provided but a customer has not yet connected would appear to be excluded from the proposed grandfathering arrangement.
- It does not consider it fair that prices for MSEs should be subject to significant change once a customer has paid the application fee. Sydney Water has a number of MSE cases in progress and considers these cases should be grandfathered.[245]

We agree with Sydney Water that customers that have already made a valid application for a new connection to an existing property should also be eligible for grandfathering of the charges that would apply under the existing determinations. Therefore, we have specified in the determination that grandfathering applies to customers that have made applications for a new connection (subject to that application being approved by the water utility).

4.6 We recommend that NSW Government funding for Community Service Obligations be contestable

IPART recommendation

1 We recommend the NSW Government's social policy objectives and Community Service Obligations be provided through a contestable process.

We recommend that the provision of CSOs to achieve NSW Government social policy objectives (eg, relating to the provision of backlog sewerage services) should be **contestable**, to facilitate innovation and efficient market solutions.

In our submission to the Harper Review of competition policy, we stated that there should be competition for the market for providing non-commercial services and meeting community service obligations relating to water (eg, universal service obligations). That is, when governments are procuring these services, they should call for competitive bids or expressions of interest from the market, rather than automatically requiring public water utilities to

243 Hunter Water's submission to IPART Draft Report, August 2018, pp 19-20.
244 Sydney Water's submission to IPART Draft Report, August 2018, pp 13, 20-21.
245 Sydney Water's submission to IPART Draft Report, August 2018, pp 6, 25.

provide them (or granting them the right to do so). In such circumstances, a public water utility could bid or be a public sector comparator (and default supplier).[246]

We recommended that "CSOs be clearly defined and funded and available to all suppliers in the market".[247]

If the NSW Government provides subsidies or grants directly to a utility to fund the capital costs of extending services (eg, to fund backlog services), these grants **should not be deducted from the capital costs** used in the developer charges calculation formula. This would assist with calculating the appropriate total cost of an extension and the capital connection charge per equivalent tenement (ET).

If assets to service a backlog area or extension could service a new development, they should be added to the corresponding DSP area and included in the developer charge.

Any subsidies would then apply to eligible connecting customers after calculating the full charge. Assuming they are not eligible for a subsidy, new developments connecting to an extension would pay the full connection charge (that is, the charge before any subsidy).

Submissions to our Draft Report generally supported our draft recommendation, and provided a number of other comments around contestable CSOs.

Sydney Water noted that this is a matter for the NSW Government, but that in principle, a competitive process for the delivery of services (or servicing solutions) could result in better outcomes or lower costs for customers.[248] Sydney Water noted that since the introduction of WICA in 2008, water and sewerage services can now be provided by any entity with a WIC Act Licence. It therefore makes sense to make any CSOs relating to water and sewerage services contestable. Sydney Water noted that it supports competition where it delivers innovation and value for customers, and that it agrees with IPART that CSOs should be clearly defined and funded and available to all suppliers in the market.[249]

Hunter Water acknowledged the benefits of competition in fostering innovation and delivering dynamic efficiencies, but also noted that this is a matter for the consideration of the NSW Government.[250] Hunter Water also provided further comments and requested clarification on how a contestable CSO framework would operate, including:

- If the Government were to decide on a contestable market for the provision of backlog sewerage projects, then public water utilities should be able to choose the extent of their participation in the market. The proposal to designate public water utilities as default suppliers would be inconsistent with the principle of a level playing field for all utilities, public or private.
- It would be useful if the Final Report were to provide some indicative guidance on the funding and integration issues if a private water utility invested in a scheme that required consequential upgrades to the public water utility's system.

246 IPART, *Opportunities for further reform: IPART's submission to the Competition Policy Review Issues Paper*, June 2014, p 15.
247 IPART, *Opportunities for further reform: IPART's submission to the Competition Policy review Issues Paper*, June 2014, p 5.
248 Sydney Water's submission to IPART Draft Report, August 2018, p 15.
249 Sydney Water's submission to IPART Draft Report, August 2018, p 26.
250 Hunter Water's submission to IPART Draft Report, August 2018, p 21.

- The Government would also need to consider the administrative arrangements applying to IPART's recommended competitive bidding or expressions of interest process to avoid any potential conflicts of interest associated with water utilities' involvement in the process. The Final Report could also usefully provide some guidance on this issue.
- IPART should clarify that properties receiving backlog sewerage services would be required to pay the capital connection charge per ET less any relevant government contribution.[251]

A number of Hunter Water's comments relate to detailed implementation issues of a contestable CSO framework. Given that such a framework is not yet in operation, we consider it would be premature to attempt to resolve these issues prior to the establishment of a contestable CSO framework. However, as a general guide, we provide the following comments on how a contestable CSO framework might be implemented:

- With regard to Hunter Water's comments on water utilities participating in the market, it should be clarified that the basis of competition is for receipt of CSO funding from the Government (which would be given on the basis of the provision of services), not the provision of services itself (which could be provided with or without a CSO).
- Any additional infrastructure required to be constructed by public water utilities would be treated in the same way as other expenditure under the methodology for new connections to existing properties.
- As set out above, any subsidies from a CSO arrangement would apply to eligible connecting customers after calculating the full charge.

4.7 We have maintained the annuity payment option for providing a new service to existing properties

Our decision is to:

28 Maintain the annuity payment option for providing a new service to existing properties. This annuity is based on:

- the discount rate set to the utility's real pre-tax WACC referred to in the Final Report accompanying the prevailing periodic price determination, and
- the annuity period of up to 20 years.

29 Calculate prices when the service becomes available. The CPI indexation factor applies to prices for connection at a later date (March-on-March quarter CPI, ABS all groups eight capital cities).

30 Not to apply any WACC adjustment once the charge is calculated.

Our 1997 Determination and 2006 Determination of backlog sewerage charges provided two payment options for backlog customers, which were:

- a single upfront payment, or
- an annual or quarterly payment, over a period of up to 20 years.

[251] Hunter Water's submission to IPART Draft Report, August 2018, p 10.

In calculating the amount of the annual or quarterly payment, both determinations specify that it must be based on an amortisation method. The interest rates to be used in deriving the annual or quarterly payments are:

- 1997 Determination – NSW Treasury Corporation's 10-year bond rate, and[252]
- 2006 Determination – Commonwealth Government Securities' 10-year bond rate.[253]

Stakeholders indicated support for the annuity payment option. Under this option, customers in existing properties pay a fixed amount each year over a period of up to 20 years for the costs of connecting to the sewerage system. Sydney Water[254], Hunter Water[255], Central Coast Council[256] and PIAC[257] all agreed with providing this option, indicating that, for customers, it was more affordable than paying a lump sum at the time of connection.

We consider that there are offsetting savings for most existing properties connecting to a service for the first time. These include savings from no longer needing to maintain, upgrade and operate on-site systems, improved service levels and, potentially, increased property values.

Because water utilities provide the funding to the customer, our draft decision was that the discount rate should match the utility's opportunity cost of capital. Therefore, the WACC established in the water utility's prevailing retail price review is an appropriate discount rate for calculating an annual backlog charge.[258] Stakeholders agreed that the annuity should be calculated at the same WACC rate we applied in the price determination for the relevant utility.[259]

The charge would not be adjusted once calculated (ie, periodic WACC adjustments would not apply). Our decision not to include an in-period WACC adjustment provision is consistent with the decision we made for the developer charges methodology (see Chapter 2).

As for other capital charges, we consider these charges should be indexed using movements in CPI. Our preferred approach is to use the Australian Bureau of Statistics' (ABS) March-on-March quarter CPI, all groups eight capital cities, from the time the service is available.

252 IPART, *Pricing of Backlog Sewerage Services*, *Sydney Water Corporation, Gosford City Council, Hunter Water Corporation, Wyong Shire Council, Determination No 4.1 1997*, July 1997, p 3.
253 IPART, *Pricing of Backlog Sewerage Services for Gosford City Council, Determination No 1 2006*, February 2006, p 6.
254 Sydney Water's submission to IPART Issues Paper, December 2017, p 35; Sydney Water's submission to IPART Draft Report, August 2018, pp 4, 13.
255 Hunter Water's submission to IPART Issues Paper, December 2017, p 42; Hunter Water's submission to IPART Draft Report, August 2018, p 20.
256 Central Coast Council's submission to IPART Issues Paper, December 2017, p 13.
257 IPART, Developer Charges public hearing transcript, 6 March 2018, pp 52-53; PIAC's submission to IPART Draft Report, August 2018, p 1.
258 The annuity charge would be calculated at the pre-tax WACC referred to in the Final Report accompanying the prevailing periodic price determination for the relevant utility, in force at the time when the charge is calculated.
259 Sydney Water's submission to IPART Issues Paper, December 2017, p 35; Sydney Water's submission to IPART Draft Report, August 2018, pp 13-14; Hunter Water's submission to IPART Issues Paper, December 2017, p 42; Hunter Water's submission to IPART Draft Report, August 2018, p 20; Central Coast Council's submission to IPART Issues Paper, December 2017, p 13.

4.8 We have minimised procedural burden for service extensions

Our decision is to:

31 Not impose any procedural requirements for new connections to existing properties. We will review connection charges not subject to procedural requirements, including those raised under service extension schemes, as part of the expenditure review at the next periodic price review.

In our Draft Report, we made a draft decision to make procedural requirements proportionate to the size of the scheme:

- Large-scale (township level) service extension schemes would require making or reviewing a DSP, following the standard procedural requirements.
- Small-scale extension schemes would not attract any specific procedural requirements and would be subject to an ex-post review.

In its submission to the Draft Report, Hunter Water supported our draft decision.[260]

In its submission to the Draft Report, Sydney Water accepted the draft decision, but raised concerns around the administrative costs of the procedural requirements, and how they would operate in practice.[261] Sydney Water noted:

- The requirement in the draft decision for utilities to prepare and exhibit a DSP for any large-scale MSE or PSP scheme will extend the time required to process applications, for minimal benefit.
- This requirement is inconsistent with the decision to allow utilities to determine the boundaries for any DSP they produce.
- Across greater Sydney, there are many thousands of properties that may apply for a MSE. From an administrative perspective, it is unclear whether:
  - A DSP for larger-scale schemes need only be prepared once an application is received
  - A DSP can or should cover multiple locations that are the subject of an MSE application (either actual or potential), particularly if they all use common assets.[262]

We have considered the implications of including a scheme in a DSP. The methodology for calculating prices for a new connection to an existing property differs depending on whether the assets for extension are included in the DSP (see Box 4.2, above):

- Where a DSP has been made or reviewed to include the assets for extension, then the price is calculated using the standard developer charge (DC)
- Where a DSP has not been made or reviewed to include the assets for extension, then the price is calculated as the standard developer charge plus a marginal cost charge reflecting the new assets ($DC + DC'$).

260 Hunter Water's submission to IPART Draft Report, August 2018, p 20.
261 Sydney Water's submission to IPART Draft Report, August 2018, p 14.
262 Sydney Water's submission to IPART Draft Report, August 2018, p 5.

While a zero developer charges policy is in place, this means that only the marginal cost charge of the new asset would apply. When developer charges are reintroduced, a property may pay both the standard developer charge for the DSP in which it is situated, and the marginal cost charge.

That is, prior to a DSP being updated, all existing (and new) properties connecting to the asset will pay both a standard developer charge and the marginal capital costs of the new asset in question. Once a DSP is updated to include a newly constructed asset, then the costs of that asset are integrated into the overall developer charge and collected from all new developments in the DSP. Therefore, updating a DSP for a new asset to connect existing properties to a new service could result in existing customers free-riding on the initial customers' contributions by waiting to connect until the asset is included in the DSP, as the marginal costs of the new asset would then be spread across all customers in the DSP.

We consider that the water utility is best placed to make a decision as to whether the marginal capital costs of a new asset should be collected from upfront charges from all existing customers connecting to the asset (using the charge for new connections to existing properties set out in this chapter) or spread across all new developments in the DSP (using only the standard developer charge set out in Chapter 2).

On this basis, we have decided not to impose any procedural requirements in relation to large or small schemes. This is consistent with our other decisions on procedural requirements and reduces administrative burden.

We will review connection charges not subject to procedural requirements, including those raised under service extension schemes, as part of the expenditure review at the next periodic price review. This may involve an ex-post review of the capital expenditure undertaken and an assessment of its prudence.

4.9 Other issues

4.9.1 Application fees

In its submission to the Draft Report, Sydney Water also raised an issue concerning application fees for preparing quotes for new connections for existing services.

Sydney Water submitted that the current MSE application fee is far below the cost of conducting the planning of MSE cases, which include preparation of servicing strategies and detailed designs for an MSE application, and documenting the outcomes in a DSP for larger schemes. Sydney Water noted that these costs cannot be recovered if the applicants do not wish to proceed, which has often been the case in the past. Sydney Water recommended that IPART consider including all MSE related charging in the final determination, and proposed a two-step charge for applications:

- an initial fee to cover an indicative quote, and
- a full application fee that could more closely align with the actual cost of preparing such a quote.[263]

263 Sydney Water's submission to IPART Draft Report, August 2018, pp 4-5, 27.

We note that Sydney Water's current periodic price determination already includes a charge for applications by customers to extend a service to an existing property. In our view, the nature and amount of this charge would be more appropriately considered in the coming price review, at which time all of Sydney Water's ancillary and miscellaneous charges can be assessed for cost-reflectivity.

5 Upgrading existing services to existing properties

This chapter outlines our decision to set a methodology for a new price for upgrading existing services to existing properties. Our decision is specifically designed to provide a mechanism for property owners to fund service upgrades that they request to increase water flow and pressure to meet their obligations in relation to fire protection.

Our decision reflects our findings that:

- there is currently no mechanism for property owners (impactors) to pay for service upgrades that they request to meet their onsite fire protection obligations
- the net present value (NPV) methodology used for calculating prices for a new connection (discussed in Chapter 2 and Chapter 3) is also appropriate for upgrades to existing services requested by customers, and
- the pricing methodology will enable customers to fund an upgrade that they request, while the zero developer charges policy applies.

On its own, our determination does not definitively solve all the problems associated with funding infrastructure upgrades to provide increased flows and pressure for firefighting. However, it does provide a funding **option** for those parties who would realise cost savings from funding an upgrade to a water utilities' network rather than paying for what, in some situations, may be a more expensive on-site solution. In that respect, it provides an additional mechanism to address a firefighting issue, but is only one among several. We consider that the most effective measures to address any issues will be identified and implemented through the utilities' continuing collaboration with Fire & Rescue NSW (FRNSW).

This chapter outlines the current issues concerning water flow and pressure for firefighting, stakeholder views, and our decision to apply a methodology for calculating a price for upgrading existing services.

5.1 Upgrading water flow and pressure for firefighting

5.1.1 Service upgrades may provide the least-cost solution for some properties

FRNSW lodged a submission to our Issues Paper about water flow and water pressure for firefighting as a result of new developments. It stated that FRNSW's operational effectiveness is directly linked to the availability of water in and from reticulated water supplies. It said that most multi-unit developments are built on brownfield sites with existing water infrastructure. By comparison, detached dwelling developments are typically built on greenfield areas with new water infrastructure.[264] FRNSW's submission focused on the issue of ageing water infrastructure serving multi-unit developments.

264 Fire & Rescue NSW's submission to IPART Issues Paper, January 2018, p 3.

FRNSW stated:

> Because of the differing fire hydrant provisions detailed in the NCC [National Construction Code], almost all multi-unit developments will need to incorporate the cost of a fire hydrant system into their overall development costs. On the other hand, all detached housing developments will not. In relation to the total cost of the fire hydrant system borne by a multi-unit development and the subsequent cost attributed to each unit, two factors will determine this cost: the size of the development; and the pressure and flow characteristics of the nearest available town main.
>
> Where the pressure and flow characteristics of an existing town main are identified as not being able to provide the required pressure, the required flow, or both, to a fire hydrant system, the cost to install a fire hydrant system can increase significantly through the requirement to provide on-site pumps or on-site tanks and pumps. Instances where the nearest available town main has been unable to provide the required pressure or flow are now being seen with increasing regularity by FRNSW.[265]

FRNSW proposed that the funding model for water infrastructure should be reviewed to provide for upgrading existing water infrastructure.[266]

Firefighting capacity was also discussed at the public hearing. FRNSW stated that there may be a case for upgrading water mains rather than requiring individual properties to install fire hydrant systems, or tanks and pumps, on site:

> The silly situation at the moment is that you may find, for instance, in a street with half a dozen buildings may be paying $100,000 to $200,000 in costs to upgrade, which greatly exceeds at the time the cost of the upgrade in the main. That would be [a] far more efficient way of doing it because it benefits all consumers on the street.[267]

In addition, FRNSW said there may be situations where the existing water main accommodates some but not all proposed developments on a street. This leads to some developers paying more than others for firefighting capacity:

> The first developer may find that they can get what they require from the main on that street, but the greater drawing on that particular main may mean that the second or third developers may still use it, but the fourth developer may incur the $200,000 charge to meet the building code requirements that the other developers did not have to meet.[268]

At the public hearing, Sydney Water cautioned against providing a generic solution to the issues FRNSW raised, warning that doing so could be more expensive than providing localised solutions.[269] Sydney Water and FRNSW acknowledged they had signed a memorandum of understanding (MoU) and were examining how to best address this issue.[270]

Hunter Water indicated that it does not have the same level of brownfield developments as Sydney Water. However, it does have legacy issues with existing developments not meeting the increasingly stringent standards for water pressure and flow.[271] Hunter Water stated that the cost of upgrading all water mains to meet new requirements was significant:

265 Fire & Rescue NSW's submission to IPART Issues Paper, January 2018, p 6.
266 Fire & Rescue NSW's submission to IPART Issues Paper, January 2018, p 11.
267 IPART, Developer Charges public hearing transcript, 6 March 2018, p 66.
268 IPART, Developer Charges public hearing transcript, 6 March 2018, p 67.
269 IPART, Developer Charges public hearing transcript, 6 March 2018, p 67
270 IPART, Developer Charges public hearing transcript, 6 March 2018, p 67.
271 IPART, Developer Charges public hearing transcript, 6 March 2018, p 72.

> If we were to have a blanket requirement across our whole area of operations, that would cost well over $100 million to get those mains to that standard, which would put significant upward pressure on household bills.[272]

5.1.2 Role of property owners in the provision of water flow and pressure for firefighting

Under the National Construction Code (NCC) Building Code of Australia (BCA), the owners of certain classes of building are responsible for providing firefighting water.

In its submission to the Draft Report, FRNSW stated that under the provisions of the NCC, different fire protection requirements are specified for Class 1a buildings (single dwelling, detached and semi-detached residential homes) and Class 2 to 9 buildings (encompassing various building types such as apartment complexes, offices and shops).[273]

All Class 2 to 9 buildings with floor area greater than 500m^2, and where a fire brigade is available to attend, are required to be provided with a fire hydrant system. Class 1a buildings are not required to provide fire hydrant systems. Fire protection for these buildings is provided by street hydrants installed on reticulated networks.[274]

Fire hydrant systems must be installed in accordance with Australian Standard AS 2419.1, which sets minimum criteria for fire hydrant installations, including minimum pressure and flow requirements. Where the normal water supply cannot achieve the flow and pressures required by AS 2419.1, building owners must install a pump or water storage facility (or both) to meet the minimum flow and pressure. In its submission to the Issues Paper, FRNSW noted that "instances where the nearest available town main has been unable to provide the required pressure or flow are now being seen with increasing regularity by FRNSW".[275]

In NSW, the BCA applies only to new buildings and new building work; it does not apply retrospectively to existing buildings. This means that existing buildings where no work is being proposed are not required to be upgraded whenever the BCA is amended. A building that complied with a previous iteration of the fire protection provisions in the BCA, will not be found to be non-compliant with a new version of the BCA unless it makes a development application to council, triggering a review.[276]

However, it may be the case that third parties could give rise to compliance issues for building owners. For example, the actions of third parties might affect compliance if water flow and pressure to a building via a water main is affected by:

- new development in the surrounding area, or

272 IPART, Developer Charges public hearing transcript, 6 March 2018, p 72.
273 Class 1a buildings are single dwellings, typically residential homes, including detached and semi-detached houses. Class 2 to 9 buildings encompass a range of buildings, including apartment complexes, offices and shops. Australian Building Codes Board, *National Construction Code*, Volume One Amendment 1 and Volume Two, 2016
274 Fire & Rescue NSW's submission to IPART Issues Paper, January 2018, pp 5-6.
275 Fire & Rescue NSW's submission to IPART Issues Paper, January 2018, p 6.
276 New South Wales Office of Environment and Heritage website, *Fire, access and services – frequently asked questions*, at https://www.environment.nsw.gov.au/Heritage/conservation/faqfireaccess.htm, accessed on 20 September 2018

- a water utility reducing the size of a main to improve water quality, as we understand has been the case in some instances in Sydney Water's service area.[277]

5.1.3 Role of water utilities in the provision of water flow and pressure for firefighting

There is no regulatory requirement for the water utilities (Sydney Water, Hunter Water and Central Coast Council) to provide water for firefighting purposes. FRNSW has recommended to our current review of water utilities' performance indicators that we collect further information on water pressure and flows.[278] In our Draft Report for our review of water utilities' performance indicators, we have not recommended a performance indicator for water flow and pressure. In our view, FRNSW and the metropolitan water utilities should address this issue under bilateral agreements; MoUs could facilitate this process. In our 2015 review of Sydney Water's operating licence, we also made the following recommendation:

> That the Government undertake a comprehensive review examining firefighting water capacity requirements within NSW. This review should identify any "regulatory gaps" or necessary improvements to regulatory arrangements. It should also examine water distribution network solutions and other options to enhance water availability for firefighting.[279]

In its submission to the Draft Report, Hunter Water noted that there is no performance requirement in its operating licence concerning water for firefighting. However, it has adopted the Australian Standard AS 2419.1 as the basis for its firefighting flow design standards for new developments.[280]

In its submission to the Draft Report, FRNSW noted that the Water Supply Code of Australia established by the Water Services Association of Australia (WSAA) provides guidance around best practice national codes and standards. This includes minimum pipe sizes to ensure adequate flow rates and residual pressures, including a contribution to basic fire-fighting capability. However, the code also specifies that unless otherwise required by a water utility's operating licence, the water supply system shall not be designed for a specific fire-fighting capability.[281]

We considered this issue in our previous reviews of Hunter Water and Sydney Water's operating licences, where we established a framework for bilateral agreements between the water utilities and FRNSW.[282] Sydney Water and Hunter Water are obliged under their operating licences to use best endeavours to develop and maintain a Memorandum of Understanding (MoU) with FRNSW, and to comply with the MoU.[283]

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277 Fire & Rescue NSW's submission to IPART Issues Paper, January 2018, p 3.
278 Fire & Rescue NSW's submission to IPART's Review of water utility performance indicators Issues Paper, March 2018, pp 9-10.
279 IPART, *Sydney Water Corporation Operating Licence End of Term Review – Report to the Minister*, May 2015, p 21.
280 Hunter Water's submission to IPART Draft Report, August 2018, p 14.
281 Fire & Rescue NSW's submission to IPART Draft Report, August 2018, p 2.
282 IPART, *Sydney Water Corporation Operating Licence End of Term Review – Report to the Minister*, May 2015; IPART, *Review of the Hunter Water Corporation Operating Licence 2017-2022* - Final Report, May 2017.
283 At the Public Hearing of 6 March 2018, Sydney Water and FRNSW acknowledged that they have signed an MoU and were examining how to best address the issue of upgrades to water flow and pressure (IPART, Developer Charges public hearing transcript, 6 March 2018, p 67.)

The purpose of the MoU is to develop roles and responsibilities, identify the needs and constraints of the parties, and to identify and develop strategies for efficient and effective provision of firefighting water. The MoU must include the establishment of a working group comprising representatives of the water utility and FRNSW, which much consider:

- Agreed timelines and a format for the water utility to provide a report to FRNSW detailing the network performance with regard to availability of water for firefighting (taking into account the minimum available flow and pressure in localised areas of the network)
- Arrangements for the water utility to consult with FRNSW in the design of new assets and planning of system maintenance, where planning indicates that minimum available flow and pressure may unduly impact firefighting in the network section under consideration.[284]

The MoU provides an opportunity for the water utilities to more clearly define their network renewal and maintenance plans as they relate to flow and pressure needs for firefighting, and could also provide information about the costs of network solutions to building owners seeking to address their firefighting obligations.

5.1.4 There is currently no mechanism for levying upfront charges for service upgrades

Currently, mains upgrades are treated as a normal part of water utilities' capital expenditure programs. This expenditure is reviewed by IPART during periodic price reviews, with expenditure found to be prudent and efficient rolled into the RAB and recovered from customers over time through periodic prices.

In its submission to the Draft Report, Sydney Water noted that the regulatory framework does not currently require least-cost solutions to addressing water pressure and flow issues for firefighting, and water utilities currently have no mechanism to recover costs upfront from 'impactors' or 'beneficiaries' of upgrades to existing assets.[285]

We consider that it is appropriate to provide a mechanism for water utilities to recover the upfront costs of upgrades to existing services, where such an upgrade would represent a departure from the utility's existing or 'business as usual' (BAU) capital expenditure program. This is consistent with the principle behind charges for new connections to new developments, and charges for new connections for existing properties.

5.2 We have established a charge for customer requested upgrades of an existing service

Our decision is to:

32 Apply a methodology for calculating prices for upgrading an existing service to existing properties.

284 Sydney Water Operating Licence 2015-2020, clause 9.4; Hunter Water Operating Licence, clause 5.11
285 Sydney Water's submission to IPART Draft Report, August 2018, p 28.

Our decision is to set a methodology to calculate a charge for upgrading existing services to existing properties. This will facilitate the funding of an efficient solution to improve firefighting capacity where property owners seek a mains upgrade as a least-cost solution to addressing water flow and pressure for their property or properties.

We propose calculating the charges according to whether the property is existing or part of a new development (see Box 5.1). In summary:

- Where the owners of an **existing property**, or a group of owners of existing properties, seek an upgrade of an existing service to increase firefighting capacity, the charge will be based on the costs of the upgrade.
  - The charge only relates to increasing the capacity of water assets for firefighting, and not to the costs of existing assets, because the owners already pay for existing assets through their periodic prices.
- In contrast, **new developments** would pay a capital charge that would include the costs of existing assets as well as the cost of the upgrade.
  - While zero developer charges apply and the DSPs have not been reviewed or updated, our draft determination would allow utilities to levy the upgrade charges to new developments reflecting just the costs of the upgrade. New developments and existing properties (who agreed to fund the upgrade) would contribute equally to the costs of infrastructure upgrades for firefighting, per ET.
  - Should the zero developer charges policy be reversed, a DSP would be remade to calculate a new developer charge, which would include the new development's share of the costs of existing assets, the costs of new assets to service the new development, and the cost of providing water pressure and flow capacity for firefighting.

Box 5.1 Methodology for maximum prices to upgrade an existing service

The maximum price to upgrade the existing service, per equivalent tenement (ET), is calculated as follows:

$$\widetilde{DC} = \frac{K_5}{L_5} - \frac{NPV\left(\check{C}_i - \hat{C}_i\right)}{L_5} \; for \; i = years \; 1, \ldots, n$$

where

- K_5 – the present value of estimated efficient capital costs of the upgrade
- L_5 – the present value of the number of ETs in the service upgrade area within the DSP that will use the upgrade (including both new developments and existing properties that agreed to contribute to the cost of upgrade), calculated at discount rate $r_5 = r_3$.
- $\check{C}_i$ – the estimate of what the future operating, maintenance and administration costs of servicing the customers serviced by the upgrade would have been in each year (i), had the upgrade not taken place
- $\hat{C}_i$ – the estimated future operating, maintenance and administration costs of servicing customers serviced by the service upgrade in each year (i).
- n is 30 years from the year in which the upgrade is completed. It is the end of the forecast period for the assessment of expected revenues and costs.

For existing properties, only new assets and augmentation costs are to be included in the capital charge K_5, because these ETs have already been contributing to the costs of existing assets through periodic prices of the service before its augmentation. The charge for existing properties is $\widetilde{DC}$.

For new developments, in the area where an upgrade has been made available, the charge is a standard developer charge (before the upgrade) **plus** a capital charge reflecting the cost of the upgrade; that is,

$$DC + \widetilde{DC},$$

where DC is calculated using the formula outlined in Chapter 2:

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

When a DSP is remade to include the cost of the service upgrade, the relevant assets would then be included in K_2, and a price to connect a new service, *DC,* would include the cost of upgrade.

5.2.1 Our decision is aligned with our cost allocation hierarchy

Submissions from stakeholders on cost allocation

In response to our Draft Report, some stakeholders provided comments and suggestions on alternative cost sharing arrangements:

- Sydney Water noted that our draft determination does not provide a mechanism to charge properties that will benefit from an upgrade in the future.[286]

286 Sydney Water's submission to IPART Draft Report, August 2018, p 30.

- The Association of Hydraulic Services Consultants Australia (AHSCA) noted that water utilities are a major beneficiary of an upgrade to a water main, and therefore should pay for a portion of the upgrade.[287]
- FRNSW supported the proposal to share costs between ETs, but proposed that the methodology should also reflect the remaining design life of the asset, as the assets may be approaching a point where they would be upgraded by the water utility.[288]

Application of our cost allocation hierarchy

We use a hierarchy to determine who should be targeted when charging for a good or service. This hierarchy is designed to target those who are most able to change their behaviour, allowing individuals to assess the costs and benefits of undertaking particular activities, and therefore providing incentives for efficient outcomes. The hierarchy includes:

1. **Impactors.** Those that create the need for the service are targeted first. In the current context, this principle suggests that if impactors can be readily identified, then they should pay the full costs of a connection or upgrade.
2. **Beneficiaries.** If it is too difficult to identify and target impactors, or if the service is not provided in response to an impactor, then beneficiaries should be targeted to fund the provision of the service. Typically, applying this approach involves identifying the beneficiaries, assessing the benefits they receive, and allocating the cost to them in proportion to these benefits. Direct beneficiaries should be targeted before indirect beneficiaries.
3. **Government** (tax payers). Government is only targeted where there is a strong case for the service and it is inefficient or impossible to charge impactors or beneficiaries. Alternatively, where the benefits are clearly realised by the broader community, there may also be a case for Government funding to ensure the service is provided.

Identifying **impactors** in the current context is challenging and will depend on the circumstances. Outside of water utilities' normal renewal and maintenance program, the requirement for an upgrade to an existing service is likely to come from a new development or an existing building connected to the service seeking a mains upgrade as a least-cost approach to addressing a fire protection compliance issue. However, there may be other, third parties that have contributed to the need for an upgrade.

In some cases, it may also be appropriate to allocate costs to **beneficiaries**. Direct beneficiaries include new developments and existing buildings connected to the main with a current compliance issue. These properties benefit from a service upgrade by avoiding the cost of alternative onsite options to meet water flow and pressure needs for firefighting. Our charging mechanism recognises direct beneficiaries by allowing for these parties to contribute to the costs of the upgrade in proportion to their share of the ETs that will be served by the upgrade.

Sydney Water's submission also identified future beneficiaries, being properties with a 'silent' compliance issue that will need to be addressed if they undertake a redevelopment requiring an application to council. However, there are a number of complexities in identifying future beneficiaries that we consider make it impractical to include them in a charging regime. Future

287 AHSCA's submission to IPART Draft Report, August 2018, p 2.
288 Fire & Rescue NSW's submission to IPART Draft Report, August 2018, p 4.

developments are inherently uncertain and difficult to identify as potential beneficiaries of a service upgrade at the time it occurs. Further, we note that future beneficiaries are likely to be new developments, which would be subject to the normal developer charges regime, under which the costs of past upgrades would be included in a DSP and part of the developer charge. This approach is the same as the approach we have applied to the calculation of charges for new connections to existing properties. However, it is not possible to reliably identify other properties that might benefit in the future due to renovations that bring a fire protection compliance issue to light but do not result in a new connection.

We note the comments of the AHSCA and FRNSW concerning apportioning a share of the costs of upgrades to water utilities. However, we do not consider that water utilities are clear beneficiaries from water main upgrades. As set out in Chapter 2, water utilities should be indifferent between recovering the costs of infrastructure from upfront capital charges or over time from periodic charges.[289]

However, the broader customer base may benefit from upfront capital charges for water main upgrades. To the extent that an existing customer funds a mains upgrade upfront (rather than the water utility funding the upgrade and recovering the costs through periodic charges), the rest of the customer base will benefit from lower periodic charges going forward. On this basis, there may be a case to share some costs of an upgrade between the broader customer base and existing properties providing upfront funding for the upgrade.

For example, the customer(s) seeking a mains upgrade could pay an amount equal to the financing costs of bringing forward the upgrade, with the remaining costs covered by the utility (ie, the broader customer base). This would recognise that at some point, the mains upgrade would have been undertaken anyway, the only difference being the timing of the investment. However, we also note that:

- the extent of the benefit to the broader customer base (being the reduction in periodic prices) would be likely to be small, and
- the administrative costs of determining the extent of the benefit and calculating the costs to be borne by each party would be likely to exceed the benefits.[290]

In this case, we consider that our approach, which in the first instance allocates the costs of upgrades to existing services to new developments and existing properties that request the upgrade (as impactors), remains appropriate.

This differs from prudent and efficient 'business as usual' mains (or other) upgrades for the purpose of providing general water services to customers, which should be funded by the broader customer base through water prices.

289 Ignoring the effects on timing of cash flows, tax allowances and the accounting position of these utilities.

290 This would require an understanding of when the main would have been scheduled for replacement (noting that age is not necessarily an accurate indicator of asset replacement), then calculating the difference in prices under a scenario where the upgrade was funded by a developer versus being funded by the broader customer base.

5.2.2 Annuity payment option for existing properties will facilitate take-up

Our decision is to:

33 Provide the annuity payment option for a voluntary upgrade of existing services to existing properties. This annuity is based on:

- The discount rate set to the utility's real pre-tax WACC referred to in the Final Report accompanying the prevailing periodic price determination.
- The annuity period of up to 20 years.

34 Calculate prices when the upgraded service becomes available. The CPI indexation factor applies to prices for connection at a later date (March-on-March quarter CPI, ABS all groups eight capital cities).

35 Not to apply any WACC adjustment once the charge is calculated.

Our decision is to apply the annuity payment option to upgrade a service by an existing property, to manage customer impacts and affordability. This decision is in line with our approach to providing funding options to existing property owners to pay for the connection of a new service.

Provision of the annuity payment option to existing property owners has been supported by stakeholders in submissions to our Issues Paper and our Draft Report (see Chapter 4).

As with the other capital charges, the charges for this new service will be indexed using CPI. Our preferred approach is to use the ABS's March-on-March quarter, eight capital cities, All groups CPI, from the time the service is available.

Our decision not to include a WACC adjustment provision is consistent with the decision we made for the developer charges methodology (see Chapter 2).

In their submissions to the Draft Report, Hunter Water[291] and Sydney Water[292] supported our decisions.

5.3 We have minimised procedural burden for funding upgrades

Our decision is to:

36 Not to impose any procedural requirements for upgrading services for firefighting, subject to an ex-post review.

Our decision is not to impose any additional procedural requirements on the application of the methodology for calculating prices for service upgrades to existing properties, to facilitate firefighting. When DSPs are remade to include upgraded assets, these updated DSPs would be subject to our standard procedural requirements discussed in Chapter 3. While the zero developer charges policy applies, our charging mechanism will enable upfront funding for infrastructure upgrades to be provided by existing properties seeking an upgrade.

291 Hunter Water's submission to IPART Draft Report, August 2018, pp 20-21.
292 Sydney Water's submission to IPART Draft Report, August 2018, pp 14-15.

Submissions to our Draft Report from Sydney Water[293], Hunter Water[294] and FRNSW[295] supported our decision not to impose any procedural requirements at this time. The metropolitan utilities and FRNSW also noted that they were working together to address the issues under the framework of the MoU:

- Sydney Water noted that it strongly supports the aim of allowing cost-effective solutions to compliance with water and pressure for firefighting, where on-site solutions prove more costly or impractical, and noted that it has been working collaboratively with FRNSW and local councils to address this issue.[296]
- Hunter Water stated its preference to work with FRNSW to agree on priority areas and the most cost-effective way of meeting fire-fighting requirements in those locations.[297]
- FRNSW noted that the MoU provide a forum in which to explore the issues and evaluate the effectiveness of the proposed funding methodology.[298]

A number of submissions noted that getting existing properties to contribute to the cost of upgrades could be challenging:

- Sydney Water's submission recognised that the regulatory gaps previously identified by IPART in relation to water flow and pressure for firefighting remain. For example, Sydney Water noted that orders on properties to address firefighting requirements currently occur on an ad hoc basis, rather than for an entire area at once. In the absence of an active fire order from Council, Sydney Water submitted that the incentive for property owners to make a monetary contribution to a voluntary upgrade would seem very low.[299]
- Hunter Water noted that in the absence of appropriate regulatory drivers, there is unlikely to be an incentive for existing properties, other than those proposing some form of development, to contribute to an upgrade. Hunter Water also noted its concerns that the approach proposed in the Draft Report could add administrative burden to water utilities, in identifying current and future properties that would benefit, brokering arrangements on a property-by-property basis and recovering payments.[300]
- AHSCA noted that it agreed with the proposal to spread the cost of upgrades across multiple properties, but also noted that IPART may face some challenges in getting existing sites to pay.[301]

While we recognise the issues raised by stakeholders, we remain of the view that it would not be feasible to compel benefitting properties to contribute to the cost of an upgrade. Even when a mains upgrade is identified as the least-cost approach to addressing a water pressure and flow issue, the decision on the approach to addressing the compliance issue should ultimately reside with the property (or properties) concerned.

293 Sydney Water's submission to IPART Draft Report, August 2018, p 3
294 Hunter Water's submission to IPART Draft Report, August 2018, p 20.
295 Fire & Rescue NSW's submission to IPART Draft Report, August 2018, p 4.
296 Sydney Water's submission to IPART Draft Report, August 2018, p 3.
297 Hunter Water's submission to IPART Draft Report, August 2018, p 5.
298 Fire & Rescue NSW's submission to IPART Draft Report, August 2018, p 4.
299 Sydney Water's submission to IPART Draft Report, August 2018, p 3.
300 Hunter Water's submission to IPART Draft Report, August 2018, p 14.
301 AHSCA's submission to IPART Draft Report, August 2018, p 1.

Therefore, we have retained our decision not to impose procedural requirements for upgrading services for firefighting, subject to an ex post review.

In its submission to the Draft Report, AHSCA noted that a solution could be to issue a fire audit on all properties in a region requiring an upgrade, as this would trigger everyone to work together to resolve the issue.[302] For example, under the *Environmental Planning and Assessment Act* (the EP & A Act):

- When requested by the council, an authorised fire officer may inspect a building to determine whether or not adequate provision for fire safety has been made in or in connection with the building[303]
- If they consider that the building's provision for fire safety is inadequate, councils or registered fire officers may give building owners a fire safety order that (a) specifies the standard that the premises is required to meet, and (b) indicates the nature of the work that, if carried out, would satisfy that standard.[304]

This approach could assist in identifying beneficiaries, provide information on the costs of addressing any inadequacies in fire safety related to water flow and pressure, and assist beneficiaries in making an informed choice about whether to invest in an onsite solution or make a voluntary contribution to a mains upgrade.

In our Draft Report we also noted that a coordinated effort would be required between the parties to arrange funding for upgrades.[305] In response to Hunter Water's concerns about administrative costs of brokering agreements, while we remain of the view that all parties should work collaboratively to facilitate least-cost servicing solutions to fire protection issues, we do not consider that it is necessarily the role of water utilities to broker negotiations and agreements between properties.

We will review charges for service upgrades as part of the expenditure review at the next periodic price review.

5.4 Other issues

5.4.1 Application fees

In its submission to the Draft Report, Sydney Water stated that there is no mechanism by which it can charge customers for an application to receive a quote for an upgrade to an existing service. Sydney Water proposed that, at a minimum, an application for a quote to upgrade an existing service should attract the same fee as a quote for a minor service extension (MSE). Sydney Water suggested that IPART consider including pricing for both MSE and existing service upgrades in its Final Determination. For both of these processes, Sydney Water proposed a two-step process, whereby customers would pay an initial application fee

302 AHSCA's submission to IPART Draft Report, August 2018, p 2.
303 Environmental Planning and Assessment Act 1979, Section 9.32.
304 Environmental Planning and Assessment Act 1979, Schedule 5, Parts 2, 4 and 8.
305 IPART, *Maximum prices to connect, extend or upgrade a service for metropolitan water agencies – Draft Report*, June 2018, p 76.

to receive an indicative quote, and then proceed to paying a full application fee aligned to the actual costs to Sydney Water of preparing the quote.[306]

We note that Sydney Water's current periodic price determination already includes a charge for applications by customers to extend a service to an existing property. In our view, the nature and amount of this charge would be more appropriately considered in the coming periodic price review in 2019-20, at which time all of Sydney Water's charges can be assessed for cost-reflectivity.

306 Sydney Water's submission to IPART Draft Report, August 2018, p 27.

6 Other charges - Sydney Water Developer Direct

During this review, we examined the services offered through Sydney Water Developer Direct™ (SWDD) to understand their nature and decide on IPART's pricing role in relation to them. Our decision is to defer regulation of SWDD's construction services until the next review of Sydney Water's periodic prices in 2019-20.

6.1 SWDD provides application and construction services for customers

Prior to the introduction of SWDD, from the early 2000s Sydney Water has required all developers to engage a Water Servicing Coordinator (WSC) to apply for a Section 73 Compliance Certificate (Section 73 Certificate). Sydney Water issues Section 73 Certificates under the *Sydney Water Act 1994*, certifying that a development has satisfied all of its requirements relating to the availability of drinking water, wastewater, recycled water or stormwater services for that development.[307]

WSCs act as a point of contact between Sydney Water and the developer, and assist in various matters relating to advising on how to meet the requirements to obtain a Section 73 Certificate, preparing design sketches and seeking quotes from construction services providers for any necessary works. These services broadly fall under the umbrella of 'application services'. Sydney Water has stated that there are currently 26 WSC's providing application services.[308]

Some WSC's also provide construction services, which may include preparing designs, project management, engaging constructors to build works, or utilising their own construction teams. Sydney Water has stated that it recognises over 150 providers of construction services.[309]

Sydney Water launched SWDD in July 2017. SWDD provides the following services:

- **Application services** for developments requiring only 'minor works', or no works. For these types of developments, developers can now choose whether to engage a WSC or to use SWDD for application services. For developments requiring major works, Sydney Water still requires developers to engage a WSC.[310] The services provided by SWDD, as listed on the Sydney Water website, include:
  - Assessment of building plans and development applications
  - Notice of Requirements if there is a need for works
  - A quote for any construction work outlined in the Notice of Requirements
  - Section 73 Certificate and full Building Plan Approval, once the developer has met all of Sydney Water's requirements.[311]

307 Sydney Water's submission to IPART Issues Paper, December 2017, p 39.
308 Sydney Water's submission to IPART Issues Paper, December 2017, p 39.
309 Sydney Water's submission to IPART Issues Paper, December 2017, p 39.
310 Sydney Water's submission to IPART Issues Paper, December 2017, p 39-41
311 Sydney Water website, *Sydney Water Developer Direct*, at http://www.sydneywater.com.au/SW/plumbing-building-developing/developing/Sydney-Water-Developer-Direct/index.htm, accessed 20 September 2018.

- Various **construction services**, including:
  - new private main to meter connections for water, wastewater and recycled water
  - capping an existing connection, and
  - asset protection slabs and concrete easements.[312]

In our 2016 Determination of Sydney Water's periodic prices, we determined maximum prices for the following services provided by Sydney Water relating to Section 73 Certificates:

- building plan approvals
- development requirements application – complying development
- development requirements application – other development, and
- the hourly labour rate used for any other service where a designated charge does not otherwise apply.[313]

In its submission to the Issues Paper, Sydney Water noted that some of the application services it provides fall within these regulated services, specifically:

- building plan approvals, and
- development requirements application – complying development.

Sydney Water noted that it has used the regulated prices as the basis for costing these services provided by SWDD, with the other services provided by SWDD provided in direct competition with WSCs.[314]

6.1.1 Stakeholders raised concerns with the SWDD

In response to our Issues Paper, we received a submission from a WSC, which queried the amount Sydney Water charges for SWDD:[315]

> The upfront charge of $495.03… and the hours allowed to complete this part of the process… is [a] totally inadequate estimate.

Stakeholders also commented on SWDD at the public hearing, noting that SWDD is not required to meet the same level and standards as WSCs and their concerns with the competitive neutrality of SWDD.[316] For example, stakeholders indicated:

- WSCs are required to provide drawings generated in AutoCAD, which requires an expensive software licence, but SWDD is not required to do so, and
- SWDD is not required to have the same inspection regime as WSCs.

At the public hearing, Sydney Water stated that it was diligent about making sure the regulated area of its business does not subsidise SWDD. It also said it abides by the same standards as WSCs.[317]

312 Sydney Water's submission to IPART Issues Paper, December 2017, p 42.
313 IPART, *Review of prices for Sydney Water Corporation – Final Report*, June 2016, pp 305-310.
314 Sydney Water's submission to IPART Issues Paper, December 2017, p 43.
315 North Western Surveys' submission to IPART Issues Paper, 22 January 2018.
316 IPART, Developer Charges public hearing transcript, 6 March 2018, pp 59-60, 62-63.
317 IPART, Developer Charges public hearing transcript, 6 March 2018, pp 60-61.

Since the public hearing, we have met with Sydney Water. At that meeting, Sydney Water reiterated that it developed SWDD to improve competition in the market and thus outcomes for its customers, who had complained about the fees charged by WSCs for small to medium developments. Sydney Water confirmed that its contractors performing SWDD services do not submit AutoCAD-generated drawings to Sydney Water. Sydney Water's view is this is not necessary, as it has contractual arrangements in place which ensure that the drawings it receives from its contractors are of the appropriate standard and quality.

Sydney Water stated that it randomly inspects all construction work (including SWDD work) to ensure the quality of that construction. But, because of the risk-mitigation inherent in its contractual arrangements, Sydney Water does not require certification from its contractors providing construction services as part of SWDD. Sydney Water indicated that:

> [T]here is no need for one staff member to provide evidence to another staff member that works completed are adequate for the Section 73 certificate to be issued. It is the same staff member who is responsible for the case throughout. So works are only 'certified' as being adequate at the final step when the Section 73 certificate is issued.[318]

On 31 July 2018, Sydney Water increased its fee for application services provided by SWDD from $495.03 to $660.42. This fee covers the application services outlined above. Sydney Water has noted that this increase reflects the most up-to-date information on the costs of providing the service.[319]

6.1.2 We will examine Sydney Water's ring-fencing of SWDD at the next Sydney Water price review

We set charges for Sydney Water's regulated services based on the assumption that all costs and revenue associated with its unregulated services are ring-fenced from its regulated businesses. This approach ensures Sydney Water's regulated customers do not subsidise the costs of providing its unregulated services, which would enable it to under-cut other providers of the unregulated service. This also ensures that customers of regulated services pay for only the efficient costs of these services.

In 2019-20, we will undertake the next pricing investigation for Sydney Water. As part of this price review, we will examine Sydney Water's ring-fencing of SWDD. This will determine if Sydney Water is cross-subsidising its provision of SWDD services through the charges it levies for regulated services.

For example, for SWDD's application services, we will review all application services as part of our review of Sydney Water's periodic prices in 2019-20. This includes reviewing:

- which SWDD application services are government monopoly services and therefore subject to IPART price regulation, and
- the efficient costs of delivering those application services.

We will also ensure that any SWDD application services that are not monopoly services (ie, are unregulated services) are ring-fenced.

318 Minutes from meeting with Sydney Water and IPART, 3 May 2018.
319 Email communication with Sydney Water, 31 July 2018.

6.2 We will defer regulation of construction services provided by SWDD

SWDD issues a fixed-price quote to developers for **construction services** if the Notice of Requirements includes construction. A developer may accept the quote or organise their own construction services.

Our decision is to:

37 Defer regulating SWDD's construction services until the 2020 Sydney Water price review.

Section 11(1) of the IPART Act requires us to determine maximum prices for government monopoly services supplied by Sydney Water and other specified government agencies. The *Independent Pricing and Regulatory Tribunal (Water, Sewerage and Drainage Services) Order 1997* (the Order) lists the services declared by the NSW Premier to be government monopoly services. Construction services offered under SWDD are government monopoly services under paragraph 3(e) of the Order, which declares "services supplied in connection with the provision or upgrading of water supply and sewerage facilities for new developments" to be "government monopoly services".

We do not agree with Sydney Water's submission that these services are ancillary services.[320] In effect, Sydney Water is stating that the services fall within paragraph 3(f) of the Order: "ancillary and miscellaneous customer services for which no alternative supply exists and which relate to the supply of services of a kind referred to in paragraphs (a)-(e) of this Order."

Submissions to our Issues Paper by Sydney Water[321], the Water Services Association of Australia (WSAA)[322] and Hunter Water[323] do not support IPART regulating the price of construction services provided by Sydney Water under SWDD, as they consider the market for these services to be competitive. If IPART were to regulate the price of these services, Sydney Water's view was that it should do so based on a pricing methodology rather than a maximum price because of the significant variation between jobs.[324]

We note that Sydney Water's website lists 27 WSCs and more than 150 contractors for minor works.[325] This suggests customers have a choice of suppliers for construction services offered through SWDD.

In our Draft Report, we made a draft decision to defer regulating construction services provided under SWDD to the 2020 Sydney Water price review, when we will set prices for its water and sewerage services. This will enable us to examine the costs of delivering construction services when we engage our expenditure consultants to review Sydney Water's costs.

320 Sydney Water's submission to IPART Issues Paper, December 2017, p 41.
321 Sydney Water's submission to IPART Issues Paper, December 2017, pp 45-46.
322 Water Services Association of Australia's submission to IPART Issues Paper, January 2018, p 9.
323 Hunter Water's submission to IPART Issues Paper, December 2017, p 43.
324 Sydney Water's submission to IPART Issues Paper, December 2017, p 46.
325 Sydney Water, *Lists*, at https://www.sydneywater.com.au/SW/plumbing-building-developing/developing/providers/lists/index.htm , accessed on 7 June 2018.

In submissions to our Draft Report:

- Hunter Water supported the draft decision.[326]
- Sydney Water noted that it disagrees with the need for regulation, as it considers that the relevant services provided by SWDD are contestable. Sydney Water requested the opportunity to better understand the reasons why IPART considers that regulation is necessary.[327]

Sydney Water has not offered further arguments or reasons as to why it considers that SWDD is a contestable service, and not monopoly services subject to IPART regulation. Sydney Water and other stakeholders will have a further opportunity to present their views in our review of Sydney Water's periodic prices in 2019-20.

6.3 Competitive neutrality complaints process

6.3.1 There is an established process to lodge a competitive neutrality complaint

Competitive neutrality is the principle that where government competes with private business, it should do so on an equal footing. In other words, government agencies should not enjoy any net competitive advantage simply as a result of their public sector ownership. Competitive advantages include non-price advantages. For example, non-price related advantages might include government business administrators having access to information used in performing statutory functions to which their private sector competitors do not have access. Other non-price advantages include the government business having less stringent procedural requirements compared with their private sector competitors, or the use of statutory resources to promote the commercial business.[328]

In its submission to the Draft Report, PIAC noted that it is concerned that SWDD will price out existing Water Servicing Coordinators and discourage potential new entrants, thus adversely affecting competitive service provision. PIAC recommended that this be investigated more urgently than the 2020 price review.[329]

In response to PIAC's recommendation, we note that the review of Sydney Water's prices will commence in 2019. Consideration of regulation of SWDD's construction services will require a detailed analysis of Sydney Water's costs. As such, we consider that the next price review is the appropriate point at which to undertake this investigation. In the meantime, concerned parties have the competitive neutrality complaints process available.

The procedure for competitive neutrality complaints is outlined in Box 6.1**Error! Reference source not found.Error! Reference source not found.** below. The NSW Government assigned IPART partial responsibility for investigating and reporting on competitive neutrality complaints that are referred to us.[330] More information can be found on our website.

326 Hunter Water's submission to IPART Draft Report, August 2018, p 21.
327 Sydney Water's submission to IPART Draft Report, August 2018, pp 6, 15.
328 Victorian Competition and Efficiency Commission, *Final Report: Competitive neutrality complaint investigation of plumbing services provided by South East Water Limited,* December 2010, p 3.
329 PIAC's submission to IPART Draft Report, August 2018, p 2.
330 IPART can't initiate a competitive neutrality complaint.

Box 6.1 Procedure for competitive neutrality complaints

The NSW Government Policy Summary of the Competitive Neutrality Complaints Handling Mechanism states that:

- Prior to lodging a formal complaint, complainants should first discuss their concerns with the NSW Government business involved.
- Complainants are obliged to first lodge their complaint with the NSW Government business involved.
- Generally, NSW Government businesses should respond in writing within four weeks of receiving a complaint.
- If complainants are not satisfied with the response, they may request that the Premier refer their complaint to IPART for investigation.

Further information can be found on IPART's website.

Source: NSW Government, *Policy Summary of the Competitive Neutrality Complaints Handling Mechanism,* January 2002, pp 17-20.

Appendices

A Matters to be considered under section 15 of the IPART Act

In making determinations, IPART is required under section 15 of the IPART Act to have regard to the following matters (in addition to any other matters IPART considers relevant):

a) the cost of providing the services concerned

b) the protection of consumers from abuses of monopoly power in terms of prices, pricing policies and standard of services

c) the appropriate rate of return on public sector assets, including appropriate payment of dividends to the Government for the benefit of the people of New South Wales

d) the effect on general price inflation over the medium term

e) the need for greater efficiency in the supply of services so as to reduce costs for the benefit of consumers and taxpayers

f) the need to maintain ecologically sustainable development (within the meaning of section 6 of the *Protection of the Environment Administration Act 1991*) by appropriate pricing policies that take account of all the feasible options available to protect the environment

g) the impact on pricing policies of borrowing, capital and dividend requirements of the government agency concerned and, in particular, the impact of any need to renew or increase relevant assets

h) the impact on pricing policies of any arrangements that the government agency concerned has entered into for the exercise of its functions by some other person or body

i) the need to promote competition in the supply of the services concerned

j) considerations of demand management (including levels of demand) and least cost planning

k) the social impact of the determinations and recommendations

l) standards of quality, reliability and safety of the services concerned (whether those standards are specified by legislation, agreement or otherwise).

Table A.1 outlines the sections of the report that address each matter.

Table A.1 Consideration of section 15(1) matters by IPART

Matters under section 15(1)	Final Report reference
a) the cost of providing the services	Chapter 2 sections 2.4, 2.5 Chapter 4 sections 4.2, 4.4
b) the protection of consumers from abuses of monopoly power	Chapter 2 sections 2.4, 2.9 Chapter 6
c) the appropriate rate of return and dividends	Chapter 2 section 2.6
d) the effect on general price inflation	Chapter 2 section 2.9
e) the need for greater efficiency in the supply of services	Chapter 2 sections 2.4, 2.9 Chapter 4 section 4.6 Chapter 5 section 5.1
f) ecologically sustainable development	Chapter 4 section 4.1
g) the impact on borrowing, capital and dividend requirements	Chapter 2 section 2.4
h) impact on pricing policies of any arrangements that the government agency concerned has entered into for the exercise of its functions by some other person or body	n/a
i) need to promote competition	Chapter 2 sections 2.4, 2.9 Chapter 4 section 4.6 Chapter 6
j) considerations of demand management and least cost planning	Chapter 2 section 2.4
k) the social impact	Chapter 2 section 2.9 Chapter 4 section 4.4
l) standards of quality, reliability and safety	Chapter 5

B Developer charges in Central Coast Council

Wyong Shire Council

In 2014, the former Wyong Shire Council released an updated DSP. It was prepared using the methodology in our 2000 Determination and the parameters detailed in our 2013 Determination (for Central Coast Council). The updated DSP defined the former Wyong Shire Council Local Government Area (LGA) as a single DSP area for water and wastewater. Previously, the former Wyong Shire Council operated with 12 district DSPs. Within these DSPs, there were multiple precincts with their own DSP for water and wastewater charges.

Table B.1 Previous structure of DSPs within the former Wyong Shire Council's districts

Wyong Shire Council DSP district/area	Number of water DSPs within district	Number of wastewater DSPs within district
DSP 1 – Wyong	7	7
DSP 2 - Southern Lakes District	10	7
DSP 3 - The Entrance District	1	3
DSP 5 - The Ourimbah District	7	3
DSP 6 - The Toukley District	1	3
DSP 7A - Warnervale / Wadalba	1	2
DSP 7 - The Gorokan District	3	7
DSP 8 - The San Remo Area	3	3
DSP 9 - The Budgewoi Area	1	1
DSP 10 - The Lake Munmorah Area	4	2
DSP 11 - The Mannering Park Area	1	1
DSP 12 - The Gwandalan and Summerland Point Area	2	2

Note: In their 2014 DSP, the former Wyong Shire Council defined their LGA as a single DSP area for water and wastewater.
Source: Wyong Shire Council, *Development Servicing Plan - Water Supply and Sewerage*, April 2014, pp 1-4.

The former Wyong Shire Council and Gosford City Councils jointly owned and managed a water supply headworks scheme. This resulted in uniform water headworks charge pricing applicable to both former Council areas.[331]

Prior to Wyong Shire Council agglomerating its DSPs into a single plan in 2014, there were 12 separate DSPs covering 41 pricing areas for water, and 41 areas for wastewater. The average developer charge for water was $5,506, with charges ranging from $1,834 to $16,359.[332] The average wastewater developer charge was $2,742, with charges ranging from $867 to $7,093.

331 Wyong Shire Council, *Development Servicing Plan – Water Supply and Sewerage*, April 2014, p 4.
332 Simple arithmetic average across 41 pricing areas. See IPART, *Review of developer charges and backlog sewerage charges for metropolitan water agencies* – Issues Paper, October 2017, p 49.

The average combined water and wastewater developer charge was $8,248.[333] We note that there was a significant variation in the level of developer charges for both water and wastewater within the entire Wyong Shire Council area.

Following the adoption of the 2014 DSP, the combined water and wastewater developer charge for all developments within the former Wyong Shire Council became $8,978 ($3,747 for water and $5,231 for wastewater).[334] Any geographic variation of developer charges was removed.

Gosford City Council

In 2014, the former Gosford City Council released two DSPs, a redevelopment and city centre plan. Historically, there were a number of DSPs within the former Gosford City Council LGA. However, in 2012, the former Council made a decision to agglomerate 11 DSPs into a Redevelopment DSP and a City Centre DSP, from 2013-14 onwards.[335]

Table B.2 Actual developer charges for the Gosford City Council's DSPs

Combined water and wastewater charge	2013-14	2014-15
DSP	$/ET	$/ET
City Centre	6,825	6,790
Redevelopment	3,871	3,416

Note: All figures are in $2017-18.

Source: Gosford City Council, *Gosford City Centre - Development Servicing Plan - Water and Sewer*, April 2014, p 3; Gosford City Council, *Redevelopment - Development Servicing Plan - Water and Sewer*, April 2014, p 3.

333 IPART, Review of developer charges and backlog sewerage charges for metropolitan water agencies – Issues Paper, October 2017, p 50.
334 Wyong Shire Council, *Development Servicing Plan – Water Supply and Sewerage*, April 2014, p 1.
335 Gosford City Council, *Redevelopment – Development Servicing Plan – Water and Sewer,* April 2014, p 16.

C Sydney Water and Hunter Water's policy for funding growth

Sydney Water's policy for in-sequence development

Sydney Water will fund the infrastructure for development in line with Sydney Water's Growth Servicing Plan or in brownfield areas.

Sydney Water's policy for out-of-sequence development

If development is to occur outside Sydney Water's Growth Servicing Plan, the developer must enter into a commercial agreement with Sydney Water. The developer will then fund the construction and transfer the works to Sydney Water. Sydney Water provides a repayment system, which varies depending on how out of line the development is to the Growth Servicing Plan. If the development is not on the Growth Servicing Plan, not in a NSW Government program or has no planning status, there is no repayment of the costs of delivering the infrastructure.[336]

Hunter Water's policy

Hunter Water does not typically refer to development as being either 'in-sequence' or 'out-of-sequence'.[337] The *Funding and Delivery of Growth Infrastructure Manual* and *Funding and Delivery of Growth Infrastructure Standard* set out Hunter Water's approach to funding capital works that support urban growth in the Lower Hunter. Hunter Water released these documents in January 2018 following consultation on its previous policy on funding growth related infrastructure.

Hunter Water always requires the developer to fund and deliver the minimum reticulation assets within the development.[338] Its funding policies for connection assets depend on the timing of the development ie, whether the land is shown as a new development areas within Hunter Water's Growth Plan within the next five, ten years or beyond ten years. Connection assets are those assets that are outside the development and connect the development to Hunter Water's trunk infrastructure. [339]

Hunter Water will pay the cost of connection assets in a staged manner when development is within five to ten years according to the Growth Plan. When development is beyond ten years,

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336 Sydney Water, *Growth Servicing Plan for 2017 to 2022*, at https://www.sydneywater.com.au/web/groups/publicwebcontent/documents/document/zgrf/mdq2/~edisp/dd_046979.pdf, 2017, accessed on 5 June 2018, pp 7-8.

337 This is because previously, the NSW Government did not have a plan of priority development for the Lower Hunter area. There is now the *Hunter Regional Plan 2036*. Hunter Water correspondence to IPART, August 2016.

338 Hunter Water, *Funding and Delivery of Growth Infrastructure Standard*, January 2018, p 4.

339 Hunter Water, *Funding and Delivery of Growth Infrastructure Standard*, January 2018, p 3.

Hunter Water will not pay the cost of connection assets, unless the developer is required to upsize these assets for future or adjoining developments. In these circumstances, Hunter Water will pay the marginal costs for upsizing the connection assets.[340]

Hunter Water takes a similar approach for reticulation assets. Where reticulation assets are increased to service adjoining or nearby development, Hunter Water will pay for the full cost of these larger assets when development is within five to ten years. When development is beyond ten years, Hunter Water will not pay the cost of reticulation assets, unless the developer is required to upsize these assets for future or adjoining developments. In these circumstances, Hunter Water will pay the marginal costs for upsizing the reticulation assets.[341]

340 Hunter Water, *Funding and Delivery of Growth Infrastructure Standard*, January 2018, p 7.
341 Hunter Water, *Funding and Delivery of Growth Infrastructure Standard*, January 2018, p 7.

D Developer charges for Local Water Authorities in NSW

The Department of Primary Industries' Water division (DPI Water) released an updated version of the Guidelines for calculating the maximum applicable developer charge applicable to local water utilities (LWUs). The approach is based on the NPV approach adopted by IPART for the metropolitan water utilities.

NPV is a standard tool for making investment decisions and is widely accepted and understood. The fundamental principle of the NPV approach is that the investment in assets for serving a development area is fully recovered from the development, through a combination of up-front charges (developer charges) and periodic charges.

The NPV approach allows future costs and revenues to be reconciled to a single value by discounting them to today's dollars. It also takes account of the upfront infrastructure costs related to a development, the ongoing costs of servicing the development and the additional revenues from periodic charges as the number of customers being serviced by a LWU increases.

The NPV methodology for LWUs has been simplified for ease of calculation and adoption. The result of this is that the Guidelines provide several options that LWUs may use when calculating their developer charges.

Box D.1 Brief overview of changes in the 2016 DPI Water Guidelines for LWUs

DPI Water has outlined the key changes since the 2002 Guidelines. They include:

- New provisions related to the registration, exhibition and review of DSP documents.
- New provisions related to dispute resolution.
- Modifications to the provision of assets to be included in the capital charge calculation:
  - Including existing assets less than 30 years old.
  - Including future assets that are required within 10 years of the DSP.
  - Including the future renewal cost of assets planned within 10 years if a renewal asset is older than 30 years and has been excluded from capital charge.
- Amendments included to value future assets on the basis of MEERA cost.
- Modifications to the capital charge calculation methods:
  - The Return on Investment (ROI) factor method was removed.
  - NPV spreadsheet method applies to all LWUs.
- A change to the calculation method for weighted average capital charge to calculate on the basis of percentage of Present Value of new ETs instead of percentage of growth.
- Modifications to the reduction amount calculation method.
- Modifications to the NPV of annual bills method.
- Provisions for capping developer charges.
- Provisions on disclosure of cross-subsidies.

Source: NSW Department of Primary Industries, *2016 Developer Charges Guidelines for Water Supply, Sewerage and Stormwater*, June 2016, pp ix-xiv,.http://www.water.nsw.gov.au/__data/assets/pdf_file/0011/663698/2016-Developer-Charges-Guidelines.pdf, accessed on 24 August 2017.

In reviewing and recommending improvements to the 2002 Guidelines, IPART identified a set of broad objectives that developer charges should aim to achieve. These include:

- Full cost recovery: developer charges should reflect the full efficient costs of providing water-related infrastructure to new developments.
- Effective price signalling: developer charges should send effective price signals about the costs of development in different locations.
- Appropriate risk sharing: developer charges should appropriately share the risks of development between LWUs and the developers.
- Equity: developer charges should equitably share the costs of development between developers, LWUs and existing ratepayers.
- Simplicity, transparency and consistency: developer charges should be set through a method that is simple for LWUs to administer, is transparent to all interested parties, and can be implemented consistently.[342]

342 IPART, *Review of Water Supply, Sewerage and Stormwater Developer Charges Guidelines – Final Report to the Minister,* September 2007, p 4.

Table D.1 Summary of 2016 Developer Charges Guidelines for Local Water Utilities

Parameters	2016 DPI Guidelines for LWUs	Does it align with IPART Draft Determination?
Discount rate for pre-1996 assets	3%	Yes – based on Draft Determination for Sydney Water and Hunter Water. The discount rate for Central Coast Council is 0%.
Discount rate for post-1996 assets	5%	No – applicable rate for utilities is the prevailing WACC as per the Draft Determination.
Assets to be included	There must be a nexus between the development and the assets serving the development. Can include dams, pumping stations, water treatment works, trunk mains and service reservoirs.	Yes – consistent with Draft Determination
Inclusion of headworks	Capital charge is calculated for water supply headworks serving the development	Yes – consistent with Draft Determination
Time window for existing assets	Assets less than 30 years old	No – pre-1970 assets are excluded
Time window for future assets	Assets planned within next 10 years	No – Draft Determination does not set a timeframe
Valuation of assets	MEERA	Yes – consistent with Draft Determination
Capital charge	NPV or ROI (for LWUs with under 2,000 properties for either water or sewerage) NPV: Capital Charge = PV of capital cost / PV of ETs	Yes – NPV approach is consistent with Draft Determination
Reduction amount	NPV of annual bills (similar to IPART method) or simplified NPV of annual bills (n= 30 in both cases)	Yes – NPV approach is consistent with Draft Determination
Reticulation	Exclude	N/A – Draft Determination does not make a provision for reticulation

Source: NSW Department of Primary Industries, *2016 Developer Charges Guidelines for Water Supply, Sewerage and Stormwater*, http://www.water.nsw.gov.au/__data/assets/pdf_file/0011/663698/2016-Developer-Charges-Guidelines.pdf, June 2016, accessed on 25 August 2017; 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.

E Developer charges in other Australian jurisdictions

This appendix provides a brief overview of developer charges in other Australian jurisdictions. All other Australian jurisdictions levy developer charges for new customers connecting to the existing water, sewerage and recycled water networks.

Victoria

The Essential Services Commission regulates the pricing of water services for consumers within Victoria. Water corporations levy developer charges when new customers connect to the existing water, sewerage and recycled water networks. These developer charges are called new customer contributions (NCCs).

Prior to 2012, the Essential Services Commission set uniform scheduled charges and prescriptive rules for NCCs. Between 2011 and 2012, the Essential Services Commission undertook a review of the NCCs framework in place at the time. This review responded to water corporations and developer concerns about the opaqueness of the regime. The Essential Services Commission developed a new, principles-based NCCs framework that came into effect on 1 July 2013.[343]

The new NCCs framework does not set prices and prescriptive rules. Rather, it provides a set of minimum pricing principles that water corporations must adhere to.[344] The pricing principles require developers to meet the incremental costs they impose on the water business when they connect to the water, sewerage or recycled water networks less the incremental revenues earned from the new customers. This approach ensures that NCCs are cost-reflective and the benefits of new connections are shared between new and existing customers.[345]

This framework clarifies each of the key participant's roles. The Essential Services Commission will assess and approve the pricing principles, any standardised charges and negotiation framework of each water corporation. Water corporations are required to negotiate NCCs with developers in accordance with the approved pricing principles and negotiating frameworks. Developers will have recourse to the Victorian Civil and Administrative Tribunal (VCAT) for dispute resolution.[346]

Australian Capital Territory

In the Australian Capital Territory, Icon Water provides water and sewerage services. In December 2017, the Independent Competition and Regulatory Commission (ICRC) published

343 Essential Services Commission, *Guidance paper – new customer contributions*, August 2012, p vi.
344 Essential Services Commission, *Guidance paper – new customer contributions*, August 2012, p vi.
345 Essential Services Commission, *Guidance paper – new customer contributions*, August 2012, p vii.
346 Essential Services Commission, *Guidance paper – new customer contributions*, August 2012, p vi.

the Water and Sewerage Capital Contributions Code (the Code).[347] This came into effect for all development approvals lodged after 1 January 2018 and changed the charges that developers pay for new water and sewerage infrastructure.[348]

Before this new Code was developed, there was inequity in the way costs were recovered when a development triggered a water or sewerage asset augmentation. If a developer triggered an upgrade to infrastructure, the developer was required to pay for the full cost of new water and sewerage infrastructure. This rule applied no matter the development size. Developers which built before or after an upgrade did not pay any contribution.[349]

The Water and Sewerage Capital Contributions Code governs what charges developers pay. Icon Water will fund 50% of water and sewerage infrastructure, with the remaining shared between all developers through the charge. Out of precinct shared assets do not fall under the Code and are fully funded by the developer.[350]

Developers will also need to fund the cost of reticulation or small assets, typically at a street level that relate to connections to houses that are part of a development.[351]

South Australia

In South Australia, SA Water provides water and wastewater services across South Australia. The Essential Services Commission of South Australia (ESCOSA) does not regulate developer charges or contributions. Rather, the developer contributions are subject to the relevant National Water Initiative Pricing Principles and additional ESCOSA pricing principles.[352]

SA Water sets developer contributions on a case by case basis, based on estimated efficient costs for the new investment, reduced to reflect the benefits other customers receive from the investment. The costs include the incremental costs of the new infrastructure (such as the cost of the materials and labour to undertake the work) and an allocation of fixed costs for the service. Revenue from developer contributions is offset against SA Water's drinking water and sewerage retail capital expenditure so there is no over-recovery of these costs.[353]

Queensland

In Queensland, water and sewerage connections are made through local water service providers, which differ according to geographic area.

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347 Icon Water, *FAQs Water and Sewerage Capital Contributions (WSCC) Code*, December 2017, p 1.
348 Icon Water, *Water and Sewerage Contributions Code*, at https://www.iconwater.com.au/developers-and-renovators/capital-contributions/capital-contributions-code-calculator.aspx, accessed on 26 April 2018.
349 Icon Water, *FAQs Water and Sewerage Capital Contributions (WSCC) Code*, December 2017, p 1.
350 Icon Water, *FAQs Water and Sewerage Capital Contributions (WSCC) Code*, December 2017, p 3.
351 Icon Water, *FAQs Water and Sewerage Capital Contributions (WSCC) Code*, December 2017, p 3.
352 SA Water, *Developer contributions 2017-18 pricing policy statement,* at https://www.sawater.com.au/__data/assets/pdf_file/0009/165258/2017-18-Developer-Contributions-Pricing-Policy-Statement.pdf, accessed on 26 April 2018.
353 SA Water, *Developer contributions 2017-18 pricing policy statement,* at https://www.sawater.com.au/__data/assets/pdf_file/0009/165258/2017-18-Developer-Contributions-Pricing-Policy-Statement.pdf, accessed on 26 April 2018, p 2.

The legislation that oversees developer charges is the *Planning Act 2016*, the *Planning Regulation 2017* and the *South-East Queensland Water (Distribution and Retail Restructuring) Act 2009*. Water service providers may require developers to pay relevant and reasonable charges towards the capital costs of infrastructure in order to meet the demand placed on trunk infrastructure networks by their development.[354] The maximum charges for trunk infrastructure are outlined in the legislative framework.

Water service providers are authorised to do either or both of the following for development approvals in relation to trunk infrastructure:

- adopt, by resolution, charges for development infrastructure and levy charges in accordance with the resolution, and
- impose particular conditions for relevant and reasonable development infrastructure.[355]

Water service providers are also authorised to impose particular conditions for non-trunk infrastructure within a development.[356]

Tasmania

TasWater provides water and sewerage services across Tasmania.[357] The Tasmanian Economic Regulator sets the prices for TasWater.[358]

Developer charges apply to all new developments. Developer charges are made up of three components – works internal to the development, works external to the development and headworks charges for existing capacity in a system consumed by the development. From 1 July 2015, the Tasmanian Government indicated that spare capacity in the system (ie, headworks) would be made available to developers at no charge. From 31 March 2016, this exemption no longer applies.[359]

Northern Territory

The Power and Water Corporation provides water and sewerage services across the Northern Territory. The Utilities Commission of the Northern Territory regulates the prices for water and sewerage services in the Northern Territory.[360]

354 Sunshine Coast Council, *Infrastructure charges for development fact sheet*, at https://www.sunshinecoast.qld.gov.au/Development/Fees-and-Infrastructure-Charges, accessed on 2 May 2018.

355 Queensland Department of Infrastructure, Local Government and Planning, *A snapshot of the Planning Act 2016*, July 2016, at https://www.dilgp.qld.gov.au/resources/planning/better-planning/snapshot-of-planning-act-2016.pdf, accessed on 3 May 2018, p 11.

356 Queensland Department of Infrastructure, Local Government and Planning, *A snapshot of the Planning Act 2016*, July 2016, at https://www.dilgp.qld.gov.au/resources/planning/better-planning/snapshot-of-planning-act-2016.pdf, accessed on 3 May 2018, p 11.

357 TasWater, *Who is TasWater?*, at https://www.taswater.com.au/About-Us/Who-is-TasWater-, accessed on 26 April 2018.

358 Office of the Tasmanian Economic Regulator, at http://www.economicregulator.tas.gov.au/water, accessed on 26 April 2018.

359 TasWater, *2015-18 Price and Service Plan*, at https://www.taswater.com.au/Your-Account/Price---Service-Plan, accessed on 26 April 2018, pp 86-87.

360 Utilities Commission, *Pricing,* at http://www.utilicom.nt.gov.au/WaterAndSewerage/Pages/Pricing.aspx, accessed on 26 April 2018.

Developers are required to contribute towards the costs of extending and upgrading water and sewerage networks in the Northern Territory. Capital contributions are levied by Power and Water through the Water and Sewerage System Extension Policy (WASSEP). Power and Water is consulting on a new framework for developer charges to update the WASSEP. This is because the charges set through the WASSEP only recover about half of the true cost of developer capital works. The remainder is subsidised by the general community via water and sewerage service tariffs.[361] The WASSEP was also designed for "greenfield" development and does not reflect the current nature of development in the Northern Territory, especially around issues inherent with infill development.

The new proposed capital contribution supplement aims to better reflect capital works costs associated with developers involved in development activity and provide a simplified, transparent framework to minimise the impact on other network users.[362]

361 PowerWater, *Water and Sewerage Network Capital Contributions,* at https://www.powerwater.com.au/networks_and_infrastructure/water_services/water_and_sewerage_network_capital_contributions_supplement, accessed on 26 April 2018.

362 PowerWater, *Water and Sewerage Network Capital Contributions,* at https://www.powerwater.com.au/networks_and_infrastructure/water_services/water_and_sewerage_network_capital_contributions_supplement, accessed on 26 April 2018.

F Treasurer's letter under section 18(2) setting zero developer charges

NEW SOUTH WALES

TREASURER

Mr Kevin Young
Managing Director
Hunter Water Corporation
36 Honeysuckle Drive
NEWCASTLE NSW 2300

Contact: M White
Telephone: (02) 9228 4266

18 DEC 2008

Dear Mr Young

I am writing in regard to the Government's decision to abolish immediately Sydney Water and Hunter Water's developer charges for water, wastewater and stormwater services.

This decision results in developer charges lower than would be charged under the current methodology determined by the Independent Pricing and Regulatory Tribunal. Such an outcome requires the Treasurer's approval under Section 18(2) of the *Independent Pricing and Regulatory Tribunal Act 1992*.

Consistent with the Government's developer charge policy, I approve zero developer charges for water, wastewater and storm water services under Section 18(2) of the *Independent Pricing and Regulatory Tribunal Act 1992*.

I note that developer charges will continue to be used to recover the cost of recycled water services to new developments. In addition, Sydney Water will retain the ability to recover from developers the cost of servicing development that is not consistent with planning policies or NSW's development program.

Yours sincerely

THE HON DAVID CAMPBELL MP
Acting Treasurer

G Glossary

1995 Determination	IPART, *Sydney Water Corporation Prices of Developer Charges for Water, Sewerage and Drainage Services*, Determination No. 9, December 1995
1997 Determination	IPART, *Pricing of Backlog Sewerage Services for Sydney Water Corporation, Gosford City Council, Hunter Water Corporation, Wyong Shire Council*, Determination No. 4.1, July 1997
2000 Determination	IPART, *Sydney Water Corporation, Hunter Water Corporation, Gosford City Council, Wyong Shire Council – Developer Charges from 1 October 2000*, Determination No. 9, September 2000
2000 methodology	Methodology for developer charges under the 2000 Determination
2006 Determination	IPART, *Pricing of Backlog Sewerage Services for Gosford City Council – Determination*, Determination No. 1, February 2006
2008 Government direction	In 2008, the NSW Government set water, sewerage and stormwater developer charges for Sydney Water and Hunter Water to zero, under section 18(2) of the IPART Act
2013 Determination	IPART, *Gosford City Council and Wyong Shire Council – Developer charges – Determination*, Determination No. 1, May 2013
ABS	Australian Bureau of Statistics
AFOC	Assets free of charge
Backlog sewerage service	The provision of an environmentally acceptable wastewater management service in urban and semi-urban areas by a water utility where that service is not currently provided
BASIX	Building and Sustainability Index

BCA	Building Code of Australia
BOO	Build Own Operate
BOOT	Build Own Operate Transfer
BSCC	Backlog Sewerage Capital Contribution Charge
Building block approach	IPART's standard methodology to establish notional revenue requirement
CAM	Cost Allocation Methodology
CSO	Community Service Obligation
DORC	Depreciated Optimised Replacement Cost
DPI Water	Department of Primary Industries Water responsible for the management of NSW's surface water and groundwater resources
DRC	Depreciated Replacement Cost
DSP	Development Servicing Plan
EIC	Environmental Improvement Charge
EPA	The NSW Environment Protection Authority
EP&A Act	*Environmental Planning and Assessment Act 1979* (NSW)
Equivalent tenement	The measure of the demand a new development will place on the water and wastewater infrastructure compared to an average residential dwelling
ET	Equivalent tenement
FRNSW	Fire & Rescue NSW
GPT	Government Pricing Tribunal
HIA	Housing Industry of Australia
Hunter Water	Hunter Water Corporation
In-sequence development	Development that occurs during the NSW Government's planned release of land and the water utilities DSP

IPART	Independent Pricing and Regulatory Tribunal of NSW
IPART Act	*Independent Pricing and Regulatory Tribunal Act 1992* (NSW)
Issues Paper	IPART, *Review of developer charges and backlog sewerage charges for metropolitan water agencies* – Issues Paper, October 2017
IWCM	Integrated Water Cycle Management
LGA	Local Government Area
LRMC	Long Run Marginal Cost
LWUs	Local Water Utilities
MEERA	Modern Engineering Equivalent Replacement Asset
MSE	Minor service extension
NCC	National Construction Code
NCCs	New customer contributions
Notional revenue requirement	Revenue requirement set by IPART that represents the efficient costs of providing a water utility's declared monopoly services
NPV	Net present value
ORC	Optimised Replacement Cost
The Order	The *Independent Pricing and Regulatory Tribunal (Water, Sewerage and Drainage Services) Order 1997*
Out-of-sequence development	Development that occurs ahead of the NSW Government's planned release of land and the water utilities DSP
PIAC	Public Interest Advocacy Centre
Post-1996 assets	Assets which were commissioned on or after 1 January 1996 or which are yet to be commissioned

Pre-1996 assets	Assets which were commissioned prior to 1 January 1996
PSP	Priority Sewerage Program
PV	Present Value
RAB	Regulatory Asset Base
ROI	Return on Investment
SCA	Former Sydney Catchment Authority (now part of WaterNSW)
SDP	Sydney Desalination Plant
State Water	State Water Corporation (now part of WaterNSW)
SWDD	Sydney Water Developer Direct™
Sydney Water	Sydney Water Corporation
UDIA	The Urban Development Institute of Australia
WACC	Weighted Average Cost of Capital
WaterNSW	WaterNSW is the organisation responsible for managing raw water supply across NSW by bringing together the Sydney Catchment Authority (SCA) and State Water Corporation (State Water) (at 1 January 2015)
WICA	*Water Industry Competition Act 2006* (NSW)
WSAA	Water Services Association of Australia
WSC	Water Servicing Coordinator

[n2018-4035]

Maximum prices for connecting, or upgrading a connection, to a water supply, sewerage, or drainage system

Sydney Water, Hunter Water and Central Coast Council

Final Determination

October 2018

ISBN 978-1-76049-240-3

The Independent Pricing and Regulatory Tribunal (IPART)

IPART provides independent regulatory decisions and advice to protect the ongoing interests of the consumers, taxpayers and citizens of NSW. IPART's independence is underpinned by an Act of Parliament. Further information on IPART can be obtained from IPART's website: https://www.ipart.nsw.gov.au/Home.

Tribunal Members

The Tribunal members for this review are:

Dr Peter J Boxall AO, Chair

Mr Ed Willett

Ms Deborah Cope

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

Scott Chapman (02) 9290 8449

Contents

Preliminary

1 Scope of this determination

1.1 To what services does this determination apply?

This determination sets methodologies for fixing maximum prices for the following services:

(a) connecting a New Development to a System, as provided for in Schedule 1;

(b) providing an Existing Property with a New Connection to a System, as provided for in Schedule 2; and

(c) providing an Existing Property with an Upgraded Connection to a System, as provided for in Schedule 3.

1.2 To which Agencies does this determination apply?

This determination applies only to services provided by Sydney Water, Hunter Water and Central Coast Council. In the case of Central Coast Council, it applies only to services provided as a Water Supply Authority (as distinct from services provided as a Council).

1.3 Where does this determination apply?

Maximum prices under this determination apply only to DSP Areas and only in:

(a) Sydney Water's Area of Operations;

(b) Hunter Water's Area of Operations; and

(c) Central Coast Council's Area of Operations.

[Note: A DSP Area is an area where a Development Servicing Plan applies. The Agencies are responsible for defining DSP Areas.]

1.4 There are two exclusions from the scope of this determination

This determination does not apply to services provided:

(a) pursuant to a Negotiated Services Agreement; or

(b) in respect of connections to a Recycled Water System.

2 Commencement and duration of this determination

(a) This determination commences on 2 November 2018 or the day that it is published in the NSW Government Gazette, whichever is later.

(b) This determination continues in force until it is revoked or replaced.

3 IPART may make scheme-specific determinations

In addition to this determination, IPART may make further determinations under section 11 of the IPART Act of the pricing for particular Determination Services supplied by an Agency in respect of specific schemes or Developments. Such a scheme-specific determination may:

(a) replace this determination in part; and

(b) apply for a term ending on, or before or after, the end date of this determination.

4 Replacement of other determinations

This determination replaces the following determinations made under the IPART Act:

(a) Determination No. 4.1 of 1997 – Sydney Water Corporation, Gosford City Council, Hunter Water Corporation and Wyong Shire Council – Pricing of backlog sewerage services;

(b) Determination No. 9 of 2000 – Sydney Water Corporation, Hunter Water Corporation, Gosford City Council and Wyong Shire Council – Developer charges;

(c) Determination No. 1 of 2006 – Gosford City Council – Pricing of backlog sewerage services;

(d) Determination No. 1 of 2013 – Gosford City Council and Wyong Shire Council – Developer charges; and

(e) Schedule 8 to Determination No. 5 of 2016 – Sydney Water Corporation – Maximum prices for water, sewerage, stormwater drainage and other services.

5 Legislative background

5.1 IPART's power to set maximum prices

Section 11(1)(a) of the IPART Act provides IPART with a standing reference for the determination of maximum prices for government monopoly services supplied by a government agency specified in schedule 1 to the IPART Act.

5.2 The Determination Services are government monopoly services

The Determination Services are government monopoly services because they fall within the scope of the *Independent Pricing and Regulatory Tribunal (Water, Sewerage and Drainage Services) Order 1997*.

5.3 The Agencies are specified in schedule 1 to the IPART Act

(a) Sydney Water and Hunter Water are each specified by name in schedule 1 to the IPART Act.

(b) Schedule 1 to the IPART Act also specifies Water Supply Authorities. Central Coast Council is a Water Supply Authority.

5.4 IPART has set methodologies, rather than directly fixing maximum prices

This determination sets methodologies for fixing the maximum prices that Agencies may charge for the Determination Services under sections 11 and 13A of the IPART Act. As required by section 13A(3) of the IPART Act, IPART's reasons for setting methodologies for fixing maximum prices are set out in Schedule 8.

6 Which parts of this determination apply to each Determination Service?

The table below outlines the contents of each Schedule and the categories of Determination Services to which each Schedule applies.

Schedule	Contents	Determination Service to which the Schedule applies
Schedule 1	Pricing methodology	Connecting a New Development to a System
Schedule 2	Pricing methodology	Providing an Existing Property with a New Connection to a System
Schedule 3	Pricing methodology	Providing an Existing Property with an Upgraded Connection to a System
Schedule 4	Requirements for DSPs	All
Schedule 5	Parameters and calculations	All
Schedule 6	Inflation, rounding and zero prices	All
Schedule 7	Definitions and interpretation	All
Schedule 8	Statement of reasons for setting methodologies	All

7 Dispute resolution

A customer who is dissatisfied with the way an Agency has applied a methodology set out in this determination may:

(a) complain to the Agency; and

(b) if the complaint has been reviewed by the Agency and the customer is still dissatisfied, the customer may request to have the dispute arbitrated under section 31 of the IPART Act.

8 This determination fixes maximum prices

For the avoidance of doubt, this determination fixes the maximum prices that an Agency may charge its customers. It does not oblige any Agency to provide, or any customer to purchase, any Determination Service.

Schedule 1 Maximum prices for connecting a New Development to a System

[Note: This Schedule sets out the methodology for calculating the maximum price that Sydney Water, Hunter Water and Central Coast Council can charge for connecting a New Development in a DSP Area to a water supply, sewerage or drainage system. For example, this Schedule would apply where Central Coast Council connects a newly developed apartment complex in a DSP Area to its water supply system.]

1 Methodology for fixing the maximum price for connecting a New Development to a System

(a) This clause 1 applies subject to each of the clauses in Schedule 6.

[Note: Schedule 6 provides for inflation adjustments, rounding and zero prices in certain circumstances.]

(b) The maximum price an Agency may charge for connecting a New Development in a DSP Area to a System is the amount calculated as follows:

$$MP_{Sch1} = \frac{K_1}{L_1} + \frac{K_2}{L_2} - \frac{NPV(R_i - C_i)}{L_3} for\ i = financial\ years\ 1, \dots, n$$

Where:

MP_{Sch1} means the maximum price per Equivalent Tenement to be serviced by the connection;

K_1 means the Capital Charge for the Pre-1996 Assets that will serve the relevant DSP Area, calculated in accordance with clause 2.3(a) of Schedule 5 and set out in the relevant DSP;

K_2 means the Capital Charge for the Post-1996 Assets that will serve the relevant DSP Area, calculated in accordance with clause 2.3(b) and 2.3(c) of Schedule 5 and set out in the relevant DSP;

L_1 means the Agency's estimate of the number of Equivalent Tenements for Pre-1996 Assets, calculated in accordance with clause 3.2(a) of Schedule 5 and set out in the relevant DSP;

L_2 means the Agency's estimate of the number of Equivalent Tenements for Post-1996 Assets, calculated in accordance with clause 3.2(b) of Schedule 5 and set out in the relevant DSP;

L_3 means the Agency's estimate of the number of Equivalent Tenements for the Reduction Amount, calculated in accordance with clause 3.2(c) of Schedule 5 and set out in the relevant DSP;

R_i means the Agency's estimate of the future periodic revenues to be received from new customers in the DSP Area in each financial year i, estimated in accordance with clause 4 of Schedule 5 and set out in the relevant DSP;

C_i means the Agency's estimate of the future operating, maintenance and administration costs of servicing all new customers in the DSP Area in each financial year i (excluding, for the avoidance of doubt, any Capital Costs), estimated in accordance with clause 5 of Schedule 5 and set out in the relevant DSP; and

n is the financial year which is 30 years from the financial year in which the relevant DSP was registered with IPART under clause 2(e) of Schedule 4.

[Note: For the purposes of a draft DSP, *n* is the financial year which is 30 years from the financial year in which the draft DSP is expected to be registered with IPART under clause 2(e) of Schedule 4.]

[Note: *n* is the end of the forecast period for the assessment of expected revenues and costs.]

[Note: Schedule 5 sets out the parameters and calculations that an Agency must use when calculating maximum prices under this clause.]

(c) The maximum price under clause 1(b) is to be calculated at the time the relevant DSP is registered with IPART under clause 2(e) of Schedule 4.

Schedule 2 Maximum prices for providing an Existing Property with a New Connection to a System

[Note: This Schedule sets out the methodology for calculating the maximum price that Sydney Water, Hunter Water and Central Coast Council can charge for connecting an Existing Property in a DSP Area to a water supply, sewerage or drainage system. For example, this Schedule would apply where Hunter Water connects a previously unsewered Existing Property in a DSP Area to its sewerage system.]

1 Methodology for fixing the maximum price for providing an Existing Property with a New Connection to a System

(a) This clause 1 applies subject to each of the other clauses in this Schedule and each clause in Schedule 6.

[Note: Schedule 6 provides for inflation adjustments, rounding and zero prices in certain circumstances.]

(b) The maximum price an Agency may charge for providing an Existing Property in a DSP Area with a New Connection to a System is the amount calculated as follows:

$$MP_{Sch2} = MP_{Sch1} + \left(\frac{K_4}{L_4} - \frac{NPV\left(\acute{R}_i - \acute{C}_i\right)}{L_4} for\ i = financial\ years\ 1, \ldots, n\right)$$

Where:

MP_{Sch2} means the maximum price per Equivalent Tenement for the Existing Property;

MP_{Sch1} means the maximum price per Equivalent Tenement for connecting a New Development to a System for the DSP Area, as calculated in accordance with Schedule 1 (as adjusted in accordance with clause 1 of Schedule 6) of this determination at the time the Extension that enabled the New Connection is completed;

[Note: This variable is the amount calculated under clause 1 of Schedule 1 and specified in the relevant DSP as adjusted for inflation under clause 1 of Schedule 6. For the avoidance of doubt, the maximum price under Schedule 1 is not to be recalculated at the time the Extension that enabled the New Connection is completed. For the avoidance of doubt, while the Nil Developer Charges Policy remains in place, MP_{Sch1} is zero for Sydney Water and Hunter Water.]

K_4 means the Agency's estimate of the efficient capital expenditure required for the Extension, calculated in accordance with clause 2.3(d) of Schedule 5;

L_4 means the Agency's estimate of the number of Equivalent Tenements in the DSP Area that will use the Extension (including, for the avoidance of doubt, Existing Properties), calculated in accordance with clause 3.2(d) of Schedule 5;

[Note: K_4 and L_4 are the Present Value of the Agency's estimates (see clauses 2.3(d) and 3.2(d) of Schedule 5).]

$\acute{R}_i$ means the Agency's estimate of the future periodic revenues to be received from new customers serviced by the Extension in each financial year i, estimated in accordance with clause 4 of Schedule 5;

$\acute{C}_i$ means the Agency's estimate of the future operating, maintenance and administration costs of servicing new customers by the Extension in each financial year i (excluding, for the avoidance of doubt, any Capital Costs), estimated in accordance with clause 5 of Schedule 5; and

n is the financial year which is 30 years from the financial year in which the Extension that enabled the New Connection is completed.

[Note: Schedule 5 sets out the parameters and calculations that an Agency must use when calculating maximum prices under this clause.]

(c) The maximum price under clause 1(b) is to be calculated at the time the Extension that enabled the New Connection is completed.

2 Payment by instalments

(a) This clause 2 applies subject to each of the clauses in Schedule 6.

[Note: Schedule 6 provides for inflation adjustments, rounding and zero prices in certain circumstances.]

(b) This clause 2 applies where an Agency and a customer agree for the customer to pay in annual instalments for the Agency providing an Existing Property with a New Connection to a System.

(c) Where this clause 2 applies then, notwithstanding clause 1, the maximum price that the Agency may charge per year (for N years, up to a maximum of 20 years) is the amount calculated as follows:

$$MP_{Sch2Instalment} = \frac{r_4 \times MP_{Sch2}}{1 - (1 + r_4)^{-N}}$$

Where:

$MP_{Sch2Instalment}$ means the maximum price per year (for N years), per Equivalent Tenement for the DSP Area in which the New Connection is provided;

MP_{Sch2} means the maximum price per Equivalent Tenement that would be payable under clause 1 (as adjusted in accordance with both clause 5 of this Schedule and Schedule 6) at the time the customer is provided with the New Connection to the System; and

r_4 means the Discount Rate set out in clause 1 of Schedule 5.

(d) The maximum price under clause 2(c) is to be calculated at the time the customer is provided with the New Connection to the System.

3 Grandfathering of Pre-existing Annuity Arrangement

Notwithstanding clause 1, the maximum price for any Determination Service that is the subject of a Pre-existing Annuity Arrangement is the price that applies under that Pre-existing Annuity Arrangement.

4 Grandfathering of Pre-existing Application

Notwithstanding clause 1, where an Agency has received a Pre-existing Application in relation to an Existing Property, and that Pre-existing Application is approved by that Agency, the maximum price for providing that Existing Property with a New Connection to a System is the maximum price that would have applied immediately before the Commencement Date.

[Note: The maximum price that would have applied immediately before the Commencement Date is the maximum price under the applicable replaced determination listed in clause 4 of the Preliminary section of this determination.]

5 Maximum price where Extension incorporated into DSP before New Connection occurs

(a) This clause 5 applies where an Extension that enables a New Connection to an Existing Property becomes an Asset allocated to a DSP (following the registration of the DSP with IPART under clause 2(e) of Schedule 4) before the Existing Property is provided with the New Connection.

(b) Where this clause 5 applies, then notwithstanding clause 1 of this Schedule, the maximum price for providing a New Connection to an Existing Property is the maximum price that would apply under clause 1 of Schedule 1 as if the words "connecting a New Development" in that clause were instead "providing an Existing Property in a DSP Area with a New Connection".

Schedule 3 Maximum prices for providing an Existing Property with an Upgraded Connection to a System

[Note: This Schedule sets out the methodology for calculating the maximum price that Sydney Water, Hunter Water and Central Coast Council can charge for providing an Existing Property in a DSP Area with an Upgraded Connection to a water supply, sewerage or drainage system. For example, this Schedule would apply where Sydney Water agrees with a customer to improve the flow or pressure of a connection to an Existing Property for firefighting purposes.]

1 Methodology for fixing the maximum price for providing an Existing Property with an Upgraded Connection to a System

(a) This clause 1 applies subject to each of the other clauses in this Schedule and each clause in Schedule 6.

[Note: Schedule 6 provides for inflation adjustments, rounding and zero prices in certain circumstances.]

(b) The maximum price an Agency may charge for providing an Existing Property in a DSP Area with an Upgraded Connection to a System is the amount calculated as follows:

$$MP_{Sch3} = \frac{K_5}{L_5} - \frac{NPV(\check{C}_i - \hat{C}_i)}{L_5} for\ i = financial\ years\ 1, \dots, n$$

Where:

MP_{Sch3} means the maximum price per Equivalent Tenement for the Existing Property;

K_5 means the Agency's estimate of efficient capital expenditure required for the Upgraded Connection, calculated in accordance with clause 2.3(e) of Schedule 5;

L_5 means the Agency's estimate of the number of Equivalent Tenements in the DSP Area comprised in New Developments that will use the Upgraded Connection and Existing Properties that will agree to contribute to the costs of the Upgraded Connection, calculated in accordance with clause 3.2(e) of Schedule 5;

[Note: K_5 and L_5 are the Present Value of the Agency's estimates (see clauses 2.3(e) and 3.2(e) of Schedule 5).]

$\check{C}_i$ means the Agency's estimate of what the future operating, maintenance and administration costs per Equivalent Tenement of servicing all new customers in the DSP Area would have been in each financial year i, had the Upgraded Connection not been made available, estimated in accordance with clause 5 of Schedule 5, multiplied by the Agency's estimate of the number of Equivalent

Tenements that will use the Upgraded Connection (including, for the avoidance of doubt, Existing Properties) in each financial year *i*;

$\hat{C}_i$ means the Agency's estimate of the future operating, maintenance and administration costs of servicing customers by the Upgraded Connection in each financial year *i* (excluding, for the avoidance of doubt, any Capital Costs), estimated in accordance with clause 5 of Schedule 5; and

n is the financial year which is 30 years from the financial year in which the Upgraded Connection becomes available for the customer to take up.

[Note: Schedule 5 sets out the parameters and calculations that an Agency must use when calculating maximum prices under this clause.]

(c) The maximum price under clause 1(b) is to be calculated at the time the Upgraded Connection becomes available for the customer to take up.

2 Payment by instalments

(a) This clause 2 applies subject to each of the clauses in Schedule 6.

[Note: Schedule 6 provides for inflation adjustments, rounding and zero prices in certain circumstances.]

(b) This clause 2 applies where an Agency and a customer agree for the customer to pay in annual instalments for the Agency providing an Existing Property with an Upgraded Connection to a System.

(c) Where this clause 2 applies then, notwithstanding clause 1, the maximum price that the Agency may charge per year (for *N* years, up to a maximum of 20 years) is the amount calculated as follows:

$$MP_{Sch3Instalment} = \frac{r_5 \times MP_{Sch3}}{1 - (1 + r_5)^{-N}}$$

Where:

$MP_{Sch3Instalment}$ means the maximum price per year (for *N* years), per Equivalent Tenement for the DSP Area in which the Upgraded Connection is provided;

MP_{Sch3} means the maximum price per Equivalent Tenement that would be payable under clause 1 (as adjusted in accordance with Schedule 6) at the time the customer is provided with the Upgraded Connection to the System; and

r_5 means the Discount Rate set out in clause 1 of Schedule 5.

(d) The maximum price under clause 2(c) is to be calculated at the time the customer is provided with the Upgraded Connection to the System.

Schedule 4 Requirements for DSPs

1 Minimum content for each DSP

At all times, each Agency must be reasonably satisfied that it has in place a sufficient number of DSPs, and DSPs that cover a sufficient aggregate area, to meet present demand for Determination Services and expected medium-term growth in demand for Determination Services. Each DSP must contain the following, at a minimum:

(a) a summary of the contents of the DSP;

(b) a statement specifying the System (or Systems) to which the DSP relates;

(c) a clear and accurate description of the DSP Area to which the DSP applies, including:

(1) its size;

(2) the basis for defining its boundaries; and

(3) reference to other DSPs where there is an overlap or co-usage of Assets;

(d) demographic and land use planning information including:

(1) the current residential population in the DSP Area;

(2) the estimated Equivalent Tenements in the DSP Area as at 1 January 1996;

(3) the projected population over a period of 30 financial years starting from the financial year in which the DSP was registered with IPART under clause 2(e) of this Schedule 4; and

(4) the projected Equivalent Tenements in the DSP Area for each financial year over a period of 30 financial years starting from the financial year in which the DSP was registered with IPART under clause 2(e) of this Schedule 4;

[Note: See clause 7 of Schedule 5 for demographic assumptions.]

(e) timing of works in the DSP Area including:

(1) completed capital works; and

(2) proposed capital works;

(f) the standards of service to be provided to customers in the DSP Area and design parameters of Assets;

(g) the calculated maximum price under clause 1 of Schedule 1 (MP_{Sch1}), and the information used to calculate that price, including:

(1) the future periodic revenues expected to be received from new customers in the DSP Area each financial year;

(2) the charges used for the calculation of those revenues;

[Note: The charges used should be consistent with the Prevailing Periodic Determination.]

(3) average water usage figures used for the calculation of those revenues;

(4) the future expected annual operating, maintenance and administration costs of providing services to new customers in the DSP Area in each financial year; and

(5) indexation principles and parameters used for that calculation;

(h) a description, or reference to a background document containing the description, of Pre-1996 Assets and Post-1996 Assets in the DSP Area including:

(1) the date (or forecast date) of the commissioning of each Asset;

(2) the size/length of each Asset;

(3) the actual efficient cost of each Asset (where applicable);

(4) the unit cost of each Asset (if applicable);

(5) the MEERA valuation of each Asset (if applicable);

(6) the total capacity of each Asset expressed in Equivalent Tenements (if applicable); and

(7) the details of the number of Equivalent Tenements served by each Asset in each DSP Area, where that Asset serves more than one DSP Area; and

(i) a comparison of the maximum price for connecting a New Development to a System calculated under clause 1 of Schedule 1 (MP_{Sch1}) with the Comparison Price, but only where the DSP:

(1) is a DSP that has been remade following a review under clause 3 of this Schedule (as opposed to a DSP made for the first time); and

(2) in the case of a DSP made by Sydney Water or Hunter Water, is a DSP that has been remade more than once since the Commencement Date.

2 Consultation and registration requirements for DSPs

(a) Following preparation of a draft DSP, an Agency must:

(1) publicly exhibit, on the Agency's website, the draft DSP at least 30 working days prior to the Agency adopting that DSP (the **Exhibition Period**);

(2) prepare and make available on the Agency's website, for the duration of the Exhibition Period, all of the critical data behind the draft DSP, including the models used to calculate the prices for the Determination Services, so that interested parties can assess the draft DSP and make informed written submissions on that draft DSP to the Agency; and

(3) advertise in a manner likely to get the attention of interested parties, the start date of the Exhibition Period, the length of the Exhibition Period and that

written submissions on the draft DSP can be made to the Agency during the Exhibition Period.

[Note: This could include, for example, advertising in a local newspaper with circulation covering the draft DSP Area and placing a notice on the home page of the Agency's website.]

(b) At least 10 working days before the start date of the Exhibition Period, an Agency must inform the following stakeholders of the start date of the Exhibition Period, the length of the Exhibition Period and that written submissions on the draft DSP can be made to the Agency during the Exhibition Period:

(1) the Urban Development Institute of Australia;

(2) the Housing Industry Association;

(3) any other relevant association representing Developers active in the draft DSP Area; and

(4) any Developers who, in the 6 months prior to the commencement of the Exhibition Period, have applied to the Agency for Planning Approval.

(c) In finalising a draft DSP, the Agency must consider all submissions made by interested parties on the draft DSP.

(d) Once the Agency has adopted the draft DSP, the Agency must forward the draft DSP to IPART for registration. At the time of forwarding the draft DSP, the Agency is to inform IPART of any submissions lodged during the Exhibition Period and the Agency's responses to the submissions.

(e) IPART may register and publish on its website a draft DSP forwarded to it under clause 2(d).

(f) A DSP comes into effect upon registration by IPART.

3 Review of DSPs

(a) Subject to clause 3(b), an Agency is to complete a review of each DSP before the 5 year anniversary of the commencement of the most recent revisions to that DSP.

(b) Despite clause 3(a), IPART may, on the application of an Agency or on its own initiative, direct an Agency, in writing, to commence and complete a review of a DSP within the timeframe specified by IPART. An Agency must comply with any such direction.

(c) A direction under clause 3(b) may exempt an Agency from complying with clause 3(a) to the extent specified in the direction.

4 Suspension of requirements under this Schedule

(a) Subject to clause 4(b), Sydney Water and Hunter Water are not obliged to comply with the requirements of clauses 1, 2 and 3 of this Schedule until 18 months after the Nil Developer Charges Policy Change Day.

(b) Notwithstanding clause 4(a), within 12 months of the Nil Developer Charges Policy Change Day, Sydney Water and Hunter Water must commence a review of

all existing DSPs, such that Sydney Water and Hunter Water are in a position to comply with the requirements of this Schedule no later than the first day after 18 months elapse from the Nil Developer Charges Policy Change Day. Each review must be completed within 6 months.

[Note: Sydney Water and Hunter Water are encouraged to update existing DSPs and create new DSPs, as required, as soon as practicable after the Nil Developer Charges Policy Change Day and notify IPART when they are prepared to comply with the maximum prices determined according to the methodologies set out in Schedules 1, 2 and 3.]

5 Saving of existing DSPs

(a) Despite any other provision of this Schedule, a DSP registered by IPART pursuant to IPART's Determination No. 9 of 2000 (Sydney Water Corporation, Hunter Water Corporation, Gosford City Council and Wyong Shire Council – Developer Charges) is deemed to continue in force from the Commencement Date as a DSP registered by IPART under clause 2(e) of this Schedule.

(b) An Agency is not required to comply with clauses 1 and 2 of this Schedule in respect of a DSP continued in force by clause 5(a) until the date on which the Agency is required to complete a review of that DSP under clause 3 of this Schedule.

(c) For the avoidance of doubt, despite clause 5(b), where an Agency conducts a review of a DSP continued in force by clause 5(a) and that review is completed after the Commencement Date, the Agency must conduct the review in accordance with clause 2 of this Schedule.

6 Implementing a DSP

In implementing maximum prices under Schedule 1 of this determination, Agencies must use a calculation spreadsheet that has been approved by IPART.

[Note: IPART has released a template spreadsheet that Agencies can use to calculate maximum prices under Schedule 1, which is available on IPART's website. Agencies can either use IPART's template, or request that IPART approves a different calculation spreadsheet.]

Schedule 5 Parameters and calculations

1 Discount Rates

(a) The Discount Rates to be used in the calculation of Present Values in this determination are set out in the table below.

Agency	r1	r2	r3	r4	r5
Sydney Water	3%	Real Pre-tax WACC			
Hunter Water	3%	Real Pre-tax WACC			
Central Coast Council	0%	Real Pre-tax WACC			

(b) An Agency's Real Pre-tax WACC is that set out in the Final Report accompanying that Agency's Prevailing Periodic Determination.

2 Recovery of capital expenditure

2.1 Valuation of Assets

(a) In calculating Capital Charges, an Agency must apply the valuation method in the right-hand column of the table below to the categories of Assets specified in the left-hand column.

Asset	Valuation Method
Pre-1996 Asset as at 1 January 1996	MEERA
Post-1996 Asset already commissioned	MEERA
Post-1996 Asset yet to be commissioned	Estimated efficient costs

(b) The efficient cost of all Assets must be taken from an asset register or other source acceptable to IPART.

2.2 Apportionment of Assets

(a) If an Asset services other areas in addition to a DSP Area, an Agency must apportion the Capital Charge for that Asset according to expected utilisation at the point in time the Asset reaches capacity.

(b) An Agency is to calculate the portion of the Capital Charge attributable to a particular DSP as follows:

$$\frac{Expected\ utilisation\ of\ the\ Asset\ by\ the\ relevant\ DSP\ (in\ Equivalent\ Tenements)}{Total\ expected\ utilisation\ of\ that\ Asset\ (in\ Equivalent\ Tenements)}$$

2.3 Calculation of K_1, K_2, K_4 and K_5

An Agency must calculate K_1, K_2, K_4 and K_5 as follows:

(a) An Agency must calculate a Capital Charge for Pre-1996 Assets (K_1) as follows:

(1) estimate the value of the relevant Assets in accordance with the valuation methodology specified in clause 2.1, as at 1 January 1996;

(2) convert that estimated value to Real Terms; and

(3) convert the value of those Assets in Real Terms to Present Values using the Discount Rate (r_1), from 1 January 1996 only.

(b) An Agency must calculate a Capital Charge for Post-1996 Assets commissioned on or after 1 January 1996 (a component of K_2) as follows:

(1) estimate the value of the relevant Assets in accordance with the valuation methodology specified in clause 2.1;

(2) convert that estimated value to Real Terms; and

(3) convert the value of those Assets in Real Terms to Present Values using the Discount Rate (r_2), from the date the Asset was commissioned.

(c) An Agency must calculate a Capital Charge for Post-1996 Assets yet to be commissioned (a component of K_2) as follows:

(1) estimate the value of the relevant Assets in accordance with the valuation methodology specified in clause 2.1;

(2) convert that estimated value to Real Terms; and

(3) convert the value of those Assets in Real Terms to Present Values using the Discount Rate (r_2), from the expected date of commissioning.

(d) An Agency must calculate the efficient capital expenditure required for an Extension (K_4) as follows:

(1) estimate the efficient costs required for the Extension;

(2) convert that estimated value to Real Terms; and

(3) convert the value of the Extension in Real Terms to Present Values using the Discount Rate (r_4), from the date the Extension that enabled the New Connection is completed.

(e) An Agency must calculate the efficient capital expenditure required for an Upgraded Connection (K_5) as follows:

(1) estimate the efficient costs required for the Upgraded Connection;

(2) convert that estimated value to Real Terms; and

(3) convert the value of the Upgraded Connection in Real Terms to Present Values using the Discount Rate (r_5), from the date the Upgraded Connection becomes available for the customer to take up.

2.4 Capital Charge principles

An Agency must calculate the Capital Charges under clauses 2.3(a) - 2.3(c) according to the following principles:

(a) All Assets must be included for the purposes of the calculation.

[Note: The definition of "Assets" under clause 1 of Schedule 7 excludes certain assets, called "Excluded Assets". For example, Pre-1970 Assets are Excluded Assets.]

(b) Once an Asset is commissioned, an Agency must calculate the Capital Charge for that Asset in accordance with clause 2.3(b) of this Schedule 5 at the next DSP review provided for in Schedule 4 to this determination.

(c) When estimating the efficient costs of Assets yet to be commissioned, an Agency must examine all available options and choose the option that is the most efficient.

(d) Where:

(1) an Agency temporarily supplies services to a Development from an existing Asset; and

(2) the Agency transfers the supply of services to the Development from the existing Asset to the new Asset that has just been commissioned;

then only the costs of the new Asset may be included in calculating maximum prices under this determination.

(e) Where a proposed Development influences the timing of an Agency's anticipated expenditure on an Asset, that anticipated expenditure must be included in the calculation of Capital Charges by:

(1) estimating the extent to which the proposed Development would bring forward the timing of the anticipated expenditure, as compared with the timing of the anticipated expenditure if that Development did not proceed;

(2) calculating the difference in the Net Present Value between the anticipated expenditure that may arise due to that change in timing; and

(3) including the cost calculated under clause 2.4(e)(2) as a cost to the Development only if that cost exceeds the cost of any comparable existing Assets used by the Development.

[Note: Where the costs calculated under clause 2.4(e)(2) are included in the Capital Charge, the cost of the comparable existing Assets are not to be included in the calculation of the Capital Charge.]

3 Equivalent Tenement

3.1 Meaning of Equivalent Tenement

Equivalent Tenement means:

(a) the Equivalent Tenement value specified in the Final Report accompanying the Prevailing Periodic Determination for the relevant Agency; or

(b) where the Final Report accompanying the Prevailing Periodic Determination for the relevant Agency does not specify an Equivalent Tenement value, that Agency's estimate of the total demand that an average single residential dwelling places on the relevant System.

3.2 Calculation of Equivalent Tenements (L_1, L_2, L_3, L_4 and L_5)

An Agency must calculate the parameters that represent Equivalent Tenements (L_1, L_2, L_3, L_4 and L_5) as follows:

(a) An Agency must calculate the Equivalent Tenements for Pre-1996 Assets (L_1) as follows:

(1) estimate the number of new Equivalent Tenements in the DSP Area that utilise the Asset from 1 January 1996 in the 1995-96 financial year;

[Note: An Agency's estimate of the number of new Equivalent Tenements in the DSP Area that utilise the Asset from 1 January 1996 to 30 June 1996 may be half the number for the full 1995-96 financial year.]

(2) estimate the number of new Equivalent Tenements in the DSP Area in each subsequent financial year up to Financial Year 30;

(3) convert those numbers of Equivalent Tenements to Present Values using the Discount Rate r_1; and

(4) add together the Present Values calculated under clause 3.2(a)(3) above.

(b) An Agency must calculate the Equivalent Tenements for Post-1996 Assets (L_2) as follows:

(1) estimate the number of new Equivalent Tenements in the DSP Area that utilise, or will utilise, the Asset in each financial year during the period starting from 1 July of the financial year in which the Asset was, or is expected to be commissioned, up to Financial Year 30;

(2) convert those numbers of Equivalent Tenements to Present Values using the Discount Rate r_2; and

(3) add together the Present Values calculated under clause 3.2(b)(2) above.

(c) An Agency must calculate the Equivalent Tenements for the Reduction Amount [$NPV(R_i - C_i)$] (L_3) as follows:

(1) estimate the number of new Equivalent Tenements in the DSP Area that will be serviced in each of Financial Years 1 to 30;

(2) convert those numbers of Equivalent Tenements to Present Values using the Discount Rate r_3; and

(3) add together the Present Values calculated under clause 3.2(c)(2) above.

(d) An Agency must calculate the Equivalent Tenements for an Extension (L_4) as follows:

(1) estimate the total number of Equivalent Tenements in the DSP Area that will utilise the Extension in Financial Year 1;

(2) estimate the number of new Equivalent Tenements in the DSP Area that will utilise the Extension in each of Financial Years 2 to 30;

(3) convert those numbers of Equivalent Tenements to Present Values using the Discount Rate r_4; and

(4) add together the Present Values calculated under clause 3.2(d)(3) above.

(e) An Agency must calculate the Equivalent Tenements for an Upgraded Connection (L_5) as follows:

(1) estimate the total number of Equivalent Tenements in the DSP Area comprised in:

(A) New Developments that will use the Upgraded Connection; and

(B) Existing Properties that agree to contribute to the costs of the Upgraded Connection,

in Financial Year 1;

(2) estimate the number of new Equivalent Tenements in the DSP Area comprised in:

(A) New Developments that will use the Upgraded Connection; and

(B) Existing Properties that agree to contribute to the costs of the Upgraded Connection,

in each of Financial Years 2 to 30;

(3) convert those numbers of Equivalent Tenements to Present Values using the Discount Rate r_5; and

(4) add together the Present Values calculated under clause 3.2(e)(3).

(f) In this clause 3.2, **Financial Year 1** has the meaning specified in the table below for the relevant parameter, Financial Year 2 means the next financial year, and so on.

Equivalent Tenement Parameter	Financial Year 1
L_1, L_2 and L_3	The financial year in which the relevant DSP was registered with IPART under clause 2(e) of Schedule 4
L_4	The financial year in which the Extension that enabled the New Connection is completed
L_5	The financial year in which the Upgraded Connection became available for the customer to take up

[Note: An Agency must estimate L_1, L_2 and L_3 as part of a DSP review and specify these figures in a DSP. An Agency must estimate L_4 at the time the Extension that enabled the New Connection is completed and L_5 at the time the Upgraded Connection became available for the customer to take up.]

4 Operating revenues (R_i and $\acute{R}_i$)

An Agency must estimate the future periodic revenues expected to be received from new customers in a DSP Area (R_i) and the future periodic revenues expected to be received from new customers serviced by an Extension ($\acute{R}_i$) according to the following principles:

(a) An Agency must project operating revenues on the basis of the efficient operation of:

(1) in the case of R_i, the Assets used to provide Determination Services in that DSP; and

(2) in the case of $\acute{R}_i$, the Extension.

(b) An Agency's projection of operating revenues arising from a DSP Area must be formulated to best meet the needs of its users.

(c) An Agency must assume that residential prices are uniform across that Agency's Area of Operations unless IPART, by determination, has approved differential prices.

(d) An Agency must estimate future revenues using the relevant periodic charge in that Agency's Prevailing Periodic Determination applied to the consumption of an average customer in the relevant customer class.

(e) Future operating revenues arising from a DSP Area must be projected over a 30 year period from:

(1) in the case of R_i, 1 July of the financial year in which a DSP is registered with IPART under clause 2(e) of Schedule 4; or

(2) in the case of $\acute{R}_i$, 1 July of the financial year in which the Extension that enabled the New Connection is completed.

5 Operating costs (C_i, $\acute{C}_i$, $\check{C}_i$ and $\hat{C}_i$)

An Agency must estimate operating, maintenance and administration costs according to the following principles:

(a) The operating, maintenance and administration costs (C_i, $\acute{C}_i$, $\check{C}_i$ and $\hat{C}_i$) should, wherever possible:

(1) be based on the most efficient and lowest cost means of providing the Determination Services;

(2) assume the continuation of the service standards set out in the DSP; and

(3) reflect costs associated with the specific Determination Services provided.

(b) An Agency should use system-wide averages for operating, maintenance and administration costs only where it is infeasible or inappropriate to apply the principles set out in clause 5(a).

(c) Future operating, maintenance and administration costs must be projected over a 30 year period from:

(1) in the case of C_i, 1 July of the financial year in which the DSP is registered with IPART under clause 2(e) of Schedule 4;

(2) in the case of $\acute{C}_i$, 1 July of the financial year in which the Extension that enabled the New Connection is completed;

(3) in the case of $\check{C}_i$, 1 July of the financial year in which the Upgraded Connection becomes available for the customer to take up; or

(4) in the case of $\hat{C}_i$, 1 July of the financial year in which the Upgraded Connection becomes available for the customer to take up.

6 Reduction Amount

Reduction Amount means, for the purposes of Schedule 1, the Net Present Value of the Agency's estimate of the future periodic revenues to be received from new customers in the relevant DSP Area in each financial year *i* and the Agency's estimate of the future operating, maintenance and administration costs of servicing all new customers in the DSP Area in each financial year *i*, calculated using r_3:

$$NPV(R_i - C_i)$$

7 Demographic assumptions

Demand for the Determination Services arises from, in part, population growth and changes in urban density. An Agency's forecasts of population and densities must have regard to the latest demographic statistics published by the NSW Department of Planning and Environment for the Area of Operations of the relevant Agency or a comparable area. For local works, the demographic statistics used must be locality specific, that is, at the local government level. For system-wide works, such as headworks, the demographic statistics used must be for the Area of Operations of the relevant Agency.

[Note: These demographic assumptions are a key factor in estimating L_1, L_2, L_3, L_4 and L_5.]

8 Present Value

An Agency is to calculate the Present Value (PV) of an amount of money or a number of Equivalent Tenements as follows:

$$PV = FV(1 + r)^{-k}$$

Where:

PV means the Present Value of an amount of money or a number of Equivalent Tenements;

FV means the future value of an amount of money or a number of Equivalent Tenements;

r means the applicable Discount Rate set out in clause 1(a) of this Schedule 5; and

k means the number of periods to apply the applicable Discount Rate.

Schedule 6 Inflation, rounding and zero prices

1 Inflation

(a) Maximum prices calculated under this determination are to be adjusted for inflation by multiplying the maximum price calculated under Schedule 1, Schedule 2 or Schedule 3 by:

$$\frac{CPIy_{0+k}}{CPIy_0}$$

Where:

$CPIy_{0+k}$ means CPI for the March quarter of the financial year immediately preceding the financial year in which the maximum price calculated is to apply; and

$CPIy_0$ means CPI for the March quarter of the financial year immediately preceding the financial year specified for the relevant maximum price in the table below.

Maximum price	Financial year
Schedule 1, clause 1	The financial year in which the relevant DSP was registered with IPART under clause 2(e) of Schedule 4
Schedule 2, clause 1	The financial year in which the Extension that enabled the New Connection is completed
Schedule 2, clause 2	The financial year in which the customer is provided with the New Connection to the System
Schedule 3, clause 1	The financial year in which the Upgraded Connection became available for the customer to take up
Schedule 3, clause 2	The financial year in which the customer is provided with the Upgraded Connection to the System

2 Rounding

(a) The CPI multiplier calculated under clause 1(a) is to be rounded to three decimal places before adjusting the relevant maximum price for inflation.

(b) For the purposes of rounding the CPI multiplier under clause 2(a), any amount that is a multiple of 0.0005 (but not a multiple of 0.001) is to be rounded up to three decimal places.

(c) Any maximum price calculated in accordance with this determination is to be rounded to the nearest whole cent.

(d) For the purposes of rounding a maximum price under clause 2(c), any amount that is a multiple of 0.5 cents (but not a multiple of 1 cent) is to be rounded up to the nearest whole cent.

[Example: This example demonstrates how a maximum price calculated under clause 1 of Schedule 1 (MP_{Sch1}) and set out in a DSP registered with IPART under clause 2(e) of Schedule 4 in the 2016-17 financial year is adjusted for inflation and rounded in accordance with clauses 1 and 2 of this Schedule to produce the maximum price to apply for a Schedule 1 Service in that DSP in the 2018-19 financial year.

The base year for the maximum price (MP_{Sch1}) set out in the DSP is y_{0+1} and expressed in \$2016-17.

In this example:

$$MP_{Sch1} = \$100.56 \; at \; time \; y_{0+1}$$
$$CPIy_{0+k} = CPI \; for \; the \; 2018 \; March \; quarter = 112.6$$
$$CPIy_0 = CPI \; for \; the \; 2016 \; March \; quarter = 108.2$$

The CPI multiplier under clause 1(a) of this Schedule is:

$$\frac{CPIy_{0+k}}{CPIy_0} = \frac{112.6}{108.2} = 1.040665$$

After applying the rounding rule in clause 2(a) and 2(b) of this Schedule, the CPI multiplier is:

$$\frac{CPIy_{0+k}}{CPIy_0} = \frac{112.6}{108.2} = 1.041$$

The maximum price at time y_{0+3} in \$2018-19 after adjusting for inflation under clause 1(a) of this Schedule is:

$$MP_{Sch1} = 100.56 \times 1.041 = \$104.68296$$

After applying the rounding rule in clauses 2(c) and 2(d) of this Schedule, the maximum price is \$104.68.]

3 No negative prices

If a maximum price calculated in accordance with a methodology provided for in this determination would be less than zero, that maximum price is taken to be zero.

4 Nil price for Sydney Water and Hunter Water during 18 month transition after the Nil Developer Charges Policy is undone

Despite any other provisions in this determination, the maximum price for any Determination Service covered by the Nil Developer Charges Policy, of a type for which Sydney Water or Hunter Water was charging a zero price immediately before the Commencement Date, is zero from the Commencement Date until the earlier of:

(a) the date, being after the Nil Developer Charges Policy Change Day, in respect of which an Agency has notified IPART that it is prepared to charge non-zero prices in a specified DSP Area or DSP Areas; and

(b) a period of 18 months has elapsed from the Nil Developer Charges Policy Change Day.

[Note: The maximum prices in this determination apply only to DSP Areas, with the result that they have no application to services provided outside DSP Areas.]

Schedule 7 Definitions and interpretation

1 Definitions

In this determination:

Agency means:

(a) Sydney Water;

(b) Hunter Water; and

(c) Central Coast Council, only to the extent that it provides services as a Water Supply Authority (as distinct from a Council).

Area of Operations means:

(a) in respect of Sydney Water, its area of operations under the Sydney Water Act;

(b) in respect of Hunter Water, its area of operations under the Hunter Water Act; and

(c) in respect of Central Coast Council, its area, within the meaning of the *Local Government Act 1993* (NSW).

Assets means all assets or parts of assets (including headworks), apart from Excluded Assets, allocated to a DSP where there is a nexus (close connection) to the Development they are intended to serve and includes assets that:

(a) were commissioned prior to the Commencement Date;

(b) were commissioned after the Commencement Date but before the Development commenced; and

(c) are commissioned, or are to be commissioned, after the Development commences.

Capital Charge means the Present Value of Assets.

Capital Costs means the return on and of capital (depreciation).

Central Coast Council means the Council by that name under the *Local Government Act 1993* (NSW).

[Note: The former Gosford City Council and Wyong Shire Council were amalgamated to form Central Coast Council in 2016.]

Commencement Date means the date on which this determination commences, under clause 2 of the Preliminary section of this determination.

Comparison Price means the maximum price for connecting a New Development to a System that applied immediately prior to the commencement of a remade DSP.

Council has the meaning given under the *Local Government Act 1993* (NSW).

CPI means the consumer price index, All Groups index number for the weighted average of eight capital cities as published by the Australian Bureau of Statistics; or, if the Australian Bureau of Statistics does not publish or ceases to publish the index, then CPI will mean an index determined by IPART.

Determination Services means the services set out in clause 1.1 of the Preliminary section of this determination.

Development has the meaning given under section 1.5 of the *Environmental Planning and Assessment Act 1979* (NSW).

Development Servicing Plan or **DSP** means a document registered by IPART under clause 2(e) of Schedule 4.

Developer means a person carrying out, or intending to carry out, Development.

Discount Rate means a discount rate specified in clause 1 of Schedule 5.

DSP Area means, in relation to a DSP, that part of an Agency's Area of Operations that is covered by that DSP.

Equivalent Tenement has the meaning given in clause 3.1 of Schedule 5.

Excluded Assets means:

(a) that part of an asset provided for a reason other than to service a growth area;

(b) that part of an asset that services other DSP Areas;

(c) the capacity of an asset that was made available by changes in land use patterns, or by changes in average demand;

(d) any asset or part of an asset that was unreasonably oversized relative to system and capacity requirements, based on available demographic data at the time it was commissioned;

(e) any Pre-1970 Assets; and

(f) any asset or part of an asset funded by Developers and transferred free of charge to the Agency.

Exhibition Period means the period of at least 30 days prior to an Agency adopting a DSP, as referred to in clause 2(a)(1) of Schedule 4.

Existing Property means a property which requires a New Connection or an Upgraded Connection to a System, otherwise than because of New Development in respect of it.

Extension means the construction of an additional component, or components, of a System.

GST means goods and services tax payable under the *A New Tax System (Goods and Services Tax) Act 1999* (Cth).

Hunter Water means the Hunter Water Corporation constituted under the Hunter Water Act.

Hunter Water Act means the *Hunter Water Act 1991* (NSW).

IPART means the Independent Pricing and Regulatory Tribunal of New South Wales established under the IPART Act.

IPART Act means the *Independent Pricing and Regulatory Tribunal Act 1992* (NSW).

MEERA means Modern Engineering Equivalent Replacement Asset, which is an asset value calculated on the basis that the asset is constructed at the time of valuation in accordance with modern engineering practice and the most economically viable technologies, which provides similar utility functions to the existing asset in service.

Negotiated Services Agreement means a written agreement between an Agency and a Schedule 1 Customer:

(a) under which that Agency agrees to supply a Schedule 1 Service to that Schedule 1 Customer at a price that is not a maximum price fixed in accordance with the methodology for fixing a maximum price set out in Schedule 1 of this determination for that Schedule 1 Service; and

(b) which is entered into after the Commencement Date.

Net Present Value or **NPV** means the difference between two Present Values (for example, the difference between the Present Value of revenue and the Present Value of costs).

New Connection means:

(a) a connection of a property to a System enabled by an Extension, where that property was previously not connected to that System; and

(b) for the avoidance of doubt, excludes a reconnection of an existing service, for example (and without limitation) after a period when a service is disconnected or restricted by an Agency due to non-payment.

New Development means a property which requires connecting to a System, because of new Development in respect of it, but excludes any Development in respect of which Planning Approval has been issued before the Commencement Date.

Nil Developer Charges Policy means the NSW Government's December 2008 decision to abolish Sydney Water and Hunter Water's developer charges for water, wastewater and stormwater services, implemented by the Treasurer's directions dated 18 December 2008 under section 18(2) of the IPART Act.

[Note: Under this policy, Sydney Water and Hunter Water retain the ability to recover from developers the cost of servicing development that is not consistent with planning policies of NSW's development program.]

Nil Developer Charges Policy Change Day means the date in respect of which the NSW Government notifies IPART that it has altered its Nil Developer Charges Policy to allow non-zero developer charges by Sydney Water and Hunter Water.

Planning Approval means:

(a) a compliance certificate, which may be issued by Sydney Water pursuant to section 73 of the Sydney Water Act;

(b) a compliance certificate, which may be issued by Hunter Water pursuant to section 50 of the Hunter Water Act;

(c) a certificate of compliance, which may be issued by Central Coast Council under section 307 of the Water Management Act; or

(d) a development consent, which may be issued by Central Coast Council pursuant to section 4.46 of the *Environment Planning and Assessment Act 1979* (NSW) where that development consent incorporates relevant water and sewerage charges and conditions in accordance with section 306 of the Water Management Act.

Post-1996 Assets means Assets that were commissioned (brought into working condition) on or after 1 January 1996 or that are yet to be commissioned.

Pre-1970 Assets means Assets that were commissioned (brought into working condition) before 1 January 1970.

Pre-1996 Assets means Assets that were commissioned (brought into working condition) before 1 January 1996.

Pre-existing Annuity Arrangement means an arrangement under one of the determinations named in clause 4 of the Preliminary section of this determination:

(a) under which a customer of an Agency is to pay for a Determination Service in instalments; and

(b) which was in effect immediately before the Commencement Date.

Pre-existing Application means an application, received by an Agency before the Commencement Date and assessed by that Agency to be a valid application, for an Existing Property to be provided with a New Connection to a System.

Present Value or **PV** has the meaning given in clause 8 of Schedule 5.

Prevailing Periodic Determination means:

(a) in respect of Sydney Water, Determination No. 5 of 2016 or a determination that substantially replaces it from time to time;

(b) in respect of Hunter Water, Determination No. 4 of 2016 or a determination that substantially replaces it from time to time; and

(c) in respect of Central Coast Council, Determinations No. 2 and No. 3 of 2013 or a determination that substantially replaces them from time to time.

Real Pre-tax WACC has the meaning given in clause 1(b) of Schedule 5.

Real Terms means a value of a variable that has been adjusted for change in the purchasing power of money by a CPI adjustment.

Recycled Water means 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, as amended from time to time.

Recycled Water System means a system for the supply of Recycled Water.

Reduction Amount has the meaning given in clause 6 of Schedule 5.

Schedule 1 Customer means a customer of an Agency in respect of a Schedule 1 Service.

Schedule 1 Service means the service of connecting a New Development in a DSP Area to a System.

Sydney Water means the Sydney Water Corporation constituted under the Sydney Water Act.

Sydney Water Act means the *Sydney Water Act 1994* (NSW).

System means any of the following operated by an Agency:

(a) a water supply system;

(b) a sewerage system; and

(c) a drainage system.

Upgraded Connection means the replacement or upgrade of an existing connection of a property to a System to improve performance, for example (without limitation) to improve flow or pressure in respect of the connection for firefighting purposes.

Water Management Act means the *Water Management Act 2000* (NSW).

Water Supply Authority has the meaning given under the Water Management Act.

2 Interpretation

2.1 General provisions

In this determination:

(a) headings are for convenience only and do not affect the interpretation of this determination;

(b) a reference to a schedule, clause or table is a reference to a schedule to, clause of, or table in, this determination unless otherwise indicated;

(c) a construction that would promote a purpose or object expressly or impliedly underlying the IPART Act is to be preferred to a construction that would not promote that purpose or object;

(d) words importing the singular include the plural and vice versa;

(e) a reference to a law or statute includes regulations, rules, codes and other instruments (including licences) under it and consolidations, amendments, reenactments or replacements of them or of the law or statute itself;

(f) where a word is defined, other grammatical forms of that word have a corresponding meaning;

(g) a reference to a month is to a calendar month;

(h) a reference to a financial year is a reference to a period of 12 months beginning on 1 July and ending on the following 30 June;

(i) a reference to a person includes a reference to the person's executors, administrators, successors, substitutes (including, but not limited to, persons taking by novation), replacements and assigns;

(j) a reference to a body, whether statutory or not:

(1) which ceases to exist; or

(2) whose powers or functions are transferred to another body;

is a reference to the body which replaces it or which substantially succeeds to its powers or functions.

2.2 Explanatory notes and clarification notice

(a) Explanatory notes do not form part of this determination, but in the case of uncertainty may be relied on for interpretation purposes.

(b) IPART may publish a clarification notice in the NSW Government Gazette to correct any manifest error in this determination. Such a clarification notice is taken to form part of this determination.

2.3 Maximum prices exclusive of GST

Prices calculated in accordance with the methodologies set out in the determination do not include GST.

Schedule 8 Statement of reasons for setting methodologies

1 Legislative framework

Under section 13A of the IPART Act, IPART may not choose to make a determination that involves setting the methodology for fixing a maximum price, unless IPART is of the opinion that it is impractical to make a determination directly fixing the maximum price.

If IPART makes a determination that involves setting the methodology for fixing a maximum price then it must include a statement of the reasons why it chose to set a methodology.

2 Statement of reasons

In this determination, IPART has set methodologies for fixing the maximum prices that Agencies may charge for Determination Services. IPART's reasons for setting methodologies for fixing the maximum prices for these services, rather than directly fixing maximum prices, are set out in this Schedule.

IPART has determined a methodology for fixing maximum prices because it would not be possible for IPART to cover the required diversity of Determination Services through a fixed maximum price. This is because connection charges are levied to recover water infrastructure costs incurred to service a large variety of developments.

Developers include the prices for Determination Services in their planning and investment decisions and require a rapid response when applying for an assessment of charges. If Agencies had to return to IPART each time they received an application for an assessment of maximum prices for Determination Services, unworkable delays could result as IPART would have to devote considerable time and resources to mechanically calculating such prices. IPART considers it preferable that this work be completed by the Agencies.

In addition, IPART has chosen to set methodologies for fixing maximum prices in order for the prices to more closely reflect the costs of providing the Determination Services. The costs of providing the Determination Services vary between Agencies and within each Agency's Area of Operations. If IPART fixed a single maximum price for each of the Determination Services, then customers may end up paying significantly more than the cost of providing the service in some cases and significantly less than the cost of providing the service in other cases.

Alternatively, if IPART were to determine more specific maximum prices for different areas then it would risk selecting areas that do not result in cost reflective prices. If IPART chose areas that are too small then there may be undue price variations between areas. On the other hand, if IPART were to choose areas that are too large then costs may be inappropriately averaged over disparate areas. We consider that the maximum price for the Determination Services should reasonably reflect the location-specific costs of development. Since Agencies are best placed to determine the appropriate scope of a DSP, we consider that the methodologies employed in the determination are more likely to reflect the cost of providing the service than if IPART determined prices directly.

In addition, costs may change over time and the methodologies and review processes in this determination allow for revisions to the maximum price for Determination Services without requiring changes to the determination. For this reason, we consider that setting methodologies, as opposed to directly fixing maximum prices, is more appropriate in this case.

[n2018-4036]