



IPART Independent
Pricing and Regulatory
Tribunal | NSW

Review of developer charges for
metropolitan water businesses

Issues Paper

May 2026

Water »

Acknowledgment of Country

IPART acknowledges the Traditional Owners of the lands where we live and work. Our office is located on Gadigal land and our work touches on Aboriginal lands and waterways across NSW.

We pay respect to their Elders both past and present, and recognise Aboriginal people's unique and continuing cultural connections, rights and relationships to land, water and Country.



Image taken on Worimi Country (Myall Lakes)

The Independent Pricing and Regulatory Tribunal

IPART's independence is underpinned by an Act of Parliament. Further information on IPART can be obtained from [IPART's website](#).

Tribunal Members

The Tribunal members for this Issues Paper are:

Carmel Donnelly PSM, Chair

Jonathan Coppel

Sharon Henrick

Enquiries regarding this document should be directed to water@ipart.nsw.gov.au.

Invitation for submissions

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

Submissions are due by Monday, 6 July 2026

We prefer to receive them electronically via our [online submission form](#).

You can also send comments by mail to:

Review of developer charges for metropolitan water businesses
Independent Pricing and Regulatory Tribunal
PO Box K35
Haymarket Post Shop, Sydney NSW 1240

If you require assistance to make a submission (for example, if you would like to make a verbal submission) please contact us at water@ipart.nsw.gov.au to find out how.

Late submissions may not be accepted at the discretion of the Tribunal. Our normal practice is to make submissions publicly available on our [website](#) as soon as possible after the closing date for submissions. If you wish to view copies of submissions but do not have access to the website, you can make alternative arrangements by telephoning one of the staff members listed above.

We may decide not to publish a submission, for example, if we consider it contains offensive or potentially defamatory information. We generally do not publish sensitive information. If your submission contains information that you do not wish to be publicly disclosed, please let us know when you make the submission. However, it could be disclosed under the *Government Information (Public Access) Act 2009* (NSW) or the *Independent Pricing and Regulatory Tribunal Act 1992* (NSW), or where otherwise required by law.

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

© Independent Pricing and Regulatory Tribunal (2026).

With the exception of any:

- a. coat of arms, logo, trade mark or other branding;
- b. photographs, icons or other images;
- c. third party intellectual property; and
- d. personal information such as photos of people.

this publication is licensed under the Creative Commons Attribution-NonCommercial-NoDerivs 3.0 Australia Licence.



The licence terms are available at the [Creative Commons website](#)

IPART requires that it be attributed as creator of the licensed material in the following manner: © Independent Pricing and Regulatory Tribunal (2026).

The use of any material from this publication in a way not permitted by the above licence or otherwise allowed under the Copyright Act 1968 (Cth) may be an infringement of copyright. Where you wish to use the material in a way that is not permitted, you must lodge a request for further authorisation with IPART.

Disclaimer

Nothing in this document should be taken to indicate IPART's or the NSW Government's commitment to a particular course of action.

This document is published for the purpose of IPART fulfilling its statutory or delegated functions as set out in this document. Use of the information in this document for any other purpose is at the user's own risk, and is not endorsed by IPART.

ISBN 978-1-76049-916-7

Contents

1	Introduction	1
1.1	How does our current developer charges framework work?	1
1.2	Why are we reviewing our developer charges determination?	3
1.3	What will our review consider?	4
1.4	How will we undertake this review?	5
1.5	How is this Issues Paper structured?	5
1.6	What issues are we seeking feedback on?	5
2	Principles and form of regulation	8
2.1	What are our guiding principles for setting developer charges?	8
2.2	Is the current regulatory instrument working as intended?	9
2.3	Should a single, integrated framework apply to maximum prices for water, wastewater, drainage and recycled water?	11
2.4	Who should benefit from existing spare capacity?	11
2.5	What are the effects of data centres and other high-volume water users?	12
3	Development Servicing Plans and procedural elements	14
3.1	Should water businesses continue to set their own DSP boundaries?	14
3.2	How might high-demand developments such as data centres fit within the DSP framework?	16
3.3	Should we continue imposing procedural requirements?	16
4	Methodology	19
4.1	How the NPV methodology works	19
4.2	Capital costs	22
4.3	Operating costs and revenue	30
4.4	Discount rates	31
4.5	How equivalent tenements are set	32
4.6	Other revenue adjustments	33
A	Mandatory and non-mandatory considerations under the IPART Act	34
B	Glossary	36

1 Introduction

The Independent Pricing and Regulatory Tribunal (IPART) is reviewing the maximum prices for connecting, extending, or upgrading metropolitan water, wastewater, and recycled water services. These developer charges apply to Sydney Water Corporation (Sydney Water), Hunter Water Corporation (Hunter Water), and Central Coast Council. We last reviewed [water and wastewater developer charges for these businesses in 2018](#) and [recycled water developer charges in 2019](#).

Developer charges help water businesses recover from developers the net costs of delivering services to new developments. These costs include building new infrastructure, consuming capacity in existing infrastructure and the net operating costs. This approach has 2 important effects:

1. It sends pricing signals to developers about the relative costs of providing services to different developments. This means developers have the information to make informed decisions about where and when to develop.
2. It protects other water customers from paying higher prices in their annual bills for infrastructure they do not need or use.

In Sydney Water, Hunter Water and Central Coast Council, it has been long-standing practice to maintain 'postage-stamp pricing' for customers' retail prices. This means that within a given water business, all customers pay the same fixed and variable prices in the bills – regardless of where they are located, and how much it costs to provide services. For that reason, it is important that developer charges reflect the relative costs of providing services in different locations.

1.1 How does our current developer charges framework work?

Under our 2018 developer charges determination, metropolitan water businesses prepare development servicing plans (DSPs) for new or expanded water and wastewater services that forecast growth, identify required infrastructure to service that growth and estimate the costs of augmenting their networks.¹ Each DSP covers a geographic area and new developments within each DSP area pay the prevailing maximum DSP charge.

Developer charges reflect the share of costs attributable to new customers, calculated per equivalent tenement (ET). These differ by location to account for variations in servicing costs.

Box 1.1 How our 2018 developer charges determination works

Our 2018 developer charges determination sets a methodology for recovering the difference between the average operating cost (reflected in the water business's postage stamp price) and the costs of servicing the specific development area.

Methodology

It is calculated as the net present value of the capital and operating costs to service the development area, minus expected future revenue from retail water charges paid by customers in that area. A simplified representation is:

$$\text{Developer charge} = \frac{\text{Net present value [capital costs + operating costs – forecast revenue]}}{\text{Net present value [ETs]}}$$

Key inputs are:

- **Capital costs**, including past, present and future capital expenditure required to service the development area (shared or allocated between the 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)
- **ETs**, representing the demand the new development will place on the water and wastewater infrastructure compared to an average residential dwelling.
- **Discount rate** based on the pre-tax WACC referred to in the water business' prevailing price determination to calculate net present value.^a

Procedural requirements

Water businesses must:

- Prepare a DSP for each service area. The DSP must meet minimum requirements including coverage of the area, demographic details, capital works, service standards, and developer charges calculations.
- Advertise and exhibit a draft DSP publicly for at least 30 days. Water businesses must review and consider stakeholder feedback.
- Send the DSP to IPART for registration. Water businesses must inform us about any submissions received during the exhibition period. IPART will then register the DSP, if the requirements have been met.
- Review all parts of DSPs and charges every 5 years or as directed by IPART. Developer charges stay the same in real terms between reviews.
- Use the calculation spreadsheet that IPART provides.

^a See IPART, *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, p 40.

1.1.1 Recycled water developer charges

In 2019, IPART set up a regulatory framework for recycled water and related services for Sydney Water, Hunter Water, Central Coast Council and Essential Energy (Broken Hill).² This is intended to be read in conjunction with the [2018 developer charges determination](#).

The recycled water framework does not set a separate, fixed developer charge like it does for water and wastewater. Instead, water businesses can recover costs for new recycled water developments through negotiated or regulated prices, subject to a price cap. The price cap reflects the efficient supply costs and the value of the service compared to other options. Developer contributions are usually negotiated commercially for each project, rather than calculated with a DSP-based formula.

This approach offers more flexibility but less transparency than the water and wastewater framework. It recognises that there is some competition in the market for recycled water services.

1.2 Why are we reviewing our developer charges determination?

In 2008, the then NSW Government set water and wastewater developer charges for Sydney Water and Hunter Water to \$0. As a result, the efficient cost of providing infrastructure to growth areas was incorporated into Sydney Water and Hunter Water's general cost base and recovered from customers through their annual bills. This did not apply to Central Coast Council, which continued to levy developer charges.

In 2023, the NSW Government began phasing in non-zero developer charges for full cost recovery by 1 July 2026. An interim cap of 25% of the full charge applied from 1 July 2024 to 30 June 2025, which was increased to 50% from 1 July 2025 until 30 June 2026, after which it will be 100%.³

In 2023, Sydney Water and Hunter Water prepared DSPs that detail developer charges for water and wastewater infrastructure in new development areas. As these DSPs met the relevant procedural requirements, IPART registered and published these plans on its [website](#).

Under our current water and wastewater developer charges determination (2018 developer charges determination), water businesses must complete a review of each plan within 5 years of the commencement of the most recent revisions to that DSP, or when directed by IPART.⁴

Given developer charges have been reintroduced, we consider it appropriate to consider whether our 2018 determination is working as intended, or if we need to make changes to reflect current and future market and policy conditions. We will assess:

- whether the principles that underpin the regulatory framework are optimal
- whether the framework strikes the right balance of flexibility and oversight for water businesses, developers and other stakeholders
- whether the framework delivers appropriate outcomes as economic and market conditions change
- how well the cost recovery methodology considers and recovers efficient costs.

Large, high-volume water users, like data centres, and increased demand for recycled water, create new challenges for our framework. Continued alignment with Government policy, especially on land and housing, is also important.

1.3 What will our review consider?

We will review and update the regulatory framework that governs how metropolitan water businesses recover the costs from developers to connect, extend or upgrade a water, wastewater, drainage or recycled water service. In doing so, we will consider the views of, and impacts on, stakeholders. Our review will:

1. Consider whether the principles underpinning our approach, and their relative weightings, are optimal.
2. Consider whether the current form of regulation remains appropriate to support development while protecting customers from paying too much.
3. Explore alternative price calculation methods to reduce risks of over or under-recovering costs.
4. Consider whether existing approaches to determining price inputs can be simplified and if they include all relevant costs. This includes the appropriate method of asset valuation.
5. Consider how price inputs should be updated over time, especially with uncertain population forecasts. We will also look at adjusting prices for water businesses' income tax liability from developer charges revenue.
6. Consider how we define ETs and if they adequately represent the relative demand a development places on water, wastewater, drainage or recycled water systems.
7. Assess how DSP boundaries are set and the merits of having a rule-based approach to support objective allocation to lower or higher cost DSPs.
8. Consider whether the current process of reviewing and registering DSPs adequately encourages compliance with the regulatory requirements.
9. Consider how our decisions in this review might affect prices for vacant land and completed dwellings, updating our previous analysis on this topic.

We will consider developer charges for recycled water alongside those for water and wastewater. Recycled water is becoming a core part of how water businesses service future growth – particularly high-volume users like data centres. Updating both determinations at the same time lets us make decisions that result in consistent pricing and investment signals across all services. This prevents unintended bias towards one water source.

This review excludes maximum prices for services that private sector recycled water providers offer. We set maximum prices only for monopoly services by public water businesses. Private provider pricing is typically determined through commercial negotiations. However, we will consider how our decisions affect the incentives for private providers.

1.4 How will we undertake this review?

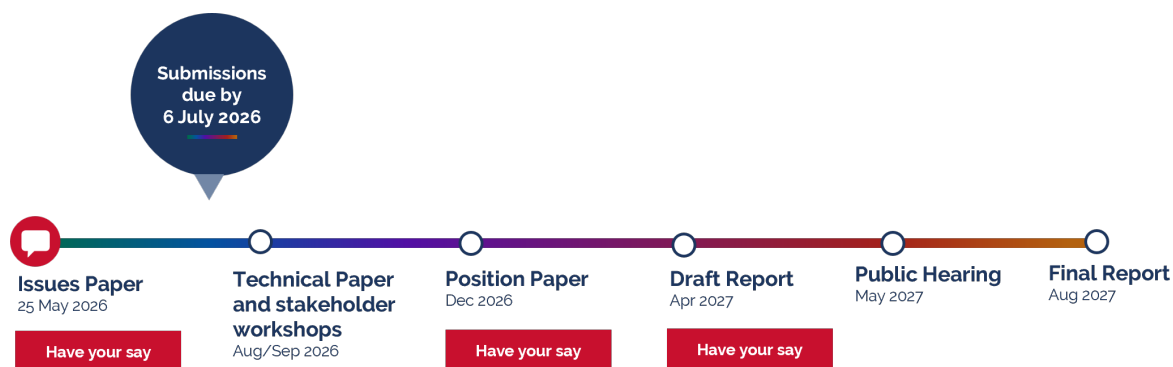
We are seeking feedback by way of written submissions to this Issues Paper via our website by **Monday 6 July 2026**. We will treat all submissions in accordance with our [submissions policy](#).

Early in the review, we intend to release a technical paper that discusses the method of calculating maximum developer charges, based on our current method for estimating long run marginal cost for water businesses. We will consult on this through targeted stakeholder workshops.

We will consider all submissions to the Issues Paper, stakeholder workshop output, and undertake our own analysis, before publishing a Position Paper with our preliminary findings in December 2026.

We will then publish a Draft Report with our draft decisions in April 2027 and a Final Report in August 2027. We will hold a Public Hearing and may hold other targeted stakeholder workshops to explore issues and gather feedback on options.

Figure 1.1 Review timeline



1.5 How is this Issues Paper structured?

This Issues Paper is structured into 2 parts. The first is a discussion of the principles, regulatory framework and key trends affecting our review. The second is a technical discussion of the cost recovery methodology and inputs.

- Chapter 2 discusses the principles underpinning our developer charges regulatory framework, form of regulation and impacts of high-volume water users like data centres.
- Chapter 3 discusses how DSPs are established and procedural elements of our framework.
- Chapter 4 contains a more technical discussion of our cost recovery methodology.

1.6 What issues are we seeking feedback on?

We are seeking feedback on the following issues and any others that stakeholders would like to tell us about that are relevant to our review.

Seek Comment

1. Are these the right principles for the developer charges framework? Are any of them more important than others? What other principles or factors should we consider? 9
2. What proportion of the costs of servicing growth is recovered from developer charges under the 2018 determination? 9
3. Does the current regulatory instrument provide the right balance of flexibility and oversight? Are there merits in considering a different approach? 11
4. Should we have a single, unified regulatory framework for developer charges that covers water, wastewater, drainage and recycled water services? 11
5. What principles might we use in allocating the costs of new and existing infrastructure between developers and customers outside of the development area? 12
6. What factors should we consider when assessing whether the existing developer charges framework is appropriate for high-volume water users, such as data centres? 13
7. Is the current avenue for developers and water businesses to opt-out of the maximum prices and enter into a Negotiated Services Agreement effective and beneficial? What, if any, changes should be made to the current avenue? 13
8. Should water businesses continue to set their own Development Servicing Plan boundaries? Do they have sufficient incentives to ensure these boundaries are determined appropriately? Does the current process provide adequate protection for developers and customers? 15
9. What forms of guidance could assist water businesses in defining Development Servicing Plan areas? 15
10. Is there sufficient flexibility in the current methodology to accommodate customer-specific Development Servicing Plans where appropriate? 16
11. Are there other factors IPART should consider in defining how Development Servicing Plan boundaries might be drawn? 16
12. How can the current procedural requirements be improved? 18
13. Should IPART consider adopting a more detailed approach to reviewing Development Servicing Plans? 18
14. Would a level of capacity augmentation approach be an appropriate method for setting developer charges? Please provide reasons as to why or why not. 22
15. Are there other alternative price calculation methods for setting Development Servicing Plan prices that we should consider? 22
16. Is the current list of exceptions to asset inclusions still appropriate? If not, why and how should it be modified? 23
17. Does the inclusion of existing assets in the capital charge component of developer charges continue to be appropriate? If not, why and how should it be modified? 24

18.	Do you agree with our reasons for excluding pre-1970 assets from the capital cost component, and do they still apply? If not, what contrary points would you suggest, and how would those alternatives affect the Development Servicing Plan price?	26
19.	Do you agree with our approach of not determining a cut-off date for including future assets?	26
20.	Is it appropriate to include the capital costs of headworks infrastructure assets in the calculation of developer charges if these assets are not owned by the water business?	27
21.	Does our current approach of apportioning shared assets between Development Servicing Plan areas using expected utilisation based on equivalent tenements remain appropriate? Why or why not?	28
22.	Is the Modern Engineering Equivalent Replacement Asset valuation method still appropriate for valuing existing assets? If not, how should existing assets be valued?	30
23.	What would be the potential impact to water businesses of moving to an alternative method of asset valuation?	30
24.	The 'reduction amount' component of the developer charge methodology accounts for postage stamp revenues and location-specific operating costs for a period of 30 years. Does this approach continue to be appropriate? If not, how should it be modified?	31
25.	What discount rates should apply in the developer charges methodology? Is it still appropriate to distinguish between pre- and post-1996 assets?	32
26.	Does our measure of equivalent tenements continue to be appropriate for calculating developer charges? If not, how could it be improved or is there a different measure that is more suitable?	33
27.	Should we maintain our current approach for treating water businesses' income tax liability from developer charges or move to a different method?	33
28.	Are there any other revenue adjustments that we should consider?	33

2 Principles and form of regulation

This chapter discusses the core principles, which underpin the purpose of the regulatory framework, including what it is designed to achieve and how effectively it does that in practice. It examines key external influences on the framework, such as the rapid growth in data centres, increasing demand for recycled water and government housing policies. It considers how these factors might affect the performance and future suitability of the framework.

2.1 What are our guiding principles for setting developer charges?

Under section 11(1)(a) of the *Independent Pricing and Regulatory Tribunal Act 1992* (IPART Act), IPART has a standing reference to determine pricing for a government monopoly service.

Section 15(1) of the IPART Act sets out a range of factors IPART must have regard to in making our determinations and recommendations. These are set out in Appendix A and include:

- the need for greater efficiency in the supply of services
- enabling water businesses to recover efficient costs, including a reasonable return on assets
- protecting consumers from monopoly pricing
- considering equity and affordability impacts
- considering social, ecological and sustainability impacts.

If we set a methodology for fixing the maximum price for a government monopoly service, IPART may also have regard to such matters as it considers appropriate, including those listed in section 14A(2) of the IPART Act.

Given these factors, we have based our current developer charges regulatory framework on several key principles to:

- send clear price signals to show the costs of development in different locations, whether infill or greenfield
- recover the estimated full efficient costs of supplying services to new developments from developers and customers
- share risk appropriately between developers and water businesses
- share costs equitably between developers and customers
- keep the method simple, transparent and able to be implemented consistently.

Developer charges are based on forecasts of growth, capital costs and timing, all of which are subject to uncertainty. Factors like cost and type of infrastructure, economic conditions, development take-up rates, infrastructure sequencing and land release can change. As a result, actual outcomes can differ considerably from initial expectations. We have accounted for this by building in a 5-yearly review of DSPs.

In practice, our regulatory framework accounts for these uncertainties by including growth assets in the Regulated Asset Base (RAB)^a when investment occurs. As development progresses, revenue from developer charges is deducted from the RAB. Ideally, the present value of capital and operating costs would equal the present value of developer charges revenue over the life of the development. This approach provides a financial incentive for a water business to invest in growth areas so development can proceed when needed. However, if development proceeds slower than forecast or outturn costs are underestimated, the full costs of servicing the development will not be recovered from developers. This means that retail customers would need to fund the residual costs through their water bills.

Currently, uncertainties around future costs, economic conditions and housing growth means these risks are heightened. Construction costs are rising, supply chains are constrained, energy prices are volatile and there are structural shifts including the potential growth of very high-water using customers such as data centres. These factors increase the uncertainty around the infrastructure delivery costs and the timing and nature of demand, which complicates efforts to achieve cost recovery.

We are reviewing the principles, which underpin our developer charges framework, and whether some should take precedence over others.

Seek Comment



1. Are these the right principles for the developer charges framework? Are any of them more important than others? What other principles or factors should we consider?
2. What proportion of the costs of servicing growth is recovered from developer charges under the 2018 determination?

2.2 Is the current regulatory instrument working as intended?

The current regulatory instrument is a determination that contains procedural requirements that the water business is required to meet in determining its own maximum prices for the specified services (e.g. connecting a new development to a system). We have 2 separate determinations that govern water and wastewater, and recycled water service prices for Sydney Water, Hunter Water and Central Coast Council's systems:

- [Maximum prices for connecting or upgrading a connection to a water supply, sewerage or drainage system](#)
- [Maximum prices for connecting to a recycled water system.](#)

These procedural requirements include that the water business should:

- determine the number of DSP areas for water and wastewater services and the boundaries of those areas

^a The regulated asset base (RAB) is calculated as the economic value of all assets the business owns. The RAB is used as a basis to calculate the revenue we provide to businesses in our determinations.

- apply IPART's standard developer charge formula with inputs the water business determines
- publish its calculations and seek comments from stakeholders.

Under the current method, IPART registers the DSPs once it considers that the procedural requirements are met. IPART does not review the DSP boundary decisions or the inputs to the price calculation.

Maximum prices depend on the inputs used. Water businesses have significant flexibility in selecting these inputs. If a developer disagrees with the price set for their DSP, they can seek arbitration or request a scheme-specific determination under the IPART Act.

In 2018, IPART chose this regulatory approach for several reasons:

- a consistent and transparent approach to setting developer charges was needed to improve efficiency and certainty for developers
- setting prices for each development area would require considerable time and resources, delay development and increase regulatory costs
- prescribing a methodology, rather than setting maximum prices for each DSP, allows water businesses to create new DSPs when needed.⁵

This review is an opportunity to consider whether this form of regulation is delivering the objectives as intended or whether we should consider alternatives.

Some of the alternatives we seek feedback on are having:

1. A policy or guideline:

This option would set out the method and provide guidance for water businesses to use when determining maximum DSP prices. Developers could still seek arbitration or a scheme-specific determination under the IPART Act, as they can now.

2. A determination of maximum prices for each DSP area:

This option would be more prescriptive. IPART would set the maximum price for each DSP area, using a standard and transparent method and inputs. IPART would potentially have more involvement in approving the boundaries of the DSP area.

3. A two-tiered approach, which is a combination of (1) and (2):

In most cases, water businesses would set the maximum price based on IPART's policy, but developers could trigger a more detailed IPART review and determination for a DSP area if they disagreed with the outcome. The trigger criteria would be determined in advance.

Each option has strengths and weaknesses. Setting a determined maximum price for each DSP area could add more time to the process, which could delay development. However, a lighter-handed approach could also result in delays from disputes or inefficient contributions.

We are keen to hear stakeholder views on whether the current form of regulation gives water businesses enough flexibility, or whether a more prescriptive or two-tiered approach is needed.

Seek Comment



3. Does the current regulatory instrument provide the right balance of flexibility and oversight? Are there merits in considering a different approach?

2.3 Should a single, integrated framework apply to maximum prices for water, wastewater, drainage and recycled water?

We are considering whether to replace the separate 2018 developer charges determination for water and wastewater, and the 2019 determination for maximum recycled water prices, with a single, integrated regulatory instrument.

The current split framework reflects the historical treatment of recycled water as a niche service. However, recycled water is becoming increasingly significant as it plays a larger role in servicing growth, particularly for large, high-use developments such as data centres and major precincts.

Integrating the regulatory frameworks may support a more consistent approach to pricing, cost recovery, investment and treatment of shared infrastructure across water, wastewater, drainage and recycled water services. It may also reduce complexity for water businesses and developers.

Any move to consolidate the frameworks would need to consider the competitive nature of the recycled water market as private providers potentially compete with public water businesses to provide these services to large new customers.

Seek Comment



4. Should we have a single, unified regulatory framework for developer charges that covers water, wastewater, drainage and recycled water services?

2.4 Who should benefit from existing spare capacity?

One of our principles is that new developments should pay for the additional costs they cause. Where a new development requires a specific new asset, it is straightforward to assign the cost of that asset to it. However, a new development will often make use of an existing headwork asset (such as a water filtration plant or ocean outfall sewage disposal system) with limited spare capacity.

By doing this, the new development would cause the next augmentation of capacity to take place sooner than it otherwise would have. Part of the cost of accelerating the new capacity might be borne by existing customers. In a case such as this, we would need to consider who should get the benefit of existing capacity, whether it should be existing customers exclusively or all customers including new developments.

This question of principle arises for several aspects of developer charges. Under the current approach, existing customers are ring-fenced from the costs of new capacity.

However, in other price settings for water infrastructure, existing spare capacity is treated as a shared resource between existing and new customers: all customers pay part of the cost of any new infrastructure that will be required in the future. One example of this logic is our approach to the water usage price, which is set with regard to the long run marginal cost (LRMC) of supply. The LRMC includes the present value of future infrastructure costs. This is paid by all customers equally.

In this review, we see merit in seeking stakeholder views on this question, which is related to the topic taken up in Chapter 4 below of the incremental versus marginal cost approach.

Seek Comment



5. What principles might we use in allocating the costs of new and existing infrastructure between developers and customers outside of the development area?

2.5 What are the effects of data centres and other high-volume water users?

Growing demand for data-intensive technologies, including AI, increases the need for large scale data generation and storage facilities. Data centres may place substantial pressure on water infrastructure by consuming large quantities of potable or non-potable water for cooling purposes.⁶

Some data centres may require guaranteed, uninterrupted water supply (i.e., a high-security supply), which may pose risks to water security for broader customers under drought and climate change scenarios. Residual water security risks in the system could also trigger water businesses to bring forward or expand investment into higher cost rainfall-independent water supply sources, such as desalination, which may increase costs for broader water customers.

At the same time, high-intensity water users, such as data centres, could also create opportunities for scale efficiencies by virtue of their high water demand. For example, if data centres use latent, underutilised capacity in existing water or recycled water systems, this could deliver improved asset utilisation and scale efficiencies that reduce costs for broader customers.

As such, it is important that we consider whether our current regulatory framework remains fit for purpose in light of the impacts of data centres and other new, high-volume water uses.

Under the 2018 determination, water businesses and developers can opt-out of the maximum prices in the determination and enter into a bilateral Negotiated Services Agreement. Where mutually acceptable, we consider that such agreements may be well suited to considering what might be abnormal demands or levels of service from new very large customers such as data centres.

Some issues we will consider include:

- **Usage charges paid by high-volume users:** Whether it is appropriate that high-volume users pay the same usage charge as residential customers, especially where their water quality or supply reliability requirements differ materially from that of typical residential demand. This could also include consideration of whether residential ETs remain an appropriate metric for characterising demand from high-volume users.
- **Allocation of costs by DSP boundaries:** Whether servicing costs within a DSP may be disproportionately driven by a small number of very large users, and how this might affect allocation of costs and the incentives for data centre placement between DSPs, as well as the timing of data centre development in NSW.
- **System-wide risks to water security:** Whether the developer charges framework appropriately accounts for broader water security impacts resulting from increased or volatile demand, including where demand from new developments causes an expansion or acceleration in investment into drought-resilient water supply sources, or where data centres close or change demand rapidly.
- **Scale efficiencies for broader customers:** Whether the developer charges framework appropriately recognises and allocates any scale efficiency benefits that high-volume users deliver for broader customers, including for instance, through improved utilisation of existing water supply infrastructure.
- **Negotiated Services Agreements:** Whether the current avenue for developers to enter into Negotiated Services Agreements is effective and whether we need to consider different settings for such agreements.

Our review will consider these issues, as well as broader issues around data centre needs and impacts to our developer charges framework.

Seek Comment



6. What factors should we consider when assessing whether the existing developer charges framework is appropriate for high-volume water users, such as data centres?
7. Is the current avenue for developers and water businesses to opt-out of the maximum prices and enter into a Negotiated Services Agreement effective and beneficial? What, if any, changes should be made to the current avenue?

3 Development Servicing Plans and procedural elements

DSPs are planning documents for a specific geographic area that define infrastructure, costs, demand and charges.

Under our 2018 developer charges determination, water businesses are responsible for defining DSP area boundaries, and for preparing, exhibiting and consulting on a DSP that outlines how the developer charges for the specific geographic area have been calculated in accordance with IPART's developer charges methodology. Water businesses must complete a review of each DSP within 5 years of the commencement of the most recent revisions, or as directed by IPART.⁷

In this section we discuss the role of water businesses in setting their own DSP boundaries, outline the procedural requirements for water businesses to exhibit, advertise and consult on a DSP, and present issues or questions that have emerged in relation to these topic areas since our last review of developer charges in 2018.

3.1 Should water businesses continue to set their own DSP boundaries?

Currently, water businesses are responsible for defining the relevant geographic area covered by a DSP. This is because water businesses are better positioned to understand and balance the location-specific development costs against the administrative costs of maintaining DSP areas, and to consult with customers and developers on boundaries and charges.

Under our [2018 determination](#), each DSP must contain a clear and accurate description of the DSP area to which the DSP applies, including:

- its size
- the basis for defining its boundaries
- reference to other DSPs where there is an overlap or co-usage of assets.

One issue we have encountered following the reintroduction of developer charges for Sydney Water and Hunter Water is that developments located near the boundary between 2 DSPs (where one DSP had higher prices than the adjacent DSP) have caused developers to query their allocation to the higher cost DSP area.

We have also heard from stakeholders that the water businesses have too much discretion in the determination of DSP boundaries, which could have cost consequences for some developers. We note that under the current determination, IPART does not prescribe how water businesses set DSP areas nor review the DSP boundary decisions.

Box 3.1 Setting DSP boundaries

Under the methodology set out in our 2018 determination, the boundaries and size of a DSP area can have a significant effect on the resulting developer charge.



All else equal, the larger the DSP area and the more developments and assets it includes, the more the costs of providing services are averaged. This means that some of the benefits of efficient price signalling are muted – as pockets of high service-cost developments are averaged out with other pockets within the DSP which are low-cost.

However, there are administrative costs for water businesses in creating and maintaining DSPs. Where water businesses set smaller DSP areas, this will mean there are more DSPs and higher administration costs.

We are interested in stakeholder views on how best to balance these outcomes.

We invite stakeholders to provide feedback on whether water businesses should continue to determine their own DSP boundaries, or if IPART or stakeholders should have a greater role in this. We also welcome suggestions on additional guidance that could be provided to assist water businesses in defining DSP areas.

Seek Comment

8.  Should water businesses continue to set their own Development Servicing Plan boundaries? Do they have sufficient incentives to ensure these boundaries are determined appropriately? Does the current process provide adequate protection for developers and customers?
9.  What forms of guidance could assist water businesses in defining Development Servicing Plan areas?

As outlined in section 2.2, this review will consider whether the current regulatory instrument is working as intended. An alternative, more prescriptive approach we are considering is for IPART to set the maximum price for each DSP area, which might also require us to determine the boundaries for each DSP area. This could be based on a propose-respond model, where water businesses propose maximum developer charges and DSP boundaries, which are then reviewed by IPART before it makes a determination.

3.2 How might high-demand developments such as data centres fit within the DSP framework?

Some very high-demand developments such as data centres may not fit easily into a typical DSP framework, particularly where DSP areas are relatively large. Factors such as the pattern or scale of demand, explicit costs of new assets, consumption of capacity in existing assets or other servicing strategies might be highly customer-specific causing the costs to be diluted across the DSP. Given both the scale and rarity of developments such as these, there may be benefits in developing a DSP for individual customers or a small number of customers.

Seek Comment

10. Is there sufficient flexibility in the current methodology to accommodate customer-specific Development Servicing Plans where appropriate?
11. Are there other factors IPART should consider in defining how Development Servicing Plan boundaries might be drawn?

3.3 Should we continue imposing procedural requirements?

Our 2018 determination sets a methodology for fixing the maximum price for the specified services (e.g. connecting a new development to a system). Water businesses have some discretion over the inputs used in this methodology.

Because water businesses have some discretion over some of the inputs in our methodology, it is important that DSPs include sufficient information to clearly show how prices have been calculated. Our determination sets out minimum content standards as well as requirements for public exhibition and consultation. This supports transparency and provides stakeholders with opportunity to review and comment on the calculations.

3.3.1 The determination sets out minimum content requirements

Our 2018 determination specifies that DSPs are required to contain:

- a statement specifying the system or systems (water supply, sewerage or drainage) the DSP relates to
- a description of the DSP area, including its size, the basis on which boundaries have been established and reference to other DSPs where there is an overlap or co-usage of assets
- demographic and land use planning information
- the timing of works in the DSP area, including completed and proposed capital works
- the standards of service to be provided to customers and asset design parameters
- the calculated developer charge and the information used for the calculations
- a description of pre-1996 assets and post-1996 assets in the DSP area

- a comparison of the maximum price for connecting a new development to a system with the maximum price which applied previously.⁸

3.3.2 Water businesses must exhibit, advertise and consult on DSPs

To comply with our 2018 determination of developer charges, water businesses are required to exhibit, advertise, and consult on DSPs prior to adoption. Water businesses must:

- publicly exhibit the draft DSP for at least 30 working days before adoption and make available all of the critical data behind the draft DSP
- advertise the start date and length of the exhibition period
- inform the Urban Development Institute of Australia, the Housing Industry of Australia, and any relevant developers and associations representing developers of the start date of an exhibition period at least 10 working days before that start date
- consider all stakeholder submissions before finalising and adopting the draft DSP.

Following this, the water business is required to provide the draft DSP to IPART for registration, along with details of any submissions received during the exhibition period and its responses to the submissions.

IPART may register and publish the DSP on its website. The DSP takes effect once registered by IPART.⁹

3.3.3 DSPs are typically reviewed every 5 years

In 2018, we updated the DSP review requirement to be more flexible in response to stakeholder feedback.

Water businesses are currently required to complete a review of each DSP within five years of the commencement of the most recent revision, or when directed by IPART. The additional flexibility allows the timing of a DSP review to be adjusted to better align with pricing determinations, supports more frequent reviews when there are significant changes, and enables reviews to be deferred if existing assumptions remain appropriate at the end of a 5-year period.¹⁰

3.3.4 We assess DSPs against the requirements set out in our determination

When a water business submits a final version of a draft DSP to IPART for registration, IPART assesses whether the DSP meets the requirements set out in the determination for IPART to register them. This involves checking if:

- the DSP conforms to IPART's methodology for calculating maximum prices
- the DSP complies with the minimum content requirements
- the water business has complied with notification, exhibition and consultation requirements.

We invite stakeholders to provide feedback on whether there are any aspects of the current procedural requirements that can be improved. We would also like to hear from stakeholders on whether IPART's current approach to reviewing and registering DSPs remains appropriate.

Seek Comment



12. How can the current procedural requirements be improved?



13. Should IPART consider adopting a more detailed approach to reviewing Development Servicing Plans?

4 Methodology

Our 2018 determination of developer charges is based on a methodology to set a maximum price, accompanied by procedural steps that water businesses follow when applying this methodology to calculate developer charges.¹¹

This chapter provides an overview of the current developer charges methodology and raises key issues or questions associated with the methodology and its elements. We discuss and seek views on:

- the capital costs to be included in the methodology, including what assets to include, how to apportion shared capital costs, and what asset values to use
- the operating costs and revenue component of the methodology, also known as the 'reduction amount'
- the discount rates used to convert past and future costs and revenues into current values
- use of the ET measure and how it is set
- other revenue adjustments, such as the income tax liability of developer charge revenue.

In determining the methodology, IPART sets rules on asset inclusion and valuation and discount rates. The water business identifies assets, estimates costs and allocates them to DSP areas when applying the methodology to calculate developer charges.

As part of this review, we will review the methodology and its parameters to ensure the methodology remains fit for purpose and the parameters remain current for Sydney Water, Hunter Water, and Central Coast Water (i.e. where relevant, the methodology refers to values in the prevailing price determinations).

We are open to considering changes to the current methodology, which could involve adjustments to or simplification of existing parameters (such as discount rates or how the capital cost component is calculated), or a conceptual deviation from the current methodology as a whole.

4.1 How the NPV methodology works

The existing methodology uses a net present value (NPV) approach, which allows costs and revenues to be reconciled to a single value by discounting them to present day's dollars.

By using an NPV approach, the existing price formula for a DSP area yields a constant real price that is the ratio of 2 numbers:

1. the present value (PV) of the capital costs of existing and future assets used to service the DSP area less the PV of the expected revenues from ordinary water and sewer rates for that DSP area (net future operating surplus or deficit)
2. the PV of the number of ETs that will be supplied in the DSP area.

Box 4.1 shows the current methodology for calculating developer charges.

Box 4.1 Current methodology for developer charges

The developer charge per ET is calculated as follows:

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

Where:

- DC = developer charge per ET
- 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 ETs 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 financial year i
- C_i = the future expended annual operating, maintenance and administration costs of servicing all new customers in the DSP area in each financial year i
- r_1 = 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 = the end of the forecast period for the assessment of expected revenues and costs. This end date is 30 years from the financial year in which the relevant DSP was registered with IPART, as required by the 2018 determination.

Source: IPART, *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, Schedule 1.

4.1.1 Alternative price calculation methods

In principle and with the benefit of perfect cost and development forecasts, our current methodology for setting a DSP price should lead to the full recovery of the PV of costs for water businesses. This would mean in the long run that within a DSP area, the PV of the total revenue generated from developer charges should match the PV of the total additional costs incurred in providing their services.

However, costs may be under-recovered if infrastructure costs are underestimated or incurred sooner than expected. There may also be under-recovery of costs if the infrastructure included in the costing is insufficient to supply the ETs included in the developer charge calculation.

On the other hand, there are also risks that costs might be over-recovered. For example, if the time horizon used in the PV calculations is too short, a mismatch between infrastructure capacity and ETs can arise. In this case, the full cost of a new capacity expansion might be included, but the full number of ETs it will serve is not.

There may be other options for the developer charges methodology that may mitigate these risks of under or over-recovery that exist in our current approach. One of which could be to base the calculation on a level of forecast capacity augmentations. This method would aim to better link costs to demand, resulting in a price per ET based on standardised cost inputs. Box 4.2 below provides an example of this method.

Box 4.2 Example of agreed level of capacity augmentations

The objective of this alternative approach is to directly link costs that comprise developer charges with demand.

For example, water businesses or a third-party engineering expert could establish the cost of a standard wastewater treatment plant (X). The wastewater treatment plant also has an established standard capacity (Y) and will provide tertiary treatment for up to a certain number of ETs (Z). The water business or planning authority could also establish the annual rate of growth in ETs (W).

In principle, we could then calculate a representative price per ET for that plant which would be reasonably accurate. This approach could be extended to include a range of standard wastewater treatment plant options (i.e. different capacity or reliability capabilities), as well as the same for other water infrastructure items. Given the possibility of latent conditions that could alter the standard costs, such as soil composition or topography, the benchmark costs could include a series of adjustment factors (i.e. contingency allowances, etc.).

This approach is like the algebraic estimation method we currently use to estimate the LRMC of water supply.¹² There are different ways to apply the algebraic expression depending on what factors are known or not.

The approach to estimating capacity augmentation costs (algebraic approach) is a possible alternative for determining price inputs to calculate developer charges instead of water businesses attempting to forecast actual costs (current approach), which can be subject to demand changes.

We are open to stakeholder views on this possible approach, as well as any others that stakeholders may wish to propose for us to consider.

Seek Comment



14. Would a level of capacity augmentation approach be an appropriate method for setting developer charges? Please provide reasons as to why or why not.



15. Are there other alternative price calculation methods for setting Development Servicing Plan prices that we should consider?

4.2 Capital costs

In our current methodology, the calculation of developer charges includes a capital cost component. To consider what capital costs are to be included in this component, we must determine:

- which assets to include as capital costs
- how to apportion shared assets
- the value of assets included as capital costs.

Under our 2018 determination, new developments pay for the capacity of the existing and future assets they will use. We previously termed this approach of including the costs of existing and future assets in the capital charge an 'incremental cost' approach (see below). The other key features of our approach are:

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

In this section, we are seeking views from stakeholders on the elements that comprise our current approach to the capital costs component in the developer charges methodology.

4.2.1 Which assets to include as capital costs?

Under our 2018 determination, the main criterion for inclusion of an asset in the DSP is a nexus (i.e. close connection) between the development and the need for the assets. All assets or parts of assets that service the development area must be included in the calculation of a developer charge, except:

- the part of an asset provided for a reason other than to service growth (e.g. to accommodate amendments to environmental legislation)
- the part of an asset that services other DSP areas (see Section 4.2.2 on apportionment of assets)

- 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 unreasonable oversized relative to system and capacity requirements, based on available demographic data at the time it was commissioned
- any asset commission prior to 1 January 1970
- assets funded by developers and transferred free of charge to the water business
- assets or parts of assets without a nexus to the development that they are intended to serve.¹³

Seek Comment



16. Is the current list of exceptions to asset inclusions still appropriate? If not, why and how should it be modified?

Incremental cost approach includes both existing and new assets

By allowing capital costs of pre-commissioned (existing) assets into the capital charge, our methodology relies on an incremental cost approach. The costs of existing assets are thus shared between existing and new customers to the degree that the new customers use the existing assets.

When deciding upon our 2018 determination, we considered that using a purely forward-looking (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. Box 4.3 below outlines what we mean by 'incremental cost' and 'marginal cost', and the difference between these two approaches.

Box 4.3 Incremental and marginal approaches to capital costs

During our previous review of developer charges, 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 water businesses.

Source: IPART, *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 Report, October 2018, p 23.

Stakeholders previously supported our incremental cost approach for new connections to new developments used in our current methodology.¹⁴ We also note that the developer charges guidelines for NSW Local Water Utilities (LWUs) apply a similar approach.¹⁵

Our preliminary position is to maintain the incremental cost approach, which includes both existing and new assets in the capital cost component. However, we seek stakeholder views on whether the current methodology continues to strike an adequate balance between historical and forward-looking assets in establishing the capital costs to service new development.

Seek Comment



17. Does the inclusion of existing assets in the capital charge component of developer charges continue to be appropriate? If not, why and how should it be modified?

Period for inclusion of assets

In our previous determinations, we excluded pre-1970 assets from the capital cost component. Our position has been that some assets, such as very old dams, continue to contribute service capacity long after their construction costs have or should have been recovered, and in turn should not be included in the developer charge calculations. The cost of augmenting a pre-1970 asset can be included, but not the cost of the whole asset.

In our 2018 review, the basis for our decision to continue excluding pre-1970 assets from the capital charge was that:

- 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.
- Incorporating such assets in a consistent way would increase data requirements, both in terms of capital costs and the historical ETs.¹⁶

We also previously considered modifying 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, resulting in a 30-year 'rolling window' of asset inclusion. While not adopted at the time, we consider it appropriate to revisit this approach given the increasing weight of our current approach towards existing assets (i.e. assets that have already been commissioned before the adoption of a DSP).

For example, if a water business's DSP were to be reviewed in 2026 under the current 2018 determination, it would consider inclusion of up to 56 years of commissioned assets and, while not explicitly limited, generally up to a decade of future assets where forecasts of capital expenditure are robust.


However, we note that asset lives can be longer than 30 years, and a 30-year rolling window may exclude a large share of assets still servicing developments that are not yet fully funded. In considering a rolling window approach, this may warrant a longer window, such as 40 years.

Our current determination also does not have a cut-off date for including assets yet to be commissioned in the capital cost component. In practice, the period of inclusion of future assets is usually five years, or up to 10 years where there is a reasonable degree of certainty that the capital expenditure will occur. Typically, the accuracy of capital forecasts diminishes with longer forecast horizons. The water business is responsible for demonstrating that any forecasts of expenditure used to calculate developer charges are prudent and efficient. We note that five-yearly reviews of DSPs align with the inclusion of five-year projections of capital expenditure (see Chapter 3 on procedural requirements for details).

In our 2018 review, the basis for maintaining our approach of not determining a cut-off date for including future assets was such that developers can scrutinise water businesses' forecasts. DSPs are regularly reviewed and a dispute resolution process is in place if a developer and water business disagree on the level of charges.¹⁷

We are seeking stakeholder views on whether our reasons for excluding pre-1970 assets still apply and the period for inclusion of assets remains appropriate.

Seek Comment

 18. Do you agree with our reasons for excluding pre-1970 assets from the capital cost component, and do they still apply? If not, what contrary points would you suggest, and how would those alternatives affect the Development Servicing Plan price?

 19. Do you agree with our approach of not determining a cut-off date for including future assets?

Treatment of headworks capital costs

In our previous determinations, we include the cost of headworks infrastructure attributable to a new development area in the capital cost component. The term 'headworks' refers to significant assets at the end of water, sewerage and drainage systems that provide services to two or more DSP areas. Water and wastewater 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.

We have previously considered the current circumstance where Central Coast Council and Hunter Water own their headworks, but Sydney Water does not own all its headworks. Major dams and associated infrastructure assets in the Greater Sydney area are owned by WaterNSW. Our current position is that all headworks should be included in a water business's DSP, regardless of whether they are owned by the agency. This decision was on the basis that, if Sydney Water excluded assets that it did not own, its charges would be distorted in relation to other water businesses. In addition, Sydney Water would incur costs to use headworks assets that are not owned, and those costs would need to be recouped from developer charges.

Previously, Sydney Water produced a separate DSP covering developer charges for headworks infrastructure. Currently, Sydney Water include water headworks costs across their DSPs instead of separately. This applies to some drinking water DSPs and no wastewater DSPs.¹⁸ Hunter Water and Central Coast Council also include the costs of headworks in the calculation of their developer charges.¹⁹

Sydney Water purchases bulk water from WaterNSW. Now that developer charges are no longer set to zero, Sydney Water recovers its WaterNSW-related bulk water costs through a combination of developer charges and periodic prices.

Our practice has been to reduce the water business's RAB – which is used to calculate periodic prices – by the level of developer charges revenue that it receives (see Box 4.4). Therefore, if Sydney Water were to levy developer charges for headwork 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.

In NPV terms, Sydney Water should be indifferent as to 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).^b

We consider other bulk water suppliers, including the Sydney Desalination Plant (SDP) should potentially be treated the same as WaterNSW's headworks costs serving Greater Sydney.

In our 2018 review, we decided that, given SDP's then primary role in responding to drought rather than being a permanent water supply source, SDP's costs should be recovered from all customers through periodic prices and not included in developer charges. This was on the basis that SDP's assets would not pass the 'nexus to development' test.²⁰

However, it might be that the current operating parameters of SDP (and potentially other suppliers) now make it an integrated bulk water provider.

Seek Comment



20. Is it appropriate to include the capital costs of headworks infrastructure assets in the calculation of developer charges if these assets are not owned by the water business?

4.2.2 How to apportion shared assets?

Assets or parts of assets must be apportioned so that only the costs attributable to a particular development area are recovered from developer charges. Apportionment is needed where an asset:

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

The 2018 determination stipulates that if an asset services other areas in addition to a DSP area, the agency must apportion the capital charge for that asset according to the expected utilisation at the point in time the asset reaches capacity.²¹ Expected utilisation would be based on the forecast ETs and average consumption in the relevant DSP areas.

^b Disregarding the effects of cashflow timing, tax allowances, and the accounting positions of these water businesses.

We are seeking stakeholder views if our current approach to apportioning shared assets remains appropriate. This includes the scenario where pre-existing infrastructure is excluded in the developer charge due to our period for inclusion of assets, despite new ETs relying on this infrastructure (such as headworks serving more than one DSP area).

Seek Comment



21. Does our current approach of apportioning shared assets between Development Servicing Plan areas using expected utilisation based on equivalent tenements remain appropriate? Why or why not?

4.2.3 What asset values should we use?

Under our 2018 determination, assets already commissioned (both pre- and post-1996) must be valued on a Modern Engineering Equivalent Replacement Asset (MEERA) basis. Future assets are valued on an estimated efficient costs basis, which is effectively equivalent to MEERA.²²

MEERA is defined as the value of the asset 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 technology, which provides a similar utility to the existing asset in service. The efficient cost for new assets is generally their MEERA value.

We recognise that periodic revaluations of assets to reflect MEERA values would typically lead to higher developer charges than using other measures. This is primarily because there is no depreciation aspect to MEERA values. As a result, when the amount received via developer charges is deducted from the water business's Regulatory Asset Base (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.

On the other hand, if water businesses were to value existing assets using a method that is more reflective of regulatory values, the composition of the developer charge would be more consistent with periodic charges. This could involve using disaggregated RAB values if known, or depreciated optimised replacement costs^c if not known. In turn, the RAB's developer charge deductions would be more likely to match the regulatory values of existing assets, having a balancing effect on future periodic prices for existing customers. Box 4.4 below outlines the relationship between developer charges and periodic charges.

^c The cost of replacing an existing asset with an identical asset in the same condition (i.e. after allowing for depreciation), optimised to meet actual and reasonably projected demand.

Box 4.4 What is the relationship between developer charges and periodic charges?

Full cost recovery is one of our key pricing principles

- The total efficient cost of providing 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 charges using the building block approach

- We determine a water agency'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 charges are linked to developer charges through the RAB - the value of the water agency's assets on which it earns allowances for a return on and of its assets. 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 agencies results in lower periodic prices in future period (assuming that the average operating costs do not change).

Water businesses 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. 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 charges to calculate the operating surplus and, in turn, periodic charges require a value for developer charges to calculate the developer charges revenue to deduct from the RAB.

Our previous rationale for deciding to maintain using MEERA valuation of existing assets and not regulatory values is that it would not be desirable from a competition perspective. This was based on the observation 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 (e.g. a *Water Industry Competition Act 2006* (WICA) licensee).²³

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 (e.g. by WICA licensees)
- enables developer charges to be compared across water businesses
- is used by NSW LWUs in calculating developer charges.²⁴

We acknowledge that there may be merit in using regulatory values for existing assets when setting developer charges and that this has been considered previously. We seek stakeholder views on if MEERA is the right valuation method for existing assets, and the potential impact of moving to an alternative method (on both the level of charges and administrative costs to water businesses).

Seek Comment

 22. Is the Modern Engineering Equivalent Replacement Asset valuation method still appropriate for valuing existing assets? If not, how should existing assets be valued?

 23. What would be the potential impact to water businesses of moving to an alternative method of asset valuation?

4.3 Operating costs and revenue

The next component of our current developer charges methodology is the 'reduction amount', which is the amount that reduces the existing and future capital costs component. The reduction amount is equal to the present value of the net operating position (i.e. net profits), arising from the water business 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 water business'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 the operating costs in a new development area could be higher or lower than system average costs. Ultimately, the objective of developer charges is to be cost-reflective and signal the different costs of developing different areas.

Under the 2018 determination, projected revenue depends on the prevailing retail price determination. To calculate the net operating position, water businesses use their relevant retail price applied to the consumption of an average customer in the relevant customer class.

We are open to stakeholder views on the current forecast period of 30 years, and if a different time period would be beneficial. There is a trade-off between certainty and accuracy when considering a longer or shorter time period. For example, if a shorter time period (e.g. 20 years) would allow for more accurate forecasts that mitigate the risk for the under recovery of costs.

Seek Comment



24. The 'reduction amount' component of the developer charge methodology accounts for postage stamp revenues and location-specific operating costs for a period of 30 years. Does this approach continue to be appropriate? If not, how should it be modified?

4.4 Discount rates

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

Under the 2018 determination, the 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 Central Coast Council
- IPART's current real pre-tax weighted average cost of capital (WACC)^d for post-1996 assets for all water businesses
- IPART's current real pre-tax WACC for calculating the present value of the expected net revenues and costs.

We use a real post-tax WACC in our periodic price determinations because we explicitly provide a tax allowance for the water businesses we regulate when calculating their notional revenue requirement. However, developer charges are calculated on a pre-tax basis and should be discounted at the pre-tax WACC.

We consider it appropriate to continue to apply a real pre-tax WACC established in the water business's prevailing price review to discount real pre-tax cashflows (capital costs and net operating position) and ETs.

We also consider that if a MEERA valuation continues to form the basis of the capital component of developer charges, using different discount rates is appropriate. This would mean that a lower discount rate for pre-1996 assets would continue to apply. At the time, this was decided because the water businesses did not expect a full commercial return from developer charges before we introduced our methodology in 1996.²⁵

^d A utility's real pre-tax WACC is that set out in the Final Report accompanying that utility's prevailing periodic determination.

We acknowledge that Sydney Water previously argued in favour a RAB-based approach to setting the capital component of developer charges.²⁶ If regulatory values are used for existing assets, then the use of a single discount rate for pre- and post-1996 could be appropriate because pre-1996 assets are likely to be heavily depreciated.

Seek Comment



25. What discount rates should apply in the developer charges methodology? Is it still appropriate to distinguish between pre- and post-1996 assets?

4.5 How equivalent tenements are set

The current developer charges methodology uses the concept of ETs to represent the demand the new development will place on the water and wastewater infrastructure, compared to an average residential dwelling. The current ET measure allows water businesses to convert different land uses into a common demand metric, where total ETs will equal projected development demand in a DSP area.

Our 2018 determination stipulates that ET means the ET value specified in the Final Report accompany the prevailing periodic determination for the relevant water business. If the accompanying Final Report does not specify an ET value, the water business can estimate the total demand that an average single residential dwelling places on the relevant system.²⁷

Currently, each water business makes its own decision on the scaling of ETs to reflect the demand on infrastructure created by a particular development/customer type. For example, one water business may multiply the base unit of one ET for a single residential dwelling by 0.8 to reflect medium- to high-density residential development, while another water business may multiply the base unit by 0.6 for the same type of development. We raised this in our previous review of developer charges and consider it appropriate for the scaling to differ by water business, given the characteristics that may apply to one region but not the other. For the benefit of developers and customers, it is important that the method of scaling ETs continues to be made transparent by water businesses.

Overall, establishing a developer charge on a per ET basis has been supported by the water businesses.²⁸ However, there are a couple of issues to consider in relation to ETs.

- As noted in section 4.1.1, the number of ETs may be overestimated or paid for later than expected (including when development does not proceed as projected). Is there a measure that could be more resilient to deviations from development assumptions?
- As noted in section 2.5, large, high-volume water users like data centres that have a materially different water consumption profile compared to residential dwellings. Is the ET measure still fit-for-purpose for these users?
- Are the settings appropriate for water businesses to take into consideration measures of both average and peak demand and load, when applying our methodology?

We are open to stakeholder views on whether there is a more suitable measure for representing demand when calculating developer charges, whereby any changes would need to be assessed against its costs.

Seek Comment



26. Does our measure of equivalent tenements continue to be appropriate for calculating developer charges? If not, how could it be improved or is there a different measure that is more suitable?

4.6 Other revenue adjustments

There may be other revenue adjustments that we should consider as part of our review of the developer charges methodology.

One issue is that the revenue from developer charges that water businesses receive is assessed as income by the Australian Tax Office. This means these businesses incur an income tax liability on the revenue from these charges. Therefore, when calculating the notional revenue requirement for businesses in our periodic price determinations, we could potentially include an allowance for this tax amount. We consider that there are 2 ways this can be done:

1. Set aside 30% of the forecast developer charge to pay the tax liability and the remaining 70% of the developer charge is deducted from the RAB.
2. Include the forecast developer charges as revenue in the tax allowance calculation to calculate the tax liability as part of the tax allowance. In this case, 100% of the developer charge will be deducted from the RAB.

Our current approach has the effect of capitalising 30% of the developer charge (the tax liability part) into the RAB. This means that 30% of the costs to service growth remain in the RAB until it is depreciated and recovered from future customers.

We are open to stakeholder views on our proposed approaches to addressing this income tax issue and any alternative approaches that stakeholders propose, as well as views on any other revenue adjustments that should be considered.

Seek Comment



27. Should we maintain our current approach for treating water businesses' income tax liability from developer charges or move to a different method?



28. Are there any other revenue adjustments that we should consider?

A Mandatory and non-mandatory considerations under the IPART Act

Section 15 of the *Independent Pricing and Regulatory Tribunal Act 1992* provides that:

1. In making determinations and recommendations, IPART is 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).
2. In any report of a determination or recommendation made by the Tribunal under this Act, the Tribunal must indicate what regard it has had to the matters set out above in reaching that determination or recommendation.

Section 14A(2) of the *Independent Pricing and Regulatory Tribunal Act 1992* provides that:

In making such a determination, the Tribunal may have regard to such matters as it considers appropriate, including, for example, the following:

- a. the government agency's economic cost of production,
- b. past, current or future expenditures in relation to the government monopoly service,
- c. charges for other monopoly services provided by the government agency,

-
- d. economic parameters, such as—
 - i. discount rates, or
 - ii. movements in a general price index (such as the Consumer Price Index), whether past or forecast,
 - e. a rate of return on the assets of the government agency,
 - f. a valuation of the assets of the government agency,
 - g. 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,
 - h. the need to promote competition in the supply of the service concerned,
 - i. considerations of demand management (including levels of demand) and least cost planning.

B Glossary

Term	Definition
Development Servicing Plan (DSP)	Water businesses prepare Development Servicing Plans (DSPs) for new or expanded water and wastewater services that forecast growth, identify required infrastructure to service that growth and estimate the costs of augmenting their networks.
Discount rate	The factor used to modify an annual amount to convert it to net present value terms.
Equivalent tenement (ET)	The equivalent tenement value specified in the Final Report accompany the prevailing periodic determination for the relevant water business. If the accompanying Final Report does not specify an ET value, the water business can estimate the total demand that an average single residential dwelling places on the relevant system.
IPART Act	The <i>Independent Pricing and Regulatory Tribunal Act 1992</i> , which establishes IPART's regulatory role and functions in NSW.
Line-in-the-sand	The line-in-the-sand value is equal to the present value of future free cashflow and is used to establish the value of a business's initial regulatory asset base.
Modern Engineering Equivalent Replacement Asset (MEERA)	The value of the asset 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 technology, which provides a similar utility to the existing asset in service.
Net present value (NPV)	Net present value is the discounted value of a stream of benefits (or costs) taking into account the time value of money.
Notional revenue requirement (NRR)	Notional revenue requirement, the revenue needed by a business to recover the cost of providing their services.
Operating Licence	A regulatory instrument that authorises a water business to undertake its functions. Issued under the requirements of an Act by a Minister or the Governor, it contains terms and conditions governing a water business' operations. Not all water businesses are subject to a licence.
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.
Regulated asset base (RAB)	The regulated asset base is calculated as the economic value of all assets the business owns. The RAB is used as a basis to calculate the revenue we provide to businesses in our determinations.
Weighted average cost of capital (WACC)	The weighted average cost of capital is the post-tax real cost of capital as determined by IPART as part of a regulatory review.

- ¹ IPART, *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 Report, October 2018, p 53.
- ² IPART, *Maximum prices for connecting to a recycled water system*, Final Report, July 2019.
- ³ Treasurer letter to Sydney Water, October 2022, p2.
- ⁴ IPART, *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 Report, October 2018, p 57.
- ⁵ IPART, *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 Report, October 2018, p 3.
- ⁶ For example, see Australian Water Association, *How can we cut water consumption in data centres?*, May 2026.
- ⁷ IPART, *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 Report, October 2018, p 57.
- ⁸ IPART, *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, pp 12-13.
- ⁹ IPART, *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, pp 13-14.
- ¹⁰ IPART, *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, p 14.
- ¹¹ IPART, *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, pp 5-10.
- ¹² IPART, *Water regulation Handbook*, July 2023, Appendix C, pp 110-111.
- ¹³ IPART, *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, Schedule 7.
- ¹⁴ IPART, *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 Report, October 2018, p 22.
- ¹⁵ NSW Department of Primary Industries, *2016 Developer Charges Guidelines for Water Supply, Sewerage and Stormwater*, at <https://www.water.dccceew.nsw.gov.au/our-work/local-water-utilities/pricing-and-dividend-payments/pricing>, 2016, p 23, accessed April 2026.
- ¹⁶ IPART, *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 Report, October 2018, p 24.
- ¹⁷ IPART, *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 Report, October 2018, p 27.
- ¹⁸ Sydney Water, *Infrastructure contributions: How we apply IPART's pricing method to calculate prices*, November 2023, pp 49-50.
- ¹⁹ Hunter Water, *Calculating Developer Charges Guideline*, July 2023, p 14; Central Coast Council, *Water and sewer development*, accessed 29 April 2026.
- ²⁰ IPART, *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 Report, October 2018, p 33.
- ²¹ IPART, *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, pp 16-17.
- ²² IPART, *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, p 16.
- ²³ IPART, *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 Report, October 2018, p 36.
- ²⁴ NSW Department of Primary Industries, *2016 Developer Charges Guidelines for Water Supply, Sewerage and Stormwater*, 2016, p 25.
- ²⁵ IPART, *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 Report, October 2018, p 40.
- ²⁶ Sydney Water, submission to IPART *Maximum prices for connecting, or upgrading a connection, to a water supply, sewerage, or drainage system – Sydney Water, Hunter Water and Central Coast Council Draft Report*, August 2018, p 18.
- ²⁷ IPART, *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, Schedule 5.
- ²⁸ IPART, *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 Report, October 2018, p 45.