IPART Independent Pricing and Regulatory Tribunal | NSW

Delivering customer value

Our water regulatory framework

Technical Paper

November 2022

Water »

Tribunal Members

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The Independent Pricing and Regulatory Tribunal (IPART)

Further information on IPART can be obtained from IPART's website.

Acknowledgment of Country

IPART acknowledges the Traditional Custodians of the lands where we work and live. We pay respect to Elders, past, present and emerging.

We recognise the unique cultural and spiritual relationship and celebrate the contributions of First Nations peoples.

Contents

1 Introduction

This paper explains the decisions that will support our 3Cs pricing framework for regulating water businesses. We set out our analysis and reasons for each decision, including how we considered stakeholder submissions.

This paper should be read in conjunction with our Final Report and our Information Paper on financial incentives. Together, these documents explain how the 3Cs framework works as a package to promote the long-term interest of customers. We will also continue our work with stakeholders to develop guidance materials for water businesses implementing the framework in the future.

This Technical Paper is structured as follows:

- Chapter 2 sets out the goals of the 3Cs framework
- Chapter 3 explains how the new regulatory process will work, and how we will tailor our regulatory approach based on a business's proposal
- Chapter 4 outlines the role of financial incentives to promote cost efficiencies and improvements in service-level performance
- Chapter 5 lists the common elements of price reviews for all businesses
- Chapter 6 clarifies how the 3Cs framework addresses the changing needs of water businesses across and within determination periods
- Chapter 7 discusses how we will monitor ongoing performance of water businesses under the 3Cs framework.

1.1 We have listened to the sector in developing the 3Cs approach

1.1.1 What we heard

Over the past 2 years, we have reviewed our approach with a transparent and extensive public consultation process. We heard from a range of stakeholders that our regulatory approach should be updated so that it better supports water businesses to invest prudently in the infrastructure and technology needed for the future and provide the services that their customers value and can afford. We heard from water businesses, industry organisations, government agencies and advocacy groups who told us about their priorities for a new regulatory framework, including:

Pricing reviews should consider customer views

Stakeholders told us they were supportive of a regulatory framework that encourages businesses to promote customer voice and value within the regulatory price setting process. In response to our Draft Report Sydney Water Corporation (Sydney Water) told us:

> We especially welcome a defining feature of the proposed framework: which is placing customer engagement at the centre of business planning. We consider that the long-term interests of customers should be the primary lens through which we plan and deliver our services.[1]

Earlier in our review, Hunter Water Corporation (Hunter Water) emphasised the importance of focusing on customer outcomes:

> The customer voice should be heard and form an integral part of our business decision-making. This is not about improving engagement for its own sake. The regulatory framework should drive the water businesses to identify, understand and deliver the outcomes and levels of service that customers want.[2]

The Energy and Water Ombudsman NSW (EWON) explained how the proposed framework encourages a cultural shift in the sector for the benefit of consumers:

> The focus on customers, costs and credibility (the 3Cs) and the 12 supporting guiding principles will assist water businesses through increased customer engagement and driving culture change that genuinely benefits customers. This will, in return, increase rapport and trust with customers and provide valuable insights that will lead to better policy and customer focused initiatives.[3]

Health, reliability and environmental standards remain an important focus for water

Water is an essential service and all businesses must address broader community, health and environmental risks. The NSW Water Strategy has highlighted some of the growing challenges the sector faces in addressing environmental and climate risks and meeting the needs of growth. Our new framework, and regulatory principles, recognise these factors, as raised in the Public Interest Advocacy Centre's (PIAC) submission:

> Water is unique in its role as an essential foundation for the health, wellbeing and prosperity of the community and environment. Regulating water businesses must integrate the needs of human health, social responsibility, affordability, efficiency, and environmental sustainability. Responding to the risks imposed by climate change, and the increasing insecurity of water resources is also a central consideration.[4]

Incentivising long-term efficiency

In adopting an incentive-based approach, our aim is to create a framework that provides water businesses with incentives that align with promoting the long-term interests of customers. Our framework is designed to motivate and reward pricing proposals that deliver customer value. Sydney Water also sought such an approach:

> IPART also needs to think of equity return as a lever to generate incentives and create long-term customer benefit. This type of performance framework is a strong feature of reforms delivered elsewhere.[5]

Our regulatory framework should allow flexibility to reflect different circumstances

Our regulatory framework allows water businesses to tailor their proposals to account for the differences in customer base, sizes and services provided by the businesses we regulate. This ensures that our focus is proportionate to the issues that matter most to a water business's customers.

During our review, we heard that this flexibility was particularly important to some water businesses such as Essential Water, which serves a small rural customer base and Sydney Desalination Plant, a bulk supplier of desalinated water to only one large customer:

> … the ability to tailor the regulatory framework is particularly important.[6]

> … it is important for IPART to allow sufficient flexibility to tailor its approach to the role and circumstances of each water business.[7]

Businesses require more autonomy to innovatively deliver outcomes not projects

Our framework seeks to promote good performance over time. Our framework does not 'approve or disallow' individual projects, rather it is a model that rewards businesses that demonstrate, through its performance and reporting, that it is delivering services that meet customers' preferences. This aligns with the concerns raised by the Central Coast Council (CCC) and WaterNSW:

> Currently proposed business investments are based on key projects in a bottom up approach. Often resulting in focus being placed on key projects rather than an aggregate approach which defines investment via envelopes of funding. This approach creates a culture…that IPART has approved or disallowed projects for the next determination period.[8]

> A regulatory focus on the 'bigger picture' allows water businesses to speak to their customers in the way that addresses customers' needs and facilitates business planning suited to the delivery of services. This, in turn, results in more efficient delivery of the services required and reduced regulatory burden for businesses and regulators. [9]

The Water Services Association of Australia (WSAA) stated that "Efficiency and innovation will be key to meeting the challenges of balancing service delivery with affordability."[10] Our framework seeks to remove hurdles and disincentives for innovation, and provide financial, reputational and process rewards for businesses that can demonstrate they are acting in the long-term interests of customers. This will enable the businesses to drive improvements in efficiency and innovation.

1.1.2 What we did

We developed our new framework with these priorities in mind, while also being mindful of how the sector could be best supported in implementing change. Stakeholder views were instrumental in designing each element of the framework so that businesses have the tools to improve customer value successfully.

In particular, feedback to our Draft Report through written submissions, workshops and public hearings, have assisted us to refine our new framework and work towards addressing concerns around transition to and implementation of the new framework.

When businesses expressed concerned that some elements of the framework increased risk and uncertainty without any demonstrated improvement in customer outcomes, we responded by amending our framework to reflect the feedback from the sector. For example, we agree that linking alternative forms of price controls and grading is at odds with the framework's intent of encouraging businesses to tailor their proposal to the needs of their customers.

We have also committed to providing more clarity on how the changes will operate in practice and on our expectations on the sector moving forward. We will achieve this through the development of a handbook and the publishing of the information paper on incentives accompanying the final report package. This is in response to concerns from water businesses about complexity in adjusting their processes to a substantial package of reforms, including technical innovations like financial incentives.

1.2 Our framework builds on successful elements from other regulatory models

We have consciously and carefully included successful elements from other regulators' approaches which we consider suitable in the NSW context. The 3Cs framework is closely aligned with those of Victoria's Essential Services Commission (ESC) and Australian Energy Regulator (AER) (**Table 1**). We have also engaged with regulators in the UK like Ofwat, Ofgem, and Water Industry Commission for Scotland (WICS) on their experiences, which have informed parts of our framework design.

We have had the advantage of being able to consider our regulatory framework after these other regulators have implemented a wide range of improvements in their respective jurisdictions. We have retained the foundations of the previous regulatory framework that we consider fit-for-purpose; for example, a propose-respond review process and a building-block approach for assessing efficient revenue needs.

Our new framework represents an evolution of our previous approach. We will continue to protect water customers by ensuring they pay only what an efficient water business would need to deliver quality water services, consistent with our role under NSW legislation. The 3Cs framework forms the central part of how IPART fulfils its legislative water pricing function, including to consider the matters under Section 15 of the *Independent Pricing and Regulatory Tribunal Act 1992* (the IPART Act) when making determinations and recommendations.

Table 1 Comparison of regulatory models

IPART's proposed 3Cs framework	Vic ESC[11]	AER[12]	Ofwat[13]
Grading according to criteria/principles	✔		✔
Tracking and publishing performance	✔	✔	✔
Targeted pricing reviews linked to performance	✔	✔	✔
Ex-post reviews by exception	✔	✔	
Upfront financial incentives linked to proposal and/or self-assessment	✔		✔ a
Financial incentives to share additional value between the business and customers (EBSS, CESS, ODI)		✔	✔
Early engagement before pricing reviews	✔ b	✔	− c
Set allowances with a building block approach	✔	✔	✔

a. Ofwat offers menu regulation. Companies are provided with a menu of potential regulatory contracts involving pre-set incentive rates that companies choose from. This provides a financial incentive for more ambitious proposals as well as for ongoing financial and service performance.
b. With each price review cycle under the PREMO framework, the ESC directly engages industry on the ESC's guidance, including any proposed changes to the previous price review. They facilitate workshops with industry on these changes to their guidance and key issues of focus.
c. Ofwat provides extensive guidance ahead of pricing reviews.

2 Our 3Cs pricing framework focuses on customers, costs and credibility

Our framework is centred around pricing proposals that promote the long-term interests of customers. The framework elements of financial, reputational and procedural incentives aim to encourage good quality proposals that consider the costs allowed in a price determination together with the delivery of customer outcomes including compliance with regulatory obligations[a]. The framework keeps water businesses accountable for its proposed expenditure by nominating credible performance measures for annual reporting.

The 3Cs framework is underpinned by 12 proposed principles (outlined in **Table 2.1**) which both IPART and the water businesses will use to develop and assess pricing proposals.

We designed our new framework and principles to enable businesses to focus on efficiently providing services that their customers value. We want our price regulation processes to promote long-term thinking, rather than a focus on cost cutting that may lead to higher costs and prices or poor water services in the long term.

The following sections outline why we have designed the 3Cs framework around the 12 guiding principles, and what the businesses need to do to provide high-quality pricing proposals. The full assessment tool is presented in **Tables 3, 4** and **5** below.

Final Decision

1. IPART will update our water pricing framework to better promote customer value, cost efficiency and credibility. These elements are referred to as the 3Cs. They are supported by individual principles that:
   – water businesses will use to guide pricing proposals that promote the long-term interests of customers
   – IPART will use to assess pricing proposals, and as a basis for its decisions, in a pricing review.

[a] Most water businesses that IPART sets prices for also have an operating licence, with the notable exceptions of Central Coast Council and Essential Water.

Table 2.1 The 3Cs guiding principles

Customer principles

Customer centricity	How well have you integrated customers' needs and preferences into the planning and delivery of services, over the short and long term?
Customer engagement	Are you engaging customers on the things most important to them, using effective methods, to add value?
Customer outcomes	How well does your pricing proposal link customer preferences to proposed outcomes, service levels and projects?
Community	Are you engaging with and considering the broader community and its objectives, including traditional custodians of the land and water, while ensuring services are cost-reflective and affordable today and in the future?
Environment	Are you delivering environmental objectives, including to address climate change, in a cost-efficient manner across the short and long term?
Choice of services	Are you providing opportunities to reflect customers' varied preferences for the tariffs and additional services they are willing to pay for?

Cost principles

Robust costs	How well does your proposal provide quantitative evidence that you will deliver the outcomes preferred by customers at the lowest sustainable cost?
Balance risk and long-term performance	How well do you weigh up the benefits and risks to customers of investment decisions, and how consistent are they with delivering long-term asset and service performance?
Commitment to improve value	How much ambition do you show in your cost efficiency targets and what steps have you taken to demonstrate commitment to deliver on your promises?
Equitable and efficient cost recovery	Are your proposed tariffs efficient and equitable and do they appropriately share risks between the business and your customers?

Credibility principles

Delivering	Can you provide assurance that you have the capability and commitment to deliver?
Continual improvement	Does the proposal identify shortcomings and areas for future improvement?

2.1 Customers are at the core of business decisions

Customer preferences are a core part of business decision making. The 3Cs framework recognises that customer value encompasses a broad range of values beyond affordable bills, with 6 'customer' principles.

Customer centricity is the focus of the 3Cs framework. The businesses we regulate are monopoly suppliers of an essential service, so they have limited or no market pressure to innovate in meeting customers preferences. We note that the term 'customer' is broader than direct bill payers and it includes end users (for instance, renters who do not pay a Sydney Water bill, or community members that use public water points such as in parks, firefighters that access the network or road users that benefit from stormwater services. It could also include future users that will be impacted by decisions made by these businesses today). Under the 3Cs framework, the term 'customer' is intended to apply broadly to all those indirect customers as well as the bill paying ones. This principle is designed to ensure businesses are putting customer needs and preferences at the core of their decision making, as they would in a competitive market.

Businesses do this by conducting good **customer engagement**, to learn from their customers and formulate plans to deliver customer value. We have deliberately not been prescriptive in how this engagement should occur, acknowledging that businesses are already engaging with their customers through a variety of channels and are best placed to design further engagement methods that work for their customers. Effective engagement should be an ongoing process. However, we do expect water businesses to make it easier for their customers to engage with them, to listen to their customers and improve the way they identify and assist customers experiencing vulnerability.

Our third principle, **customer outcomes**, is designed to help businesses monitor whether they are performing for customers. They listen to what customers want, and then design outcomes in response. When they deliver what customers have asked for, they are rewarded through our framework.

A customer-centric business is continually seeking to improve customer outcomes through performance improvements and/or lowering costs. By actively engaging with all customers, businesses are confident that outcomes reflect customer expectations, and business plans and strategies deliver customer value.

Water is critical to our communities, environment, and economy, so it is not enough for water businesses to simply deliver their services to customers. The activities of a water business can have broader impacts on others beyond the customers or users of the water service. Our **community** principle encourages businesses to give due attention to their role in delivering broader social objectives, and engage with the community, including Aboriginal peoples, as part of 'business as usual' operations.

We have added the **environment** as our fifth principle. Our environment principle encourages the business to work with customers and other stakeholders to deliver environmental objectives efficiently.

Finally, our **customer choice** principle recognises customers have different preferences, and efficient business decisions may require varied levels of service. Our new framework supports businesses to innovate and pursue differentiated services when they are in customers' interests.

2.2 Services are delivered at the lowest sustainable cost with minimal regulatory intervention

Businesses should deliver customer services and outcomes at the lowest sustainable cost, in a manner that ensures the greatest long-term customer value over the lifetime of assets. Together, our four 'cost' principles encourage businesses to prefer innovations that lead to efficiency improvements over time (i.e. dynamic efficiency), which benefits society.

Expenditure plans should contain **robust costs**. Businesses should be accurately forecasting their efficient revenue needs to ensure customers are getting value for money.

Business should show a **commitment to improve value**, striving for the industry frontier, and demonstrating how they are continuously working to deliver additional value for money to customers.

Businesses also need to show they have a sound **balance of risk and long-term performance**. Water businesses need to make decisions today, for the long term, and balance the needs of customers today with customers in the future. This principle requires them to show how they have managed any potential trade-offs and kept the long-term interests of customers at the core of all plans.

Finally, we have a principle on **equitable and efficient cost recovery**. Through the 3Cs framework, we are becoming less prescriptive in pricing structures, but businesses will need to show they are sending cost reflective price signals. This is particularly important when thinking about intergenerational equity and the need to send signals to promote a secure water supply.

2.3 Businesses maintain public confidence by being credible

Business commitments and proposed plans to customers must be credible to maintain public confidence. Our 2 'credibility' principles are designed so that businesses are accountable to their customers for the decisions they make, and customers are confident that businesses are delivering quality services at an efficient cost. In recognition of this:

- **Delivering** – What businesses propose must be deliverable (and measurable), so that they do not overpromise. We have set up a range of incentives to encourage businesses to be more ambitious in what they promise, and this principle works to ensure that these ambitions are realistic.
- **Continual improvement** – Businesses should include information on lessons learned from past determination periods, and strategies for long-term improvement. This recognises efficient businesses are always reflecting on how to improve.

2.4 The 3Cs framework is flexible and accommodates different types of water businesses

The water businesses we regulate are diverse. They serve different geographies and populations and face unique challenges. As such, the relative importance of the individual principles under the 3Cs framework may vary between businesses, and requiring all businesses to focus equally on each of the 12 principles may be inefficient.

Under our new framework, each business will nominate focus principles for each proposal from the customers and costs principles. The business should demonstrate its focus principles are consistent with customer preferences. For instance, retail businesses may have more focus principles from the 'Customer' pillar than wholesale businesses. IPART will generally expect each business to have at least one focus principle from both the 'Customer' and 'Cost' pillars.

The water businesses are at varying levels of sophistication, and we consider it important that all businesses have a path towards achieving an Advanced or Leading proposal in the longer-term. In providing flexibility for each business to identify focus principles, our goal is to promote continual improvement among all businesses.

2.5 We are working with stakeholders to develop guidance materials on the 3Cs framework

Final Decision

2. IPART will continue to engage with the water businesses and other stakeholders to develop a handbook that provides the level and type of guidance required to support water businesses' proposals under the 3Cs framework. It will be updated over time.

Our new approach should provide effective guidance that enables each business to demonstrate its proposals are in the long-term interests of customers. We want to work with the stakeholders to develop clear guidance for the businesses to implement the 3Cs framework, including:

- a water regulation handbook – to be developed with the sector
- a detailed assessment tool – draft in Tables 3-5 below.

The water regulation handbook will replace our current document '*Guidelines for Water Agency Pricing Submissions*' (November 2020).

We are working to develop this handbook with businesses and other stakeholders to ensure it meets the needs of customers and water businesses and enables them to develop high quality proposals. We held a series of workshops following the release of our Draft Report to develop the handbook. We will also update the handbook over time as the framework evolves and we learn lessons through implementing the framework. A proposed outline of the handbook is presented below.

The intended audience for the handbook is broader than regulated businesses. It is also an important reference guide for other stakeholders and interested parties, such as customers and government agencies, to understand IPART's regulatory framework.

Our handbook and assessment tool will not prescribe any particular model for customer engagement. We consider the water businesses are best placed to understand what will work for their customers and apply new and existing tools and channels to its engagement. The assessment tool is intended to set expectations, and includes a rubric of principles to differentiate between Standard, Advanced and Leading proposals.

This guidance is intended to promote clarity for businesses – we are setting out the key results and improvements we expect businesses to deliver, without presuming to know what the specific outcomes are. Businesses will tell us the outcomes their customers want and provide appropriate evidence in support of this.

Tables 2.2, 2.3 and 2.4 show our assessment tool, which we have workshopped with the sector to clarify and refine throughout our consultation period. Under our commitments under the framework, IPART has committed to focus on matters that materially impact customer value. We intend to reward businesses for their efforts, rather than penalise them for small oversights or errors.

Table 2.2 Guidance for customer principles

1. Customer centricity

How well have you integrated customers' needs and preferences into the planning and delivery of services, over the near and long term?

Standard Expectations	**Advanced** Additional expectations to Standard	**Leading** Additional expectations to Advanced
Develop customer engagement strategy		
• The business has a published customer engagement strategy which: – sets out how it seeks to understand what matters to customers, and identifies the outcomes that maximise long-term customer benefit at an efficient cost – considers the level of influence customers have in how services are delivered – identifies the role of customer engagement in understanding customer preferences – commits to engage with customers in the pricing proposal and for major investments. • The strategy should be well structured and easy for customers to follow, and articulate clear roles and responsibilities of customers, regulator(s) and business.	• The strategy demonstrates that customers have a high level of influence in how services are delivered, and commits to gain insights from customers through a variety of methods.	• The strategy empowers customers to co-develop the most material aspects of its pricing proposal that impact price and service.
Customers influence business outcomes		
• Customer insights and engagement influence customer outcomes, inform business decisions, and short, medium and long-term plans.	• Customer insights are linked to customer outcomes, which inform ongoing improvements in the way services are delivered to customers.	-
Processes support customer centricity		
• Systems in place to respond to ongoing customer feedback. • Consumer facing businesses propose assistance programs for customers experiencing vulnerability (e.g. hardship programs, payment plans, access to concessions or other)	• Learns from and keeps up with peers and industry best practice engagement methods. • Consumer facing businesses propose tools or processes to support early identification and interventions for customers experiencing a range of vulnerability circumstances.	• Clear evidence of continual improvement in customer value across the business where it reflects on, and incorporates, learnings from its engagement processes. • Consumer facing businesses propose simplifications to assist customers, including those experiencing vulnerability improve accessibility and understanding (e.g. customer contracts, bills and accounts and water literacy.

2. Customer engagement

Are you engaging customers on what's most important to them, making it easy for customers to engage by using a range of approaches, to add value?

Standard Expectations	**Advanced** Additional expectations to Standard	**Leading** Additional expectations to Advanced
Engage on what matters to customers		
• Select issues for engagement that matter to customers.	• Customers involved in setting priorities that matter most for deeper engagement.	• Collaborates with and empowers customers (and/or customer representatives) to develop solutions in customers' long-term interests.
Choose appropriate engagement methods		
• Suitable consultation method/s have been chosen to reach a representative customer base and/or their advocates, such as renters, home-owners, vulnerable groups, and businesses. • Opportunities for customer 2-way communication exist. • Scope of engagement proportional to the level of expenditure and the impact of the project.	• Chooses effective methods to provide all customers – including more difficult-to-reach customers – with a high level of influence in how services are delivered. Responses are then triangulated and tested against other information.	• Continuously seeks to improve methods of engagement and explore innovative methods.
Engage effectively		
• Unbiased, clear explanation of context and objectives. • Participants are informed of the impact of their feedback. • Engagement is easy to understand, and customers' understanding is tested and where relevant technical literacy/capacity is supported for effective engagement. • Culturally and linguistically diverse groups are supported in their engagement. • Information is accurate, objective, tells the whole story and is correctly targeted to its audience. • Clear explanations of investment options, service levels, and uncertainties.	• Engagement includes clear explanation of options (including price differences and any potential trade-offs), and participants are confident their feedback will influence outcomes.	

3. Customer outcomes

How well does your pricing proposal link customer preferences to proposed outcomes, service levels and projects?

Standard Expectations	**Advanced** Additional expectations to Standard	**Leading** Additional expectations to Advanced
Customers drive outcomes		
• Propose outcomes, based on customer engagement, that capture what customers want you to deliver. • Link proposed expenditure to these outcomes.	• Outcomes are concise, specific, measurable and written from customer's perspective. They are clearly aligned to customer preferences and proposed expenditure.	• Outcomes and supporting output measures and targets are co-designed with customers, and proposals are supported by customers.
Performance measures support outcomes		
• Propose performance measures for each outcome. • Propose performance targets for each measure, referencing IPART's principles, with: – internally consistent short-, medium- and long-term targets – targets justified based on past performance and other suitable industry benchmarks – targets that, at a minimum, meet customer protection operating licence standards and other regulatory requirements.	• Targets show a step change improvement to customer value, and include adequate protections for individual customers.	• Where supported by customer willingness to pay, service targets exceed past performance and other suitable industry benchmarks by an ambitious but realistic margin.
Accountability for customer outcomes		
• Clear mechanisms ensure the business is accountable for delivering outcomes.	• All outcomes include steps the business will take if not meeting targets, and where appropriate, are supported by outcome delivery incentive (ODI) payments/penalties.	• All important customer outcomes with high customer value supported by ODI payment/penalty rates and targets.

4. Community

Are you engaging with, and considering the, broader community to understand their objectives, including traditional custodians of the land and water, while ensuring services are cost-reflective and affordable today and in the future?

Standard Expectations	**Advanced** Additional expectations to Standard	**Leading** Additional expectations to Advanced
Identify community outcomes		
• Engage with, and consider the broader community, including Aboriginal and Torres Strait Islander peoples, to identify community outcomes. • Assess the benefits and costs to the customer of delivering on broader community values, as they relate to the provision of regulated services. • Consider costs/benefits and bill impacts before proposing expenditures.	• Outcomes have demonstrated customer value and support, with awareness of bill impacts.	• Demonstrate step change improvements in community outcomes, which prioritise customer preferences revealed through engagement.
Community outcome performance measures		
• Community outcomes have targets that are measurable, have intermediate steps and milestones built in (as needed).	• Work and partner with local groups and other stakeholders to propose and deliver community outcomes within the scope of its services.	• Demonstrate innovative approaches to promote customer and community value.
Accountability for community outcomes		
• Clear mechanisms ensure the business is accountable for delivering community outcomes.	• Mechanisms include steps the business will take if not meeting targets.	

5. Environment

Have you identified and met broader environmental objectives, while ensuring services are cost reflective and affordable today and in the future?

Standard Expectations	**Advanced** Additional expectations to Standard	**Leading** Additional expectations to Advanced
Identify environmental outcomes		
• Meet all regulatory requirements, including environmental requirements, at an efficient cost. • Follow government directions[b] and regulatory obligations. • Set environmental outcomes that relate to the provision of regulated services, consistent with customer preferences, community views and waterway quality guidelines.	• Actively engage with other regulators, evaluate prospective government directions and obligations from the perspective of promoting the customer's long-term interests. • Incorporate climate change into forecasting models and undertake climate change adaptation and mitigation actions.	• Demonstrate step change improvements in environmental outcomes, revealed through engagement, which prioritise delivery of environmental outcomes that customers and the community value most.

[b] Government directions are typically made by Ministerial order through the *State Owned Corporations Act 1989* (the SOC Act) or other power under legislation

Standard Expectations	**Advanced** Additional expectations to Standard	**Leading** Additional expectations to Advanced
• Consider long-term environmental costs/benefits and bill impacts before proposing expenditures. • Propose cost-efficient expenditure to manage and adapt to the impacts of climate change.		
Environmental outcome performance measures		
• Environmental outcomes have targets that are measurable, have intermediate steps and milestones built in (as needed).	• Work and partner with community groups, other businesses, stakeholders and government, to propose and deliver outcomes that meet regulatory requirements, promote customer value and provide environmental benefits.	• Demonstrate innovative approaches which promote customer value and maximise environmental benefits.
Accountability for environmental outcomes		
• Clear mechanisms ensure the business is accountable for delivering environmental outcomes.	• Mechanisms include steps the business will take if not meeting targets.	

6. Choice of services

Are you providing opportunities to reflect customers' varied preferences for the tariffs and additional services they are willing to pay for?

Standard Expectations	**Advanced** Additional expectations to Standard	**Leading** Additional expectations to Advanced
Consider differentiated service offerings		
• No requirements at Standard.	• Engage with customers on opportunities for differentiated service offerings, including standard add-on mass market tariff options (e.g. carbon offsets), where it is cost efficient to do so. • Work with government and developers in growth planning to offer additional services and supply options to new developments.	• Offer customers innovative tariffs and products above licence obligations, consistent with customers' preferences if there is evidence of customer demand.

Table 2.3 Cost principles

7. Robust costs

How well does your proposal provide quantitative evidence that you will deliver the outcomes preferred by customers at the lowest sustainable cost?

Standard Expectations	**Advanced** Additional expectations to Standard	**Leading** Additional expectations to Advanced
Justify proposed expenditure		
• Proposed operating expenditure (opex) is consistent with past expenditure and clearly explains any step changes or trends. • Proposed capital expenditure (capex): – is clearly explained – identifies baselines for recurrent expenditure and provides justification for any changes it proposes over time – for large capital projects with a clear scope is supported by cost-benefit analysis considering alternative options.	• Changes in expenditure are supported by quantitative evidence which demonstrates how it promotes customer value (e.g., in proposing step changes for opex, and justification in business cases for large capital projects).	• Proposes opex and capex that maximises customer value, supported by modelling which shows it is below industry benchmarks.
Optimise between opex and capex		
• Demonstrates consideration has been given to opex and capex trade-offs.	• Uses quantitative evidence to show that proposed opex and capex minimises net life-cycle costs.	• Takes into account the potential and likelihood for cost saving innovations when proposing a balance of opex and capex.
Accountability for expenditure outcomes		
• Expenditure performance targets have been identified that maintain compliance with licence conditions, other regulatory requirements, and are consistent with customer preferences.	• Demonstrates how performance targets have been developed through customer engagement and deliver customer value.	• Has adopted and implemented robust processes to ensure that forecasts are justified, evidence-based and deliverable.

8. Balance risk and long-term performance

How well do you weigh up the benefits and risks to customers of investment decisions, and how consistent are they with delivering long-term asset and service performance?

Standard Expectations	**Advanced** Additional expectations to Standard	**Leading** Additional expectations to Advanced
Understand long-term performance		
• Investment and asset management decisions demonstrate a balancing of the risks and benefits to the customer and business in terms of long-term asset and service performance.		• Provides additional evidence optimising this balance of risks, using best practice, probabilistic investment decision and asset management systems.

Standard Expectations	**Advanced** Additional expectations to Standard	**Leading** Additional expectations to Advanced
Manage risks and reprioritise		
• Demonstrates all cost drivers and has mechanisms to monitor cost risks and reprioritise expenditures and asset management strategies as necessary. • Outlines its approach to manage long-term risks, including climate change	• Proposal commits to accept more risk where it has benefits for customers. • Demonstrates it has organisational resilience to absorb cost impacts arising from changes in the operating environment.	• Proposal includes capability and strategies to optimise and manage the value of risk factored into its forecasts and proposals.

9. Commitment to improve value

How much ambition do you show in your cost efficiency targets and what steps have you taken to demonstrate commitment to deliver on your promises?

Standard Expectations	**Advanced** Additional expectations to Standard	**Leading** Additional expectations to Advanced
Develop cost efficiency strategy		
• The business has a management[c] approved and externally published cost efficiency strategy that includes: – an annual 'efficiency factor' across opex and capex – productivity improvements achieved and proposed, which highlight that the business is adopting innovations – how it has performed against current period targets.	• Proposal is informed by cost efficiency strategy, justifies an ambitious annual expenditure 'efficiency factor' and explains reasons for its current performance.	• Proposes efficiency targets which would lead to a significant step change in cost efficiencies below historical costs and industry cost benchmarks.
Accountability for cost efficiency outcomes		
• Has clear mechanisms to ensure the business is accountable for achieving its proposed cost efficiency outcomes.		

10. Equitable and efficient cost recovery

Are your proposed tariffs efficient and equitable, and do they appropriately share risks between the business and your customers?

Standard Expectations	**Advanced** Additional expectations to Standard	**Leading** Additional expectations to Advanced
Propose cost-reflective prices		
• Propose cost-reflective maximum prices for customers, with: – modelling to justify tariffs over the next determination period	• Provides modelling to show that proposed prices: – are sustainable over time, and would avoid large future bill impacts – have been informed by LRMC model estimates	• Provides comprehensive modelling to support its proposed recovery of costs, including: – catchment level LRMC estimates where appropriate (to justify demand and supply side responses to delay augmentations or prioritise investments)

[c] Depending on the organisation structure this approval may be Board, Council or executive leadership approval.

Standard Expectations	**Advanced** Additional expectations to Standard	**Leading** Additional expectations to Advanced
– a balance of fixed and usage charges that takes into account the long run marginal cost (LRMC) of providing services.	– consider the impact of climate change on the level and structure of prices addressed • Justifies the appropriate form of price control that promotes the long-term interests of customers.	– longer-term pricing paths supported by long-term cost estimates.
Justify within-period revenue adjustments		
• Provides a robust justification for any revenue adjustments, consistent with IPART's 'revenue hierarchy' principles.		

Table 2.4 Credibility principles

Credibility	Requirements (all levels)
11. Delivering Can you provide assurance that you have the capability and commitment to deliver?	• Proposed expenditures and service outcomes can be delivered in the timeframe proposed. • Sets out how progress against key investments and performance targets (both short- and long-term) will be regularly monitored and communicated to its customers. • Plans for foreseeable future challenges, including strategies for how it will reprioritise and adapt as changes arise. • The proposal has been approved by the Board (or equivalent), who endorse that the proposal would best promote the long-term interests of its customers. The proposal has evidence of a robust assurance process to ensure the veracity of information provided to IPART.
12. Continual improvement Does the proposal identify shortcomings and areas for future improvement?	• Justified self-assessment • Performance targets have been monitored and communicated to customers over the previous period, consistent with past regulatory proposals. You have justified and explained past performance to customers. • Demonstrates how experience and lessons from past determination period/s have been integrated into current and future/long-term strategies, where gaps remain, and how future plans will address these. • Identifies any shortcomings in its proposals including its plans to address any shortfalls.

3 Tailoring our regulatory approach by assessing how well pricing proposals achieve the 3Cs

Our new framework enables water businesses to promote customer value by providing a flexible approach centred around businesses' pricing proposals. Each water business will self-assess how well its proposal promotes customer value, encourages cost efficiency and is able to be credibly delivered. This process encourages each business to demonstrate it is delivering for the long-term interests of customers.

Following this, we will assess each business's proposal based on the same criteria and determine whether the proposal promotes the 3Cs at a Standard, Advanced or Leading level. On rare occasions, we may assess a proposal as Sub-Standard, which would require resubmission of a proposal.

Our regulatory approach will be tailored based on our assessment of a proposal's performance against the 3Cs. For example, access to financial rewards and streamlined expenditure reviews can change based on the grade achieved by a proposal.

How stakeholders have shaped our thinking

We introduced the concept of tailoring our regulatory approach based on the business's pricing proposal in our third Discussion Paper. Stakeholders were generally positive about this approach but asked for more information, such as more guidance on how to determine their grade and on implementation.

Stakeholders also expressed a preference for a 5-year determination period over other models such as our initial our proposal for a 6-year determination period with a mid-cycle check. When consulting on our Draft Report, water businesses disagreed with limiting the use of financial incentives and alternative forms of price control to Advanced and Leading proposals. Stakeholders considered that consumers should be able to enjoy the benefits of options like pricing methodologies set by reference to maximum revenue (revenue-cap pricing schemes) regardless of the grade achieved by a proposal. Moreover, businesses welcome the opportunity to innovate and improve without excessive risks or uncertainties.[14]

Having further considered these views, we have agreed with businesses and will not link access to financial incentives and other forms of price controls to a water business proposal's grade.

Sydney Water suggested a third-party review of proposal grades where there is disagreement between a water business and IPART has not been adopted.

3.1 Engaging early with water businesses to support customer outcomes

To successfully implement 3Cs pricing framework, we will offer the opportunity for each business to engage with IPART around 2 years before price reviews commence.

Final decision

3. Water businesses can engage with IPART one to two years before a pricing proposal. 'Early engagement':
   – aims to ensure water businesses are supported and accountable for developing their pricing proposals, delivering their plans and engaging with their customers.
   – is expected for a water business that previously submitted a Standard proposal, and encouraged if it previously submitted an Advanced or Leading proposal

Early engagement promotes better customer outcomes by providing a structured opportunity for each business to engage with IPART. This allows us to have a clear understanding of how businesses are responding to our 3Cs pricing framework, and how effectively the framework promotes customer outcomes.

Early engagement is consistent with the new framework's intent to promote bilateral trust in the sector and streamline the regulatory process. It is an opportunity for businesses to identify potential concerns early on, and for IPART to understand how to best support the sector when implementing the framework.

Early engagement is not aimed at promoting IPART involvement in pricing proposals. Each business is responsible for developing a pricing proposal in close consultation with their customers. While consultation with IPART as part of early engagement can be informative to businesses, it is not meant to produce binding decisions or to substitute our pricing review process. Our assessments are solely based on the pricing proposals that businesses publicly put forward to explain how they will be delivering the outcomes their customers want. As with all of IPART's activities, this review process is carried out with commitments to transparency and accountability.

In the first round of reviews, we will ask each water business we price regulate to engage with us one to 2 years before their pricing proposal is due. As part of this engagement, we expect each business will:

- Provide an overview of how their customer plan will be used to develop outcomes and inform how services are delivered to customers.
- Explain how it is linking customer outcomes, with long-term capital planning and asset management, as well as to cost proposals.
- Explain how their focus principles align with customer preferences (described in Chapter 2 above).

In future pricing reviews, there may be less need for early engagement, and it could become encouraged for businesses whose proposal achieved Advanced and Leading grades in the prior period, potentially creating another process incentive for streamlined reviews. In contrast, we may continue to expect early engagement if the business's previous pricing proposal was assessed as Standard. We may also request to conduct an additional systems and processes review in advance of the next pricing review, depending on whether we identified any areas of particular concern on our previous review.

3.2 Water businesses self-assess how well their pricing proposals achieve the 3Cs

Final decision

4. Water businesses will demonstrate how well their pricing proposals promote customer value, encourage cost efficiency and whether they can be credibly delivered, by self-assessing whether their pricing proposals meet the 3Cs framework at a Standard, Advanced, or Leading level.

When submitting its proposal, each business will self-assess and decide at what grade its proposal promotes customer value and cost efficiency (based on the assessment tool proposed in Section 2.5).

The three grades are:

- **Leading** – for businesses that are industry leaders in understanding their customers, innovating to deliver services customers want, and driving cost efficiencies. The business also demonstrates how it delivers a significant improvement in customer value through a combination of quantitative and qualitative evidence.
- **Advanced** – for businesses that demonstrate very strong understanding of their customers, and are broadly at the cost efficiency frontier.
- **Standard** – for businesses that undertake customer engagement and have a credible path towards the cost efficiency frontier. This grade is consistent with good practice in the NSW water sector.

In deciding its grade, each business will refer to the 12 guiding principles outlined in Chapter 2, We do not expect businesses to ascribe a grade for each underlying principle, but to provide an overall assessment.

We propose to introduce self-assessment as part of the pricing review process to promote businesses holding themselves accountable to their customers. The framework provides rewards for businesses that undertake a self-appraisal (and seek continual improvement):

- A business can earn a financial reward if its self-assessment matches the rating we give to its proposal (see Section 3.6 below). This feature helps ensure that businesses are realistic in their self-assessment, and encourages them to provide high-quality information to support their proposal,

- The scope and focus of our expenditure review process is then informed by how aligned our assessment is to the business's self-assessed grading.

3.3 Water businesses should provide key information to support proposals

Final decision

5. Water businesses will provide information to support self-assessments, including:
   - proposed customer outcomes and performance targets, and as applicable, how these are complemented by operating licence conditions and/or incentive schemes
   - a nominated efficiency factor, that is substantiated with activities to deliver on this commitment
   - supporting evidence that its focus principles are consistent with customer priorities
   - Board (or equivalent) endorsement that the pricing proposal best promotes the long-term interests of its customers.

In submitting a pricing proposal, all businesses should include key supporting information.

An overview of its customer outcomes and performance targets

We ask each business to propose a set of customer outcomes in pricing proposals, with performance measures and targets to support these outcomes, and to outline how the business will be held accountable for these outcomes.

This recognises that the methods used to deliver the result are not as important as delivering the outcome.

The outcomes do not replace operating licence conditions such as system performance standards or other obligations. Operating licences, for those water businesses that have one[d], continue to set minimum protection for customers and ensure reliable services. Outcome Delivery Incentives (ODIs) and outcome targets aim to 'optimise' service levels and allow businesses to reveal efficient levels of service provision given customer preferences.

[d] Sydney Water, Hunter Water, WaterNSW and SDP are each subject to an operating licence administered by IPART.

An efficiency factor and activities to deliver on this commitment

In the past we have commonly applied a continuing efficiency factor to represent expected productivity improvements that businesses should seek to capture over the determination period.[e] However, we consider the businesses are better placed to nominate and justify a realistic, yet challenging, target.

We expect businesses to nominate and justify an ongoing efficiency factor in their proposals.

Businesses should also identify a discrete list of forecast and realised efficiency gains. For example, applying best practice procurement/contracting and/or decision-making practices could enhance a business's ability to capture productivity improvements. This relatively simple change will emphasise finding efficiencies and help stakeholders corroborate proposed productivity gains.

In the future, the ability to deliver the proposed efficiency factor could inform our confidence in the efficiency (or otherwise) of expenditure, thereby allowing us to streamline reviews.

Board endorsement that the pricing proposal best promotes the long-term interest of customers.

One of the focus areas we identified for this review was how our regulatory framework can lift the performance of the sector. Greater Board or Council accountability for its business's proposal could support organisational improvements, focus the Board or Council on key elements of the proposal and demonstrate its ownership of proposals.

Our previous framework required a CEO declaration for pricing proposals, but there is no endorsement that the pricing proposal would promote the long-term interests of customers. Instead, the declaration only focusses on the accuracy of numbers.

We will require each Board or Council (or equivalent) approve its business's pricing proposal.

The declaration demonstrates the Board's or Council's ownership of the proposal – and provides transparency that it is confident the proposal would deliver in the long-term interests of its customers.

[e] We have recently based this on the long-term (around 40 years) average of Australia's multi-factor productivity. (IPART, Review of Prices for Hunter Water from 1 July 2020, June 2020, p 203.)

3.4 We will assess pricing proposals using the 3Cs framework

Final decision

6. IPART will assess whether we agree with the water business's self-assessment that its proposal meets the 3Cs framework at a Standard, Advanced, or Leading level.
   – IPART will require a water business that submits a Sub-Standard pricing proposal to resubmit within 6 months.

Assessing how well pricing proposals promote customer value provides reputational, financial and procedural incentives for the businesses to deliver in the long-term interests of customers. It helps to address information asymmetries by aligning the incentives of the business, its shareholder, and IPART, to customer outcomes.

We will assess whether a business's proposal promotes the 3Cs framework and assign a grade of Leading, Advanced or Standard (as described in Section 3.2). On rare occasions we may grade a proposal to be Sub-Standard. This is if we were to form the view that the proposal was unacceptable and does not promote the long-term interests of customers.

A business that is assigned a Sub-Standard grade for its proposal will be required to submit a new proposal within 6 months. A previous determination would remain in place until we make a new determination. We consider it unlikely a proposal will fall into this category.

We have chosen these grades to reflect and reward step changes in performance that will benefit customers, rather than try to measure and reward small changes in performance.

Our assessment is not intended to be a simple weighted average of the score for each of the 12 principles. Scoring each principle separately would require IPART to make value judgements about whether performance in one category is more or less important than another, when any trade-offs should be driven by customers. Each business will identify focus principles for a pricing review to reflect the most important priorities for its customers.

Our review will highlight the key areas that informed our overall assessment.

Our assessment is then interlinked to all other key elements of the framework to ensure that businesses are rewarded if they deliver improvements in performance.

During consultation, Sydney Water expressed concerns on the grading system, explaining that the associated penalties and rewards are substantial but uncertain and tied to subjective assessments. For this reason, it proposed introducing an independent review to allow businesses to challenge IPART's grading, arguing it would improve accountability on the regulator and reduce risks associated with a subjective grading system.[15]

We are not proposing to introduce an independent review. IPART is an independent agency with specific regulatory functions as defined by legislation. The Tribunal is transparent in its decision making and is required to conduct public consultation with stakeholders. As noted in PIAC's submission, IPART is already subject to judicial reviews for errors of law.[16]

It is our view that introducing an independent review body would unnecessarily increase complexity and additional time to a price review without improving the framework. The decisions of a third-party reviewer would not be binding. We consider that engagement with regulated businesses before a pricing review, as well as the ability to comment on a draft grading during a review is a more useful tool to ensure accountability, promote trust, and reduce unexpected grading risks.

3.5 Reputational incentives for water businesses to provide high-quality pricing proposals

Businesses earn a strong reputational reward if they receive an Advanced or Leading assessment. It is tangible evidence that management and decision-makers can use to show customers and shareholders that they are promoting customer value.

Reviewing proposals every 5 years also elevates the reputational effect of achieving an Advanced or Leading rating. If a business is motivated by achieving – and maintaining – a high rating, the risk of being downgraded due to underperforming against targets (such as cost savings or service delivery targets) will also encourage ongoing performance.

3.6 Financial incentives for pricing proposals which promote customer value

Final decision

7. IPART will base financial rewards and penalties on our assessment of the water business's proposal against the 3Cs framework. A financial reward – calculated as a percentage of the revenue requirement used to determine maximum prices – will be allowed where we agree with the water business that its proposal is Advanced or Leading. The maximum grade IPART will award to a proposal is the business's self-assessment.

Businesses can earn a financial reward from delivering high quality proposals. We will add the financial reward to the forecast revenue requirement used to determine maximum prices. The financial reward will be, expressed as a percentage of the business's revenue requirement, where we agree with the business that its proposal is Advanced or Leading. We consider this financial reward is important to incentivise businesses to innovate and deliver additional customer outcomes.

The financial reward, or penalty, the business will receive from our assessment will depend on:

- the business's assessment from its previous pricing proposal (i.e. our prior assessment)
- the assessment the business assigns itself (i.e. its self-assessment)
- our assessment of the pricing proposal.

For the purpose of financial incentives, each business is considered 'Standard' until its first price review under the 3Cs framework. Following this, the assessment from the last review will be the starting grade for the next review.

1. If a business's previous pricing proposal was assessed as a Standard proposal, it will receive a financial reward for making a step change in performance to an Advanced or Leading level as described in **Table 3.1**.
2. If the business is already operating at an Advanced level, it will be expected to submit a pricing proposal that meets this level (**Table 3.2**). In our view, a reward is earned the first time a business moves from a Standard to an Advanced proposal. A new expectation of performance is then set. If in future an Advanced performance backslides, there is a symmetric consequence for underperformance, providing a strong incentive to maintain ongoing performance.
3. At a Leading level, however, our expectation is that future proposals will be at an Advanced level. This distinction reflects our view that Leading businesses are actively shifting the cost efficiency frontier. A Leading rating should be difficult to sustain.

When calculating financial rewards, we compare the grade we assigned to a pricing proposal to the grade the business indicated in its self-assessment. As shown in **Table 3.1** and **Table 3.2** below, businesses are penalised if their self-assessed grade is higher than IPART's grade. This is intended to encourage businesses to put forward their best proposal while ensuring it is realistic and feasible.

In our Draft Report, we included rewards for businesses that outperform their own self-assessment and obtain a higher grade from IPART. This was meant to ensure symmetry in the risks and rewards associated with the grading system.

Stakeholders did not support the option for IPART to 'upgrade' proposals. Water businesses raised concerns on the additional uncertainty caused by the risk of upgrading. Further, the proposed matrix might result in incentives for businesses to underestimate their proposal.[17] As noted by stakeholders, the intent of the new framework is to encourage best proposals while recognising that businesses are best placed to be informed on the needs of their customers.

In this Final Report, we have removed the option to upgrade proposals. If we consider that the grade of a proposal should be higher than what the business has self-assessed, we may note it in our assessment as feedback, but we will not apply a higher financial reward.

Table 3.1 Our 3Cs assessment table for a business previously assessed as having a Standard proposal (% of annual revenue requirement)

	Business's self-assessment		
IPART's assessment	**Leading**	**Advanced**	**Standard**
Leading	2.5%	n/a	n/a
Advanced	1%	1.25%	n/a
Standard	-1%	-0.5%	0%

Table 3.2 Our 3Cs assessment table for a business previously assessed as having an Advanced or Leading proposal (% of annual revenue requirement)

	Business's self-assessment		
IPART's assessment	**Leading**	**Advanced**	**Standard**
Leading	1.25%	n/a	n/a
Advanced	-0.25%	0%	n/a
Standard	-2.25%	-1.75%	-1.25%

3.7 We will tailor our regulatory approach depending on how well pricing proposals achieve the 3Cs

Final decision

8. IPART's assessment of the water business's proposal against the 3Cs framework will be used to determine our approach to expenditure reviews and to tailor key decisions in a review.

While our assessment approach is consistent across all businesses, we will tier the form of regulation to the scale and sophistication of the business. The price review process will depend on our rating, which in turn will be influenced by the business's preferences for its form of regulation, the business's scale and sophistication, and the needs of its customers.

We will tier our regulatory approach in three areas, outlined below:

- expenditure reviews
- form of price control
- pricing flexibility.

Our tiered approach is important for a few reasons. First, it supports the efficient allocation of IPART's and the business's time to the 'key' issues. Second, and more critically, it provides additional incentives to reward high-quality proposals from the business. Third, the financial incentives for ongoing performance allow us to streamline future reviews. This is because they provide confidence that the business's historical expenditure is efficient and reliable for setting future prices.

In addition, all proposals will be able to access the financial incentive mechanisms detailed in Chapter 4. These mechanisms will provide the business with better incentives to promote customer value, by sharing the value of improved performance between the business and customers (as we would expect to see in a competitive market where a business has performed well and gained market share).

We generally expect Advanced and Leading proposals to include financial incentives, while Standard proposals can include financial incentives if there is a solid case of demonstrated benefit to customers. We may disagree with their inclusion, however, if for example, we have concerns on a business's capacity to implement the scheme appropriately, or doubts on whether customers will be better off as a result.

Expenditure reviews

In general, a business that has put forward a high-quality proposal should expect a more streamlined expenditure review, since it has demonstrated its proposed costs are in customers' interests.

This does not necessarily imply that a business that submitted a Standard proposal automatically faces a fulsome expenditure review by cost consultants, and that a Leading proposal automatically faces a lower level of scrutiny. Indeed, a business that correctly self-assesses its proposal as Standard, and carefully justifies what it is doing to meet that level, could benefit from a targeted review. And a business that achieves an Advanced or Leading grade may face more focused expenditure reviews to the areas where there is greatest uncertainty, or where genuinely new ways of doing things have been proposed.

The streamlining of expenditure reviews is a natural consequence of the proposed framework. An asymmetry of information always exists between a regulator and regulated entity, and the expenditure review attempts to verify the efficiency of the business's proposed costs. However, the 3Cs framework better aligns IPART's and the businesses' goals: creating value for customers, so the need for forensic review of costs should be reduced.

Form of price control

Businesses will be able to choose different forms of price control in their proposal. The 2 most common are price caps and pricing methodologies set by reference to maximum revenue (revenue caps), explained in **Box 3.1** below.

We consider that businesses should propose forms of price control in the long-term interests of customers. We believe there are strong benefits to customers of both forms of price control and will allow moves towards revenue caps where businesses make a convincing case it is in the interests of customers.

In our Draft Report, we proposed linking the use of alternative forms of price control to the grading system, with only Advanced and Leading proposals allowed to include pricing mechanisms such as revenue caps. This was designed to reserve complex options to those businesses that are best placed in terms of resources and sophistication, while creating an additional incentive to improve for those businesses that are not at that stage yet.

In submissions to our Draft Report, stakeholders noted that alternative forms of price control, like revenue caps, can provide benefits that should not be precluded for businesses submitting a Standard proposal and their customers. [18]

Price control forms are an important tool for businesses to manage how risks are shared with consumers, and to align incentives around water usage and conservation.[19] Businesses are best placed to determine the form of price control that's most appropriate for their case and most supported by their customers. This is true for any business and proposal, including Standard proposals.

We will allow businesses, irrespective of their proposal's grade, to include alternative forms of price control in their proposal when there is a demonstrated improvement in customer outcomes. Businesses will need to explain in their proposal why and how the new form of price control is in the best interests of customers. Our assessment of a business's case for an alternative form of price control will then inform our overall assessment of the pricing proposal. We generally expect Standard proposals to require greater scrutiny on their case for alternative price controls. We may disagree with the inclusion of a different form of price control in a Standard proposal if the business has not sufficiently justified why this change is in customers' best interests.

Box 3.1 Forms of price control

Under a simple price cap, the regulator sets prices for the period. Customers can predict their bills and have control over the determination period. Conversely, the business is exposed to short-term fluctuations in revenue. For example, customers can lower their bills through reducing their usage. If too many customers reduce their water use, the water business's revenue will fall and the businesses may not be able to recover its costs.

IPART has historically determined price caps with additional flexibility through:

- Cost pass-throughs – such as desalination plant costs.
- Demand volatility allowances – which adjust revenues in the next period for material differences between forecast and actual water sales.

This has passed some of the risks of drought and demand to customers. We used our demand volatility allowance for the first time in 2020, returning around $18 million to Sydney Water customers given higher than forecast sales over the 2016 determination period.[20] This reflected that the water businesses recovered more revenue from customers in the previous period than the previously assessed efficient cost to deliver services.

Under a simple revenue cap, the regulator sets the revenue for the period, with the water business's prices changing every year to recover the revenue requirement. This transfers demand risk from the water business to its customers, who have greater bill volatility and less control over their bills within each price path.

Under the IPART Act, we are required to directly fix maximum prices or set a methodology for fixing the maximum price. IPART may determine a methodology for fixing a price in any manner that it considers appropriate, including, for example, by reference to maximum revenue. We expect that a business seeking an alternative form of price control will propose a specific methodology for fixing the price as part of their proposal.

Flexible pricing

A consequence of the previous framework (whereby customers are provided with the same service level) is that businesses may be missing opportunities to provide tailored services to individual customers, or a distinct group of customers, who are willing to pay for it.

Our framework introduces more flexibility for customers in their water services, through 'customer choice pricing'. This flexibility will allow businesses to cater their services to groups of customers, where there is value in doing so, and provided the costs and revenues are ring-fenced.

At present, we typically defer setting prices for large non-residential customers who have an unregulated pricing agreement with the business, but this does not extend to residential or smaller customers. We can see there could be situations where both parties could derive value by varying the services offered, and we do not want our regulatory framework to stand in the way of such improvements.

Our framework should encourage a broader use of customer choice pricing arrangements for Leading and Advanced proposals, as well as exploring unregulated add-ons and services for customers who are willing to pay for them.

4 Encouraging continual improvement through financial incentives

We propose to implement financial and service performance incentive mechanisms to encourage businesses, that demonstrate a strong understanding of their customers, to pursue ongoing improvements in performance and reduced costs.

These schemes play an important role in driving dynamic efficiency by replicating the positive aspects of competition and streamlining regulatory processes. Because these mechanisms provide the business with balanced incentives to improve financial and service performance, IPART can use these to have confidence that businesses' decisions are efficient, and therefore place less reliance on expenditure reviews by consultants.

This chapter gives a brief overview of the role financial incentives play in our new framework. Our Information Paper, which is released together with this Final Technical Paper and the Final Report, sets out how incentives operate in practice in greater detail.

This chapter also outlines our approach to assess requests for separate innovation funding mechanisms on a case-by-case basis.

How stakeholders have shaped our thinking

We initially proposed introducing financial and service performance incentive mechanisms in our third Discussion Paper. We consider that such incentives are an important part of our proposed package of reforms, for several reasons:

- Financial schemes align ongoing performance for the business to customer value.
- These schemes support longer-term thinking and streamlined regulatory reviews.
- The previous framework, without incentive schemes, can result in a focus on short-term cost reductions over improved service performance and long-term innovation.

Water businesses generally told us that the previous framework, which focused on costs over a 4-year period, promotes short-term thinking.[21] During consultation for our discussion papers and Draft Report, stakeholders were broadly supportive of a new system of incentives that would better encourage long-term improvements to customer value.

However, businesses also warned that incentive mechanisms (particularly for capex) could introduce complexity and expose the business to downside financial risk. This is especially true in those circumstances where businesses overspent their allowance due to unforeseeable events, rather than by a true decrease in efficiency. The risk of receiving a penalty under the incentives could also encourage businesses to be overly conservative in their estimates. Finally, stakeholders cautioned that implementing the new schemes can be complex and require significant efforts from the sector before the next price review.[22]

We consulted extensively with the sector to develop greater mutual understanding of how the incentives package are intended to operate in practice to promote customer value. We held a workshop to outline to the sector the technical elements of the incentive schemes and their intended goal. We are also releasing an Information Paper on incentives alongside this Technical Paper and the Final Report, and an updated spreadsheet model. We remain committed to continuous engagement with the sector as we move on to implementing the framework.

We improved the incentive schemes and our guidance on them to address stakeholder concerns about risks and uncertainty. As outlined in the Draft Report, our framework includes tools to lower financial risks to businesses, such as financial adjustments and cap-and-collars. We are also introducing the option for expenditure carve-outs in the first determination period, to be assessed on a case-by-case basis. This way, businesses can avoid penalties that would be driven by unavoidable and unanticipated circumstances.

We note that the schemes are designed to improve how businesses make any trade-off between expenditure and service provision, and how they share risks with consumers. Incentive schemes are also intended to encourage better forecasts and improve our confidence in the efficiency of expenditure that is rolled into the Regulatory Asset Base (RAB). We believe that our new incentives promote these positive changes while appropriately accounting for risks that might arise outside of businesses' control.

4.1 Why financial incentive schemes can promote the long-term interests of customers

Final decisions

9. We will allow proposals (irrespective of grading) to include financial and service performance incentive mechanisms. Where the benefits exceed the costs, these proposals will have an incentive regime comprising:
   - an operating expenditure benefits sharing scheme (EBSS)
   - a capital expenditure sharing scheme (CESS)
   - a customer outcomes delivery incentive scheme for key customer outcomes (ODI).

10. IPART will implement a shadow price for leakage to encourage efficient reductions in leakage. This will apply for water businesses who serve retail customers.

The 3Cs framework seeks to encourage proposals that demonstrate a deep understanding of customer preferences and priorities. As such, we consider businesses should have improved signals to innovate, pursue cost efficiencies and deliver service performance improvements. This supports customers being provided high value services at the lowest sustainable price. We therefore consider that proposals will have access to:

1. Expenditure incentive schemes for operating expenditure (EBSS) and capital expenditure (CESS), similar in design to the AER's schemes.
2. A service level incentive scheme, similar in design to Ofwat's outcome delivery incentives (ODIs).

These schemes will allow businesses to retain 20% of the value of an efficiency gain or service improvement. They promote longer-term thinking as they:

- Create a financial incentive that rewards businesses that make longer-term trade-offs that benefit customers.
- Support streamlined regulatory reviews. They allow the business to demonstrate, by responding to the incentives, that its decisions are efficient. As a result, we are confident the business's historical expenditure efficiently promotes the long-term interests of customers, allowing IPART to rely less on expenditure review consultants.

Box 4.1 highlights the broader benefits of introducing incentive schemes to provide balanced incentives for service improvements and cost efficiency.

Box 4.1 Incentive mechanisms are important to promote decisions in the long-term interests of customers

We want water businesses to preference innovations that lead to efficiency improvements over time (i.e. dynamic efficiency), which can ultimately benefit society much more than temporary cost reductions. NSW is a climate-sensitive state, and our framework should not encourage businesses to prioritise sticking to a short-term budget over responding efficiently to drought and other temporary pressures.

Under our previous approach, we motivated efficiency improvements by setting businesses' revenue with a 'building block' approach. Broadly speaking, we set a revenue allowance for a determination period (e.g. 5 years). Over this period, the business then retains any difference between what it has spent and the revenue allowance that we initially set, for the remainder of the determination period.

Stakeholders have told us that this approach encourages a short-term focus. Under our previous approach, where we generally do not apply incentive schemes:

- Short-term fluctuations in opex are rewarded and penalised much more other changes in expenditure. This may encourage shorter-term thinking and discourage efficient trade-offs between opex and capex.
- Spending to improve service performance is discouraged because it does not provide a financial signal to deliver better customer outcomes.

Our previous framework also provided the option for each business to claim for additional 'permanent' opex efficiencies through a discretionary Efficiency Carryover Mechanism (ECM). In practice, the ECM has rarely been used. This may reflect that the ECM was not designed to address the 2 points above.

Box 4.1 Incentive mechanisms are important to promote decisions in the long-term interests of customers

We have introduced incentive schemes to allow businesses to retain a consistent 20% share of the value of a service improvement or cost saving (i.e. an efficiency gain).

The financial incentive framework is aligned to customer value because it:

- supports efficient and longer-term price vs. performance trade-offs by water businesses
- ensures customers receive most of the benefit from efficiency savings achieved by businesses.

Businesses also benefit from the ability to share temporary cost fluctuations with customers, encouraging them to respond to drought and other temporary pressures. At the same time, businesses are encouraged to seek out more innovative solutions to reduce costs over time.

The 3Cs framework encourages businesses to make any longer-term trade-offs that benefit customers. For example, under these schemes, a business is better off investing today to lift future service standards, if it has a net benefit to customers in present value terms. Similarly, it encourages businesses to make trade-offs between opex and capex that reduce lifecycle costs, even if they increase operating costs in the short term. Under the previous regime, the business was not strongly motivated to make these trade-offs on an ongoing basis.

Our financial incentive schemes work as a package with the up-front financial rewards for high-quality proposals. The new regulatory framework provides additional revenue for ambitious proposals, to recognise and support innovative activities that will drive customer value. The financial incentives then provide accountability for the business to deliver on its proposed costs and service levels. They ensure that customers do not pay if the business does not deliver on its proposals, while motivating and rewarding further improvements over time.

In response to submissions to our Draft Report, we have added several design elements to manage financial risks and uncertainty and ease implementation. These elements will operate in the first determination period for which schemes apply for a water business. In addition, the incentive schemes will only be applied to those water businesses that can demonstrate capacity to respond effectively to the incentives provided.

We intend to closely monitor the implementation of the schemes and review key elements to enhance the schemes over time. For more information on the operation of the schemes please see our Information Paper on financial incentives.

4.2 An EBSS will support efficient recurrent expenditure by water businesses

Our EBSS is similar in design and operation to the AER's scheme of the same name, which has been effective in motivating electricity transmission and distribution businesses to make year-on-year efficiencies savings in opex.

Under the EBSS, we establish the incremental efficiency gain or loss in opex by calculating the change in forecast opex less actual opex. By valuing the gains and losses in perpetuity, shorter-term fluctuations over a determination period and beyond 'net out' such that only permanent efficiency gains are paid out to consumers and the business. This characteristic also reduces risks for the businesses by enabling them to share transitory costs with customers.

The EBSS also accommodates:

- Temporary fluctuations in costs that may affect how we set revenues using a base-step-trend approach (see Section 5.2). An adjustment can be made so that the business only bears (or retains) 20% of the temporary cost fluctuation in that base year (compared to 100% under a standard building block approach). Then, over the following determination period, if the previous decrease was temporary, there would be no financial impact on the business.
- Cost pass-throughs, such as drought costs, and other forms of within-period revenue flexibility (see Section 6.1). Forecast opex can be recalculated to account for changes in allowed revenue within the period.

4.3 A CESS will ensure customers only pay for efficient investment

Our CESS is similar to the AER's capital expenditure sharing scheme. It provides financial rewards to businesses that reduce their actual capex compared to forecast and penalises businesses that exceed capex allowances. In submissions to our Draft Report most water businesses were broadly supportive of the use of financial incentive schemes, but many are concerned there is not enough time to implement them successfully before the next price review, and that some capital expenditure is not forecastable and so should be excluded from the CESS.[23]

We understand the businesses' concerns, so have agreed to allow carve-outs from the CESS so that costs that are uncontrollable can be excluded from the scheme while the schemes are new. We will also work closely with the industry to implement the schemes, so they run smoothly.

Like the EBSS, the CESS allows businesses to retain (bear) 20% of the Net Present Value (NPV) of any capex saving (loss) compared to forecast expenditure, with the remainder shared with consumers. We have adopted a consistent 20% sharing rate across our 3 schemes to provide balanced incentives to promote customer value.

The capex incentive mechanism also accounts for risks arising from the deferral of capex. Where a project is deferred into the subsequent period and cost forecasts materially increase on an NPV basis, an adjustment is made to incentive payments to exclude the value associated with the forecast increase in capex. This adjustment is required to prevent businesses from inefficiently deferring capex to maximise incentive payments in the short-term.

4.4 An ODI scheme will encourage better customer service

Introducing incentive mechanisms for opex and capex without corresponding schemes for service quality could create a perverse incentive for businesses to underinvest in service quality. Our ODI scheme complements the EBSS and CESS mechanisms above. The scheme is modelled on Ofwat's ODI framework and is conceptually similar to the AER's Service Target Performance Incentive Scheme (STPIS) and Customer Service Incentive Scheme (CSIS).

ODIs tie financial rewards and penalties to the delivery of key customer outcomes that promote customer value. As part of the 3Cs framework, each business will propose customer outcomes, and specific measures for each outcome that will promote customer value. For a particular outcome measure, if the business can establish the customer value for an increase (or decrease) in performance, we will allow the business to retain (or bear) 20% of the value it has delivered to customers from a change in performance.

ODIs address the information gap on customer preferences by providing financial incentives for businesses to prioritise customer engagement and to deliver on the outcomes that customers value. Businesses otherwise face a financial disincentive to deliver above minimum standards set in licence requirements. **Box 4.2** below outlines an example of an ODI for the shadow price of leakage.

Box 4.2 The shadow price for leakage is an example ODI

Our shadow price for leakage, which we developed as part of the first Discussion Paper, is one example of an ODI. The customer value of reduced leakage can be calculated based on how it would reduce the future costs incurred by customers, given customer demand (i.e. the long run marginal cost of water).

Water businesses are financially rewarded for making economically efficient investments in water efficiency projects which improve leakage outcomes. Specifically, businesses will be rewarded in an equivalent method to the opex and capex incentive mechanisms, with the incremental value of water gain/loss retained by the business using a sharing ratio of 20%.

For example, if the value of water is $2/kL, and the business invests $2 to reduce its leakage – either through opex or capex – it will bear a cost of $0.40 (through the EBSS or CESS). Therefore, if the shadow price for leakage is also set to $0.40/kL – that is, so that the business retains 20% of the value of water saved – the business will invest in leakage reduction up to the point it is economical ($2/kL).

4.5 We have designed the incentive schemes to address key risks

This section outlines how we have designed and calibrated common elements of the incentive schemes to promote customer value and in response to submissions on our Draft Report.

4.5.1 Water businesses can choose to exclude certain expenditure from the schemes

In the first determination period, we will allow businesses to exclude certain categories of capital expenditure from the calculation of financial incentives. This will avoid penalties from being placed on businesses for unexpected and unforeseeable changes in capital expenditure.

Businesses will need to justify proposing these capex carve-outs. A business will need to explain why its divergence from initial forecasts could be unanticipated or unavoidable; how its ability to forecast the category of expenditure will improve in the next determination period; and to show that the penalties arising from the CESS would have material financial impacts

4.5.2 Sharing 20% of the present value of benefits balances incentives

We will calculate incentive schemes benefits and penalties using a flat 20% sharing rate and an NPV approach.

We consider a 20% sharing ratio is appropriate because it provides a sufficient financial incentive to encourage behavioural change, while acknowledging that incentive schemes (particularly service incentive schemes) can never fully capture all factors that affect costs and performance. Under this scheme, the business retains a 20% share of the benefit or penalty (in NPV terms) of an efficiency gain or loss first, before passing the remaining 80% through to the customer. This way, risks and rewards are shared in a fixed ratio between businesses and customers.

4.5.3 Capping the size of the revenue adjustment to account for risks

We are capping the size of the incentive payments under the incentive schemes to guard against unintended consequences or unforeseen events.

The total cap on incentive payments will apply globally as a net payment across the 3 schemes. This provides maximum flexibility for businesses to make any trade-offs within the cap (for example between cost and services, or between opex and capex). If the business reaches the cap within the period, it will still be rewarded (penalised) for additional efficiencies (inefficiencies) throughout the period, based on standard building block incentives.

As a default, we will set a cap for combined incentive payments to 1% of the revenue requirement. We will also consider whether limits should apply for an individual scheme, or if the cap should be different, on a case-by-case basis if the business makes a case for the change in its proposal.

4.5.4 Adjusting revenues at the end of the period accounts for volatility

We consider that all payments arising from the incentive schemes should be made at the end of each determination period, rather than at the end of each year within the determination period. This approach is administratively simple and allows businesses to manage volatility and minimise year-to-year changes to customer prices.

For example, we expect a degree of year-to-year fluctuations in some customer outcomes, which are largely unrelated to the actions of the business. Paying out benefits at the end of the period allows businesses to manage year-to-year fluctuations in performance, while being rewarded for an underlying trend towards higher performance.

4.5.5 Incentive schemes account for revenue uncertainty

Stakeholders have questioned how uncertain and unforeseen costs that arise during a determination would be dealt with under our incentive schemes.

Incentive schemes do not determine which costs are being borne by customers (or when). Instead, they change how any difference between actual and allowed costs is shared between the business and its customers.

As discussed in Chapter 6, our framework provides all businesses with sufficient tools to manage the risk of uncertain and unforeseen costs, regardless of whether a financial incentive scheme applies. If a cost pass-through, or another method for accommodating an uncertain or unforeseen cost is triggered, we propose adjusting the financial incentive schemes so that they apply to the 'revised' expenditure profile. This approach maintains the underlying incentives of the schemes, ensuring that they continue to promote customer value, while adjusting revenues for cost uncertainty.

4.5.6 Where a business proposal includes incentives, once agreed by IPART rewards and penalties will be implemented at the end of the regulatory period

Under our new regulatory framework, the business will propose incentive mechanisms for financial and service performance that will be assessed and approved by IPART. We could choose to modify the proposed scheme to promote customer outcomes.

Under the ECM scheme in our previous framework, it was up to the businesses to decide to apply for an efficiency payment at the end of the period (or, at least in theory, whether to apply for a penalty in the case of an expenditure over-run). Instead, payments under our new incentive schemes won't be made on an opt-in basis. This means that if a business includes financial incentives in its proposal, and once IPART has agreed to them, rewards and penalties are mandatory at the end of the period.

This distinction is important to promote customers' long-term interests. A business will need to fully understand the schemes before they commit to them, and to consider whether applying the schemes would promote the long-term interests of their customers, given their understanding of long-term costs, customer outcomes and the services they provide.

4.6 We will consider requests for innovation funding that improve customer outcomes

A business's pricing proposal should promote the long-term interests of customers. The 3Cs framework will assess revenue proposals through that lens, including any expenditure for innovative activities recovered through standard operating and capital expenditure allowances.

At the same time, the novelty of innovative ideas and the potentially long lead time before benefits are realised reduces the certainty of success. The risk of failure is higher than for known technologies and methods. Despite these risks, IPART agrees that there are significant untapped opportunities for innovation within water businesses that could benefit customers in the long term. It is reasonable for IPART to consider funding for businesses that are investigating innovations, as part of well-thought-out strategic plans.

In our third Discussion Paper, we said there may be scope to offer innovation funding as an option for businesses that are rated highly, where they demonstrate sufficient maturity in business operations to be able to use innovation funds to promote the long-term interests of customers.

In response, water businesses supported the introduction of dedicated innovation funding, for example, to fund research and development, but generally accepted a model where IPART reviewed proposals on a case-by-case basis.

We will assess proposals for separate innovation funding mechanisms on a case-by-case basis. We are happy to discuss this with businesses as part of early engagement and provide further guidance where it is needed, but we consider it preferable for each business to retain responsibility for proposing and justifying how best to deliver innovation. Proposals for explicit innovation funding should promote our three pillars of customer, cost, and credibility, by demonstrating:

- A well-defined problem linked to customer outcomes, which clearly articulates the limitations of existing funding mechanisms that require an innovation fund.
- The business has clear incentives to 'innovate efficiently' to achieve outcomes. For example, this could involve the shareholder co-funding the innovation with customers, and/or creating opportunities for private sector participation (see **Box 4.3**).

Box 4.3 Promoting innovation through challenge questions

In recent years, governments and businesses have promoted innovation through innovation challenges. These incentivise businesses, individuals, and researchers to address the key questions or challenges facing our communities for which there is not a currently known solution. They typically pose a challenge question or problem and invite prospective innovators to propose solutions to the problem.

A subgroup of the most promising solutions is funded to undertake a feasibility study for the proposed solution, with the best one or two being selected to progress to a prototyping phase. This approach allows businesses and governments to leverage its funding to harness innovation from outside of their organisation.

An example is available on the Australian Government's Business Research and innovation initiative.[24]

We note that the 3Cs framework supports innovation in many ways, which include:

- To be successful under the framework, businesses will promote a customer focus. This should unlock better ways of delivering services for customers, including opportunities for providing differentiated services to customers where the benefits outweigh the costs.
- Our assessment process provides financial rewards for Advanced and Leading proposals. This financial payment provides a buffer to support innovation and better ways of delivering services.
- Financial incentive schemes promote longer term trade-offs to deliver services more efficiently and cost-effectively.
- Our revenue sharing framework manages uncertain and unforeseen costs, while encouraging efficient decision making.
- Conducting ex-post expenditure reviews by exception, which addresses stranding risks.
- Setting 5-year determination periods as a default and encouraging early engagement. This supports forward planning and provides confidence to the businesses about IPART's standard processes (see Chapter 5).

5 Updating common elements of price reviews

While some elements of the proposed 3Cs framework are tailored to each business based on our assessment of its proposal, other elements will be consistent across reviews. In this chapter we discuss our proposed changes to elements of the regulatory framework that apply to all businesses. Specifically:

- setting 5-year determination periods, as a default
- changes to our expenditure review process
- simplifying our building block method.

How stakeholders have shaped our thinking

Throughout this review, stakeholders have argued that 4-year determinations promote short-term planning, and that expenditure reviews have become increasingly complex and less effective over time. We have carefully considered this feedback and our new framework adopts the following:

- moving to 5-year determination period
- implementing a range of changes to streamline and refocus our expenditure review process
- introducing modelling simplifications to the building block model.

5.1 We will generally set 5-year determination periods

Final decision

11. IPART will set 5-year determination periods, and conduct price reviews over 9 months, unless another timeframe is agreed in advance.

Through this review, businesses have told us that a 4-year determination impedes their ability to conduct good long-term planning. It can take a business 2 years to prepare a pricing proposal, and then another year to go through the price setting process, so businesses have limited capacity to conduct their long-term strategic planning.[25]

Further, the previous approach to setting the length of the determination may have compounded the problem: setting shorter periods makes it more difficult for businesses to plan for the long-term, and their cost estimates become even more short-term as a result. This in turn may contribute to a Tribunal decision to set a short period next time.

Therefore, we have decided to shift from a principles-based approach to setting determination length (which usually resulted in a 4-year price period) to a 5-year price determination as a default. We have decided not to pursue the 3-3-6 model outlined in our third Discussion Paper, following feedback from the businesses that this would result in significant additional burden with insufficient benefit.

We have also decided to shorten the length of our pricing review process from 12 months to 9 months. In general, each business will submit their proposals in September, and we will publish a Determination in June the following year. In that time, we will hold a Public Hearing and publish an Issues Paper, Draft and Final reports (see Figure 5.1below).

Figure 5.1 Standard timeline for a pricing review

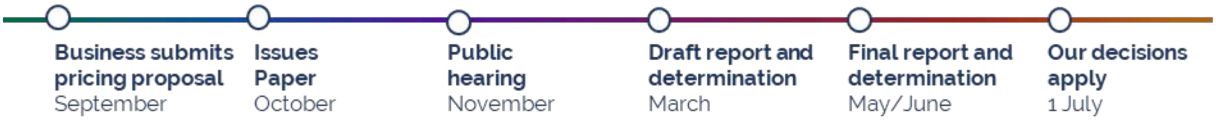


Table 5.1 Standard process stages for a pricing review

Process stage	Process stage activities
Business submits pricing proposal	The pricing review begins when we receive a pricing proposal from the business, which includes a self-assessment against the 3Cs framework, and its proposed customer outcomes, expenditures and prices.
Issues Paper	The Issues Paper highlights and seeks feedback on our focus areas for our review of the business's proposal, and the areas where we need more information to make an assessment and set a determination. It also seeks submissions from all interested stakeholders on the proposal and our proposed approach.
Public Hearing	The business presents on the key aspects of its proposal, and IPART presents its initial analysis and findings. The hearing is an opportunity for all interested stakeholders and IPART to challenge the business on aspects of its proposal, and for the business to address how its proposal would promote the long-term interests of customers.
Draft Report and Determination	IPART's Draft Report explains the decisions we intend to take, as well as the draft 'grade' we are assigning the business's proposal and seeks stakeholder comment on these decisions. It is accompanied by a Draft Determination which is a draft of the legal instrument to implement our decisions.
Final Report and Determination	Our Final Report explains the decisions we have taken, while the Final Determination is the legal instrument to implement our decisions.
Our decisions apply	The revenue allowance, financial incentive mechanisms, and pricing methodology/prices apply for the following determination period.

Note: reviews may run from August to May, depending on the circumstances of each review.

We have been able to shorten the length of the review because of new elements, including early engagement, which should help IPART prepare for the pricing review, and other improvements to streamline the regulatory effort involved. This should help to spread regulatory effort over the pricing cycle, rather than having one in every 4 years where regulatory teams are overstretched.

In addition, commencing pricing reviews in September has the advantage that we will have financial results for the previous year when we begin the review. This will allow IPART to review the business's proposed operating and capital expenditure more efficiently, which avoids each business having to provide IPART with 2 sets of forecasts throughout the review. If we started pricing reviews in July, we would still have to wait until September for updated financial information for the 'base' year.

5.2 We will update our approach to expenditure reviews

Final decisions

12. IPART will update how we assess proposed operating expenditure by:
    - implementing a base-step-trend approach
    - streamlining information returns to support greater use of benchmarking.

13. IPART will update how we assess proposed capital expenditure by:
    - working with the water businesses to develop predictive models of longer-term capital expenditure needs
    - conducting reviews of historical capital expenditure by exception.

14. IPART will identify a range of efficient expenditure using expenditure review consultants (where applicable).

The 3Cs regulatory framework is built around each business self-assessing the quality of its proposal, with IPART determining the extent to which it agrees with this self-assessment. We are providing clearer guidance about the information we need to make decisions, which should support a more streamlined review process.

We are also proposing a number of small, but important, changes to our expenditure review process. These changes are:

- Implementing a base-step-trend approach to review proposed operating expenditure.
- Streamlining information returns to support greater use of benchmarking.
- Working with the businesses to develop predictive models of longer-term capital expenditure needs.
- Only reviewing historic capital expenditure by exception.
- Identifying a **range** of efficient expenditure with assistance from expenditure review consultants (where applicable).

These changes aim to promote a more efficient use of regulatory effort by:

- Better utilising information, and incentives, that allow businesses to demonstrate that their proposals and actions are efficient. This includes streamlining information returns, to support benchmarking and promote competition by comparison where possible.
- Outlining where providing more detailed information would reduce regulatory costs for the business.
- Focusing our review process to the places where we are concerned that forecast costs may not be efficient.

They also create more certainty for the businesses. Removing automatic ex-post reviews gives businesses confidence their spending (within the revenue allowance) will not be declared inefficient at a future date and adopting a consistent approach to operating expenditure creates a common starting point for expenditure reviews.

We will implement a base-step-trend approach for operating expenditure

We will move to a base-step-trend approach for setting an operating expenditure allowance, similarly to the approach applied by other economic regulators such as the AER and the ESC. Under our approach the forecast operating expenditure is built up from 3 components:

1. **Base –** the efficient recurring expenditure required each year, typically based on the most recently available 'full year' of actual expenditure. The base should reflect genuine recurring expenditure while also taking into account an efficient business's costs on average over the range of likely conditions over the period (such as drought).
2. **Step –** changes that are typically the result of new requirements or new ways of doing things, so past expenditure or trends cannot predict this change in expenditure.
3. **Trend –** the predictable (and efficient) change in recurring expenditure over time due to input price changes, population/demand growth and improvements in productivity.

The base-step-trend approach allows businesses to present their expenditure more clearly for IPART and customers, so we can see how costs are changing, and what is driving the change. Over time, this will help verify base costs, and support more focused reviews.

Importantly, as we develop increased confidence over time about the efficiency of base costs, a base-step-trend approach would not impose catch-up efficiencies to historic cost bases. This contrasts to our previous approach.

We will streamline information returns to support greater use of benchmarking

We will adopt a standard approach to reporting expenditure to IPART. At present, each business provides IPART with different breakdowns of their operating and capital expenditure. We have allowed this because it aligns with each business's internal data collection, and because we made limited comparisons across businesses (in NSW or elsewhere).

We consider that there is untapped value in comparing businesses. It will allow us to quickly identify where a business's costs may be high (and where we should focus any expenditure review) and if there are differences in reported reasons for step changes or trends between businesses.

We will adopt the categories applied by the ESC in Victoria. This gives us greater ability to compare costs using published pricing proposals from Victoria. We will set out further details on the categories in our handbook.

This is the first step towards greater use of benchmarking in our regulation. We anticipate that Advanced and Leading proposals will support their costs with their own benchmarking information, to show where and how they are achieving lower costs and explain why their costs are higher for other components.

As we receive more standardised data and more benchmarking information from businesses, we will make greater use of benchmarking. Like base-step-trend, benchmarking creates reputational and procedural incentives. High-performing businesses can show their customers and shareholders how well they are performing, and IPART will be able to more easily verify that a business beating its own benchmarks is delivering customer value efficiently. However, we do acknowledge that with a limited number of businesses IPART's ability to rely on benchmarking may be less than in other jurisdictions.

We will develop predictive models of longer-term capital expenditure needs

By its nature, capital expenditure is more difficult to review. Capital expenditure can be lumpy over time due to a combination of asset ages, growth and the location of the capital expenditure (e.g. whether it serves brownfield growth or greenfield growth). This presents challenges to streamlining our regulatory processes.

As we proposed in our third Discussion Paper, we will use benchmarking and predictive forecasting for capital expenditure, as a tool to support our decisions in a pricing review. We note that it is difficult to apply a single method for all types of capital expenditure, but we consider that there should be some types of capital renewals that are more predictable and could be modelled.

We consider that we can improve our processes through:

- Developing predictive modelling of replacement capital expenditure for business-as-usual expenditure.
- Creating a database of major asset capital expenditure to identify the historic costs of different types of assets with differing capacities.
- Developing predictive modelling of serving greenfield growth (to the extent it is included in price review revenue).

We will work with businesses to develop this information and this will help both parties to identify the focus of future capital expenditure reviews. This process could provide broader spill-over benefits in allowing each business to showcase how it is using more and better data to improve the quality of its business plans. There could be significant benefits from businesses sharing this information across the sector.

We will only review historic capital expenditure by exception

Actual capital expenditure can vary greatly from forecasts for several reasons. When we set the RAB, we can also review the business's actual capital expenditure over the previous period and amend the RAB to ensure only efficient expenditure is recovered from future prices. This is known as an ex-post review of capital expenditure.

We have conducted ex-post capital expenditure reviews in our previous price reviews, but they will not be a prominent feature in the 3Cs framework. This is because IPART has always stated that our expenditure allowance gives the businesses an envelope of expenditure to prioritise within, and we acknowledge that the threat of ex-post capital expenditure review can contradict this statement, in practice. Further, we rarely make significant cuts in ex-post capital expenditure reviews, since it is difficult to prove that costs were inefficient in retrospect.

We propose, to conduct ex-post capital expenditure reviews by exception in the future. For example, we may conduct a review where a business:

- Has a very large capital project (e.g. large contingent projects).
- Has exceeded its capital expenditure allowance (and requests to include more than its allowance in the RAB).
- Has deferred a project and it is part of a capital expenditure incentive.
- Is underperforming in its operating licence conditions or other regulatory requirements or significantly failing to reach customer outcomes.

Consultants will provide a range of efficient expenditure

In future, we will request expenditure consultants, where we use them, to provide a **range** of efficient expenditure, rather than an exact figure as they have done under the previous framework. The consultant will also provide clear advice to IPART on the factors that would inform how it should reach a decision within that range.

The factors that will influence an IPART decision over a business's efficient expenditure allowance (within the range proposed by the consultant) could include:

- An assessment of the maturity of the business, which will tie to the grading we assign to the proposal.
- Any areas where more expenditure could be justified (or perhaps is needed) but the business case is poor. For example, when the performance commitment to customers is too conservative for the expenditure proposed.
- When the level of efficient costs is influenced by the response of other regulators or stakeholders (such as the Environment Protection Authority).
- When the information reviewed by the consultant is incomplete. In this case, any commitments by the business to address these shortcomings could inform the final decision.
- When there are concerns about the proposed expenditure being delivered in the time period.
- Where there are conflicting views about an acceptable sharing of risk between the business and its customers.
- Other specific limitations – incumbent on the consultant to justify – that would lead to uncertainty.

The advantages of this change are:

- It acknowledges that businesses' proposals are multi-dimensional – a balance of cost, performance, and risk, and creates an avenue to address uncertainty in project scope and costs.
- It could allow for more constructive dialogue between the business and IPART during the expenditure review process.
- It discourages the business from trying to anticipate the recommendations of cost consultants, and thereby reinforces other elements of the 3Cs model which encourage each business to submit its efficient expenditure needs based on customer preferences.

5.3 Replacing elements of our previous approach with the 3Cs framework

Final decisions

15. IPART will update our regulatory approach around the 3Cs framework with respect to:
    - The criteria IPART will apply to test the prudency and efficiency of proposed expenditure will be included in the 3Cs framework and guiding principles, rather than in separate guidelines.
    - As water businesses will promote the service improvements that their customers want and value by proposing customer outcomes, IPART will not apply a separate discretionary expenditure framework.
    - Our proposed customer choice pricing model promotes differentiated service offerings and broadens the scope for unregulated pricing agreements.

The 3Cs framework forms the basis of our regulation, with the underlying principles driving the way we regulate. It better articulates the factors that we consider contribute to efficiency.

The new regulatory approach is broader than the previous regime. A more holistic review means that we can retire some elements of our previous approach such as the efficiency test, discretionary expenditure framework and unregulated price agreements.

- **The efficiency test** – we will instead establish efficiency by assessing proposals against the 3Cs framework. This is not to say that prudency and efficiency are less important in the new framework, rather the way that we assess efficiency has changed from an explicit test to being embedded in all elements of a business's proposal.

- **The discretionary expenditure framework** – this is superseded by the addition of customer outcomes. We consider that our previous approach encouraged businesses to spend a disproportionate amount of effort on minor expenditure (with minimal bill impacts) when customers wanted the business to perform above minimum standards. Under the 3Cs framework, businesses propose customer outcomes (including services above and beyond licence standards) based on customer preferences and have incentives to deliver these. This should simplify the process and allow businesses to better respond to customer preferences. Where a water business already has a discretionary expenditure project allowed under our previous framework it will be transitioned to the new framework by:
  - Including past and future capital expenditure in the RABs and including operating expenditure within the relevant opex category of water, wastewater and stormwater services
  - Requiring the business to prepare a short, one-off report on each project at the end of the current determination period outlining predicted versus actual costs and outcomes.
- **Unregulated price agreements** – these are an example of customer choice pricing and therefore no longer needed as a standalone element in the framework. In recent determinations, we have provided businesses with flexibility to enter agreements with large non-residential customers that deviate from prices set in the determination and consider that customer choice pricing is an evolution of this idea. That is, encouraging businesses to offer different services to sets of customers with different needs/preferences, where the benefits exceed the costs.

5.4 Simplifying our building block models

Final decisions

16. IPART will simplify the building block models without affecting the quality of outcomes, as outlined in Appendix A of this Technical Paper.

The building block model has become increasingly complex over time. We propose to simplify our modelling without compromising its overall integrity. By simplifying the modelling, we move further away from a cost-of-service approach to regulation to one more incentive-based, which should deliver better value for customers. Full details of our modelling simplifications are presented in Appendix A.

Our key changes are:

- Having fewer RAB categories and a different approach to asset lives for the urban water businesses.
- Removing the modelling requirement for discretionary expenditure. This means rolling the discretionary RABs into the broader water, wastewater and stormwater RABs and including operating expenditure within the relevant opex category of water, wastewater and stormwater services.
- Simplifying our asset disposals policy.

- Simplifying our working capital policy by standardising all the parameters.
- Adopting a 50:50 profit sharing ratio for all non-regulatory income but allocating 100% of losses to shareholders. Allowing for exceptions on a case-by-case basis subject to materiality, and for efficiency projects.
- Simplifying our Water Administration Ministerial Corporation (WAMC) modelling.

6 Addressing the changing revenue needs of water businesses

The 3Cs framework seeks to promote the long-term interest of customers, identifying and rewarding businesses that sustain better customer outcomes and cost efficiencies. But we recognise that, within a determination period, there are inherent uncertainties that may require additional costs (or avoided costs) to be shared between customers and the business if they arise.

We also see benefit in providing guiding principles for businesses about how to manage revenues and costs between determination periods to promote intergenerational equity and efficiency.

In this chapter we highlight a revenue sharing framework that sets out principles and guidance about how and when costs should be recovered from customers. We also outline key principles for inter-period revenue smoothing, in response to stakeholder submissions.

Our revenue sharing framework is designed to promote the long-term interests of customers by supporting long-term planning and addressing changing revenue needs, while maintaining an incentive for businesses to seek out efficiencies.

How stakeholders have shaped our thinking

Businesses have emphasised the need for framework elements to allow them to pass unforeseen cost events through to customers, especially since they are exposed to additional risks under incentive schemes. Businesses have also asked for additional guidance on how the cost pass-through tools will work in practice, for example on eligibility criteria and the calculation of financial incentive payments.[26]

At the same time, PIAC has highlighted that it is not in the best interest of customers to regularly pass-through new costs, which may become a material and variable portion of the customer's bill. Instead, PIAC considers the applicability of cost pass-throughs should be narrowed, and business be directed to other means of addressing risks.

We have carefully reviewed our cost pass-through framework and stakeholder feedback on it. We are maintaining the cost pass-through framework outlined in our Draft Report, noting that we introduced a series of additional tools to shield businesses from undue penalties for uncontrollable events in all circumstances. We believe that the new framework strikes the right balance between promoting long-term improvements in service performance and efficiency, while addressing uncontrollable risks.

To address stakeholder queries, we are providing more details and clarity on cost pass-throughs and similar mechanisms below and in the upcoming handbook.

6.1 Our 3Cs framework provides water businesses with several ways to manage their revenue risks

Final decision

17. IPART will provide water businesses with mechanisms to manage changing revenue needs over the short and long term, where these promote better customer outcomes. Figure 6.1 contains the principles we will consider when assessing proposals:
    – to account for uncertain and unforeseen costs within a pricing period with a cost pass-through, ex-post true-up, letter of comfort, or a partial or a full re-opening of a pricing determination
    – to smooth revenues between pricing periods with accelerated depreciation, annuities or escrow accounts.

Water businesses have regularly asked IPART to provide more flexibility to recover uncertain and unforeseen costs from customers. In this review, businesses requested we review our cost pass-through guidance to allow pass-throughs in a wider range of circumstances. We are providing clearer guidance on our revenue risk management mechanisms, including cost pass-throughs.

While these tools are available to all businesses under our new framework, we will always balance the needs of businesses to manage revenue risks from unforeseen or uncertain large step changes in costs with consumer protection and independent scrutiny.

We consider these mechanisms to be measures of last resort. As a result we will scrutinise requests for pass-throughs or other mechanisms closely. We will carefully monitor how these tools are being used over time, to minimise the risk of overuse.

Cost pass-throughs are just one of a suite of tools businesses can use to manage revenue uncertainty within a determination period. Our framework also includes *true-ups*, *letters of comfort* and *partial* or *full reopeners* of a determination. These are explained further in sections 6.1.1 and 6.1.2 below, and summarised in Figure 6.2.

6.1.1 Recovering costs through the price determination

Broadly speaking, costs can vary within a determination period if:

- an event, which has predictable costs but an uncertain frequency, arises within the period
- unforeseen costs unexpectedly arise during the determination period
- an event will or is likely to occur within the period but costs are uncertain at the beginning of the period.

Below we outline our principles to guide businesses in deciding whether and which mechanism promotes the best long-term outcome for customers.

Base costs

Most costs should be recovered from base costs and apportioned to the appropriate cost building blocks. We review the business's planned expenditure for efficiency and set prices (or revenues) to allow it to recover the revenue needed over the next determination period to deliver customer outcomes.

This approach promotes good customer outcomes, and is our preferred approach to recovering costs, because it:

- Encourages the business to propose and justify efficient expenditure. Proposals need to substantiate why the business expects to incur costs, and how it will manage and minimise costs, and if appropriate, have its plan be tested and accepted by customers.
- Seek and drive efficiencies (to the benefit of customers), allowing the business to retain a share of cost savings.

Cost pass-throughs

When there is a known, material cost that the business cannot control, we can include a cost pass-through (up front) in the determination. Only if the cost be incurred, the business can automatically pass the costs through to customers within the determination period. If cost pass-throughs are applied in a determination period, they will be reflected in our calculation of rewards and penalties under financial incentives schemes.

Cost pass-throughs generally go against our principle of providing an envelope of expenditure for businesses. The aim of setting prices based on a forecast revenue requirement is to encourage businesses to reprioritise their spending through the period as circumstances change. Allowing a pass-through straight to customers for a specific project weakens the incentive for this reprioritisation, as well as reducing the incentive to find efficiencies.

Our guidelines (**Figure 6.1** below) address this issue by setting the pass-through on forecast, rather than actual, costs. This preserves the incentive for the business to seek efficiencies when costs are incurred. Our guidance also asks the business what it has done to consider mitigating the costs in other ways. Cost pass-throughs are intended only for large step changes in costs with material impact on a business. In setting a cost pass-through we would review the efficient cost of managing an event and set a price or a methodology for calculating the price. This provides an appropriate balance of revenue risk management with oversight for consumer protection.

This is why we consider cost pass through mechanisms need to be reviewed and determined during a price review process, where these checks and balances can be applied.

Figure 6.1 Cost pass-through principles

In proposing a cost pass-through, the business should demonstrate the following principles apply:

01	There is a trigger event (to activate the cost pass-through), which can be clearly defined and identified in the price determination.
02	The resulting efficient forecast cost associated with the trigger event can be fully assessed, including whether there are other factors that fully or partially offset the direct cost of the event.
03	The resulting cost is assessed to exceed a materiality threshold. It must also represent a material risk for customers (in the absence of a pass-through).
04	The regulated business demonstrates that a cost pass-through is the most efficient and equitable way to deal with the event.
05	If the mechanism is triggered, there is a symmetric treatment of any over- or under-recovery of actual costs, relative to the efficient forecast cost included in the cost pass-through.
06	The cost pass-through will result in customer prices that better reflect the efficient cost of service.

6.1.2 Adjustments for unforeseen costs that arise during the determination period

No matter how well a business forecasts efficient costs, the operating environment will change throughout the determination. In this case, changes in costs can be managed through a variety of means. The tools listed below are intended to address progressively risky scenarios and are to be used in exceptional circumstances.

Manage within revenue requirement (base costs)

The costs for all businesses will vary over time, and cost increases can often be absorbed by a business, particularly in the short run (in the same way that cost reductions are absorbed until the next price reset). Encouraging each business to manage costs that arise within a determination period, before asking customers to pay higher costs, will support each business in delivering customer outcomes in the most cost-effective way.

In deciding whether it can manage the cost increase until the next price reset, a business should address:

- What cost reductions has it made (or could make), and what additional revenues has it generated that offset the costs?
- Can it re-prioritise other projects without sacrificing customer outcomes?
- Will incurring the costs today deliver better long-term customer outcomes?
- Can it absorb the costs while maintaining long-term profitability and financeability?

True-ups

If costs change materially during a determination period, businesses can apply for a true-up of costs at the next price review. The costs that the business will incur can then be recovered from customers in the following period.

Such ex-post true-ups address a situation where costs arise during the determination period and:

- The costs do not have an immediate impact on the business's ability to deliver services, but they cannot be borne by the business longer-term.
- The costs are assessable (to ensure that costs remain efficient).
- It is appropriate to pass additional costs to customers but, at the same time, waiting to recover the costs does not materially impact the cost reflectivity of prices.

As with cost pass-throughs, our preference is that true-ups are based on forecast efficient costs established before actual costs are incurred.

Targeted reviews and letters of comfort

In some cases, a business may be uncomfortable proceeding with new projects/spending while waiting for an IPART review. It may be concerned that IPART will determine the spending was inefficient, and not allow it to be recovered from customers in the next period. This lack of assurance could result in businesses inefficiently postponing investment.

In situations like this, we can:

- review the need for investment
- conduct a high-level review of the proposed expenditure
- provide either a letter of comfort (without binding a future Tribunal) or offer advice on the way the spending is likely to be perceived. If needed, the corresponding true-up will later be applied in the following period.

We consider it unlikely that letters of comfort will be a key feature of our regime. Given our new framework is encouraging businesses' decisions to be guided by customers, a business should have comfort from its customers (rather than the regulator) that they support the new spending. At the same time, many of our proposed changes support a shift where the revenue forecast we set is an envelope of expenditure to promote customer outcomes, rather than an allowance for specific projects.

Replacement of the price determination

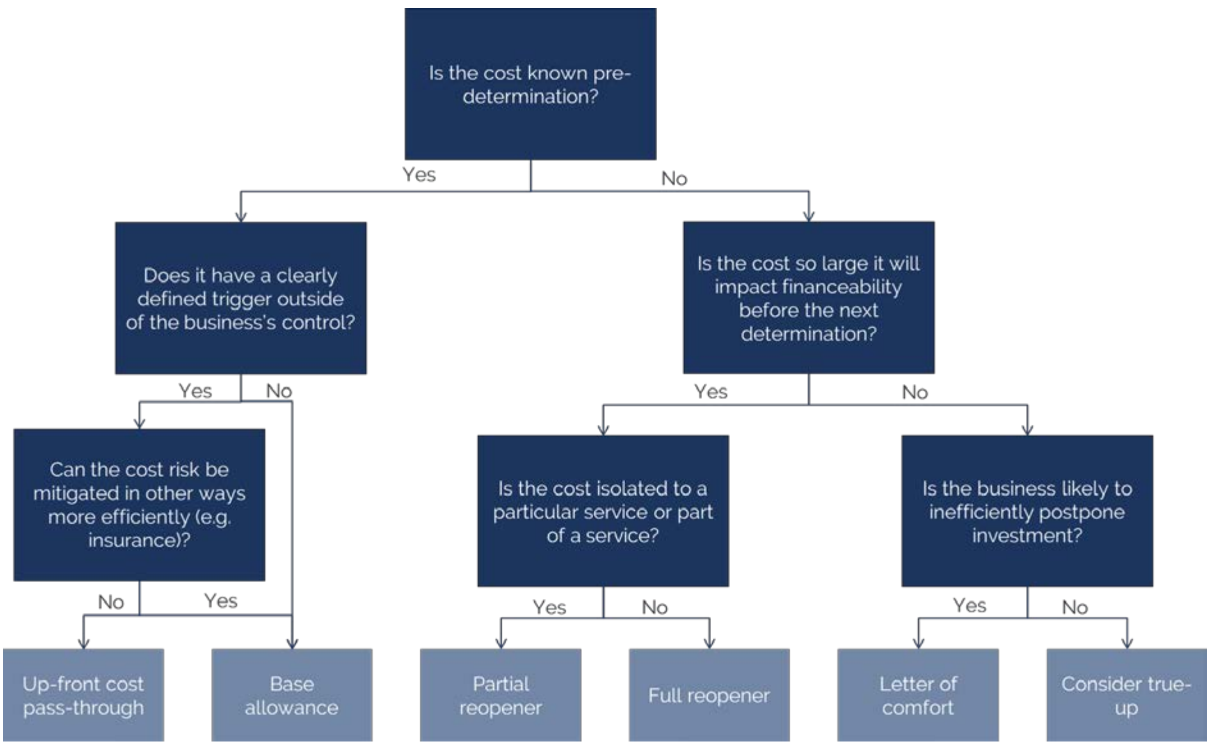
In circumstances where the business's ability to deliver services is materially affected, and it cannot wait for a true-up of efficient costs, and a cost pass-through has not already been set we can agree to partially or completely replace a current determination.

Proposing to re-open a determination has always been an option for businesses to propose and IPART to consider, but one that is rarely used, as it is a resource intensive process. We consider re-opening a determination to be a last resort solution reserved for those cases where unforeseen cost changes result in material impacts to a business's capacity to carry out its services, or in prices set during the determination being no longer cost reflective.

Businesses can also request a partial replacement of the determination if costs are restricted to specific elements of their services. We consider this effectively addresses the business's key request to have a mechanism to pass-through unforeseen costs that are outside their control, following a within-period IPART review of efficiency.

Appropriate scrutiny would be applied to requests for a partial or full re-opening of a determination. This would include considering both cost increases and any consequential savings of the unexpected circumstance. If requested, IPART would carefully consider the materiality and circumstances of a full or partial reopening of a determination, but would also consider and work within our legislative constraints for replacing or partially replacing a determination..

Figure 6.2 What tools are available to manage changing revenue needs?



6.2 We will consider other ways to manage the changing revenue needs of water businesses between price reviews

Sydney Water requested that IPART's regulatory framework create greater opportunities to manage revenue fluctuations between periods. Sydney Water provided a supplementary submission to our first Discussion Paper which suggested that IPART explore 3 tools that businesses can use to manage inter-period changes to revenue:[27]

1. accelerated depreciation
2. annuities
3. escrow accounts.

In this section we outline the specific circumstances where we consider that these 3 tools – as well as modest changes to asset lives – appropriately reflect the outcomes of competitive markets.

In summary, we consider providing more flexibility for each business to propose and justify a depreciation rate, to ensure that the costs recovered from current customers are cost-reflective and consistent with their usage of assets. Establishing, and periodically reviewing depreciation rates, should be the first tool to promote intergenerational equity.

However, occasionally, setting revenues within the range of reasonable depreciation rates may be insufficient to promote long-term customer outcomes. In those cases, we consider providing broad guidance where exploring different cost recovery options could achieve the right balance of intergenerational equity.

- **Accelerated depreciation** – used where there is an asset stranding risk.

  In a regulatory context, accelerated depreciation means depreciating an asset faster than its useful life. This means that current customers are paying for more of the asset than they use, because the business expects there will not be future customers.

  We will consider accelerated depreciation where there is a high risk of asset stranding. Asset stranding occurs when there is no use for an asset while it still works. In a competitive market a firm will only invest where it expects to recover the economic cost of the assets. This may mean that they will recover the cost of an asset over a shorter time period if they expect they can recover costs before they lose demand.

- **Annuities** – used where they can more evenly spread costs for a single asset business.

  An annuity is a financial product that produces a constant payment, spreading the costs evenly over determination periods. Unlike the building block approach, depreciation does not affect the returns of an annuity. This spreads the costs evenly across the asset's useful life. Relative to the building block model, annuities reduce costs to customers today and increase costs to future customers.

  We will consider proposals to use annuities for large investments, particularly where a business has a single asset or a dominant asset.

- **Escrow accounts** – used in rare circumstances.

  An escrow account involves over-recovering today's costs for use in the future. An escrow account works similarly to developer charges, where developers pay for the lifetime cost difference between the postage stamp price and the costs of servicing new development.

  Escrow accounts can be risky because if future costs do not materialise, current customers pay too much. On the other hand, if future costs do materialise, the business may need to finance and deliver large investments while under-recovering its costs. In other words, it needs to be credible today that the business will effectively ring-fence the revenues over multiple determination periods and retain the revenue to finance future costs.

  We may consider escrows in situations where:

  - actions today can be closely linked to future costs (i.e. polluter pays principle)
  - businesses can confidently calculate the future cost to reduce the risk of under- or over-recovery.

- **Asset life changes** – modest changes when in customers' interests.

  The RAB is unlikely to match the actual assets owned by a business because of the way we value asset bases, contributed assets and apply depreciation.

  The RAB simply reflects all costs that have not been recovered from historical or current customers, taxpayers or developers. We consider, for most regulated water businesses, there is an acceptable range of asset lives that could apply to the RAB. Businesses may propose and justify changes to asset lives within this range (as outlined in our 'Equitable and efficient cost recovery' principle).

  We will allow changes to asset lives (within a range) to smooth price changes between price periods. We expect to allow longer asset lives to reduce the impact of temporary increases in prices and shorter asset lives to reduce the impact of temporary decreases, where it promotes efficient and equitable outcomes for current and future customers.

7 Monitoring the performance of water businesses

Our framework is designed to support businesses that deliver ongoing improvements in performance to create long-term value for customers. We do this through a pricing review process where businesses make commitments to their customers, and through our compliance and enforcement role of operating licence obligations. We are implementing new monitoring tools to complement this process and keep businesses accountable for their performance they promise within the price review process. Specifically, we are:

- Requesting businesses to report to customers on their progress against the customer outcomes in their pricing proposal annually.
- Producing and maintaining an IPART dashboard that collates the information provided by each business, to provide stakeholders with comparable information across businesses.
- Establishing a Regulators Advisory Panel (RAP).
- Committing to review our framework after it has been implemented, and to continually refine and improve our regulatory approach.

How stakeholders have shaped our thinking

One of the goals of this review was to 'lift the performance' of the water sector. We consider that our proposals to increase the prominence of annual performance against customer outcomes will support this goal.

Stakeholders also told us that an issue they face is different regulatory bodies not coordinating and creating inefficiencies.[28] In response, we propose establishing the Regulators Advisory Panel, and include other government department and agencies such as the Department of Planning and Environment (DPE), NSW Health, and the EPA. Submissions to our Draft Report welcomed establishing the Regulators Advisory Panel.[29]

7.1 Water businesses will regularly report on their performance against customer outcomes

Final decisions

18. Each water business should publish its performance against customer outcomes annually and communicate this information to customers.

19. IPART will publish and maintain an online performance dashboard on water businesses' performance against customer outcome commitments.

We are asking each business to publish annual updates on their progress against the customer outcomes they include in their proposals. Each business should propose how it will communicate annual progress with customers, and we will agree on the form this will take as part of the pricing review.

The aim of this annual reporting is to maximise accessibility and visibility for customers. But we ask each business to think about how best to do this. For example, only putting the outcomes 'on the business's website' in a place that may be difficult for customers to locate might not be the most customer-centric approach.

Monitoring and communicating on progress against customer outcomes is a criterion for each business to meet as part of our 'continual improvement' principle.

In addition, we will produce a user-friendly online performance dashboard that tracks the businesses' progress against their outcome commitments. This approach ensures there is greater visibility and accountability about progress and lends itself to comparisons across like businesses.

The online dashboard will be easily accessible to all interested stakeholders. The intent is that it will contain current and past information for all price-regulated businesses on the grades that each business received for current and past pricing proposals, outcome commitment targets and progress against achieving those targets, and trends for operating expenditure and capital expenditure.

7.2 We will establish a Regulators Advisory Panel to consider regulation and compliance issues

Final decision

20. IPART will establish a Regulators Advisory Panel to promote better collaboration between regulators of NSW water businesses.

Our decision to establish a RAP to promote better collaboration between water regulators has received strong support from businesses and other regulators. Some businesses sought further engagement on the establishment of the RAP and the charter.[30] Our decision is to establish the RAP, and that the group:

- will meet at least twice a year
- is not a decision-making body, but a forum for regulators to coordinate efforts and maximise value for customers
- will include, as regular members, the EPA, NSW Health, and IPART
- include scope for other regulators, the DPE and customer advocacy groups to participate as guest members of the panel[f]

[f] We note that PIAC suggested customer advocacy groups be included in the panel, however our decision is to invite these groups along to meetings where they will generate the most customer value rather than by default. This is because we would expect businesses to have already thoroughly engaged with these groups before bringing an issue to the RAP.

- will produce high-level minutes from each discussion that are published on the IPART website.

We consider the RAP will formalise ongoing communication and collaboration between regulators and policy makers and could bring about significant benefits. It could promote:

- **General informational benefits** – each member will gain a clearer picture of the broader regulatory process and system, and the decisions being taken by other regulators. It promotes consistent and unbiased information being provided by the utility to all regulators.
- **Improve long-term planning** – policy makers and regulators have a shared social licence to ensure that water businesses deliver services that are affordable, respond to the challenges of climate change and promote positive environmental outcomes. However, there are potential trade-offs to be made to balance these objectives. The RAP could boost understanding of these tensions and promote the use of cost benefit analysis which incorporates non-financial benefits and costs, in making any of these trade-offs.
- **Support innovation in the sector** – the RAP could provide a forum to draw on the learnings of other members, as well as developments in other jurisdictions and regulated sectors.
- **Support IPART's decision-making process** – the RAP could provide useful insights in the lead-up and during our pricing review process. Businesses could test new and better ways of meeting regulatory requirements.

7.3 We will review and continually improve our framework

Final decision

21. IPART will review and update the 3Cs framework every 5 years. This will include an independent review of the framework, after the first round of reviews under the new framework.

We recognise that our framework needs to continually improve and evolve, to reflect better ways of delivering on customers' changing preferences, and reflecting the lessons from IPART's and other regulators' frameworks.

We will review our framework for regulating the water sector every 5 years. We anticipate doing so after the completion of each round of pricing reviews under the new framework, with a transparent and consultative review process. We also will review our Weighted Average Cost of Capital (WACC) method outside of the pricing review process.

These framework reviews will look at how successfully IPART and the businesses have promoted customer outcomes under the framework, reviewing which elements of the framework have worked well and which ones have not, and identifying and implementing improvements to the framework.

While we will consult with stakeholders on the focus areas for future framework reviews, we expect to:

- share learnings and improve how customer outcomes are promoted under the framework
- review and update our 3Cs guiding principles
- over time, identify improvements to the design of financial (and other) incentives in the framework, once the schemes have a had chance to operate
- over time, provide more confidence and clarity about what elements of the review process we streamline as businesses demonstrate they are delivering customer value.

For example, we could confirm whether Advanced and Leading proposals have an option to avoid a full regulatory review if they have achieved their proposed customer outcomes and cost efficiencies over previous period under the 3Cs framework, and provide evidence they are likely to achieve at least a minimum level of cost efficiency into the future.

We will also commission an independent review of our new framework after first round of reviews.

1 Sydney Water submission to IPART Draft Report, August 2022, p 3.
2 Hunter Water submission to IPART Position Paper, October 2020, p 1.
3 Energy and Water Ombudsman submission to IPART Draft Report, August 2022, p 2.
4 Public Interest Advocacy Centre submission to IPART Position Paper, November 2020, p 1.
5 Sydney Water submission to IPART Position Paper, October 2020, p 2.
6 Essential Water submission to IPART Draft Report, August 2022, p 1.
7 Sydney Desalination Plant submission to IPART Draft Report, August 2022, p 2.
8 Central Coast Council submission to IPART Position Paper, October 2020, p 10.
9 WaterNSW submission to IPART Draft Report, August 2022, p 10.
10 Water Services Association of Australia submission to IPART Position Paper, October 2020, p 3.
11 Essential Services Commission, Water pricing framework and approach, October 2016.
12 AER, Retail markets.
AER, Better resets handbook, December 2021, pp 4-23.
AER, Review of incentive schemes for regulated networks, December 2021.
13 Ofwat, Delivering Water 2020: Our final methodology for the 2019 price review, December 2017, p 20.
Ofwat, Annual performance report.
Ofwat, Initial assessment of plans.
Ofwat, PR19 initial assessment of plans: Overview of company categorisation, January 2019, p 10.
Ofwat, C-Mex and D-Mex – 2020-21 results, November 2021.
Ofwat, Delivering Water 2020: Our methodology for the 2019 price review Appendix 7, December 2017, p 4.
14 See for example Hunter Water submission to IPART Draft Report, August 2022, p 15.: and Sydney Water submission to IPART Draft Report, August 2022, p 14.
15 Sydney Water submission to IPART Draft Report, August 2022, p 37.
16 Public Interest Advocacy Centre submission to IPART Draft Report, August 2022, p 2.
17 For example, see Sydney Water Submission to IPART Draft Report, August 2022, p 4.: and Hunter Water Submission to IPART Draft Report, p 12.
18 See for example Sydney Water submission to IPART Draft Report, August 2022, p 3: WaterNSW submission to IPART Draft Report, August 2022, p 17.
19 WaterNSW, Submission to IPART Draft Report, August 2022, p 17.
20 IPART, Review of Prices for Sydney Water – Final Report, June 2020, p 58.
21 See for example Sydney Water submission to IPART Position Paper, October 2020, p 5.
22 See for example Hunter Water submission to IPART Draft Report, August 2022, p 16.: and Sydney Water submission to IPART Draft Report, August 2022, p 40.
23 See for example Sydney Desalination Plant submission to IPART Draft report, August 2022, p 4: and WaterNSW submission to IPART Draft Report, August 2022, p 19
24 Business.gov.au, Help us solve government RegTech challenges, August 2022
25 See for example Hunter Water submission to IPART Discussion Paper, June 2021, p 5.
26 See for example Sydney Desalination Plant submission to IPART Draft report, August 2022, p 9-10: and Hunter Water submission to IPART Draft Report, August 2022, p 22-23.

[27] Sydney Water response to IPART's comment on our consultation process, September 2021, p 2.
[28] See for example Central Coast Council submission to IPART Position Paper, October 2020: p 9, and Hunter Water submission to IPART Position Paper, October 2020, p 15.
[29] See for example Hunter Water submission to IPART Draft Report, August 2022, p 22: and Sydney Water submission to IPART Draft Report, August 2022, p 10.
[30] Sydney Water submission to IPART Draft Report, August 2022, p 10.

Appendices

A Modelling simplifications

The cost building block models we use to set prices have become increasingly complex over time. In the Draft Technical Paper, we indicated our intention to simplify modelling in a number of ways that would not compromise the overall integrity of the prices we set (or the incentives we provide to promote better outcomes). We held a workshop, received submissions to our reports, and had further follow-up conversations with businesses.

After listening to stakeholders, we have decided to implement the modelling simplifications set out below.

A.1 Fewer RAB categories and a different approach to asset lives for only the urban water businesses.

In our Draft Technical Paper we proposed to reduce the number of asset categories per service and provide more flexibility to water businesses to propose appropriate asset lives. Under this approach, businesses would propose asset lives at each review, for example using an asset register or their own multi-category RAB. We have decided to apply this approach to only the urban water businesses.

How stakeholders have shaped our thinking

Only the urban water businesses expressed support for fewer RAB categories. Hunter Water, Sydney Water and Essential Water support our new approach although Sydney Water plans to use its current RAB breakdown to estimate asset lives for the upcoming review and investigate the option of using its asset register for future reviews. [31] Central Coast Council did not make a submission, but in effect adopted this approach during the 2021 review of their prices.

SDP wants to retain its current RAB asset categories on the grounds that it has a relatively small number of asset categories (9) and calculating depreciation by asset category is more transparent.[32]

WaterNSW does not support a mandated move to fewer asset categories and wishes to maintain the current methodology for all services (other than WAMC), [33] Further, it plans to expand the number of categories for Rural Valleys to separately account for short lived and long-lived assets, as flagged in the 2021 report.[34] WaterNSW is of the view that the amount of effort required to calculate asset lives would negate any benefits from simplification. In addition, they believe it would be less transparent and less cost reflective.[35]

Final decision

22. We will reduce the number of asset categories and adopt a different approach to asset lives for only the urban water businesses.

Urban water businesses will only have 2 categories per service, one for all depreciating assets and the other for non-depreciating assets.

For these businesses we will no longer calculate remaining asset lives. Instead, for depreciating assets the business will propose:

- The remaining life of existing assets based on evidence of economic lives, for example from its asset register or its preferred breakdown of assets.
- The expected life of capital expenditure (net of cash capital contributions) for each year. The weighted average asset lives will likely vary from year-to-year depending on the mix of items in the capital expenditure program.

The business's proposed asset lives will then be analysed by IPART at each review.

We will not change the number of RAB categories for SDP or WaterNSW at this time. We will work with WaterNSW to implement additional asset categories for short-lived assets without unnecessary complexity.

What was our previous approach?

Many of the businesses we regulate have a large number of asset categories per service. For example, Sydney Water has 20 asset categories for potable water (which includes sub-categories for its 3 finance leases). Including provisions for RABs for discretionary expenditure, Sydney Water in total has 60 asset categories and Hunter Water has 41 categories. WaterNSW (Greater Sydney) has 13 categories and SDP has 9.

What were the benefits of our previous approach?

The main benefit, and indeed the purpose of multiple asset categories for each service, is to estimate depreciation with some degree of accuracy. Grouping assets with similar asset lives provides the additional benefit that, once established, asset lives tend to become – at one level – fairly uncontentious during a review because we (and the businesses) can calculate remaining lives at the end of a determination period with some degree of accuracy.[g]

What were the problems with our previous approach?

While our previous approach has advantages, it also means

- Large, complex models and information requests.
- Multiple sets of allocations - All capital expenditure, RAB adjustments, cash capital contributions and asset disposals need to be separated by asset category. For example, we assess capital expenditure by project and with reference to the driver. However, after the project assessment either IPART or the business need to complete another set of allocations to categorise the capital expenditure into asset categories.

[g] The cost building block model on our website shows how we calculate remaining asset lives

- The potential for spurious accuracy - Calculating remaining lives in asset categories inevitably involves a degree of inaccuracy. The inaccuracy may be compounded as asset lives are carried forward from one review to the next.

What are the benefits or our decision for the urban water businesses?

Using only 2 asset categories per service will simplify the modelling and eliminate the need for complex cost allocations to asset categories. This change will save a substantial amount of time and effort.

Importantly, we consider that this approach could lead to depreciation rates that reflect the actual 'consumption' of assets more accurately than under our previous approach. For example, re-setting (rather than calculating) the remaining lives of existing assets at each review means the business can propose asset lives that are weighted by depreciation rather than asset values.

Box A.1 Average asset lives and regulatory depreciation

The business has a list of the assets that it uses to provide a regulated service, for example a fixed asset register (FAR) or a list of the gross and depreciated value of each asset. Using this list and asset life data for each individual asset, there are 2 possible ways of deriving a weighted average asset life, namely:

1. Weight by depreciation - a weighted average asset life based on the relative depreciation of each of the individual assets.

2. Weight by value - a weighted average asset life based on the relative values (the recorded depreciated or gross replacement costs) of each of the individual assets.

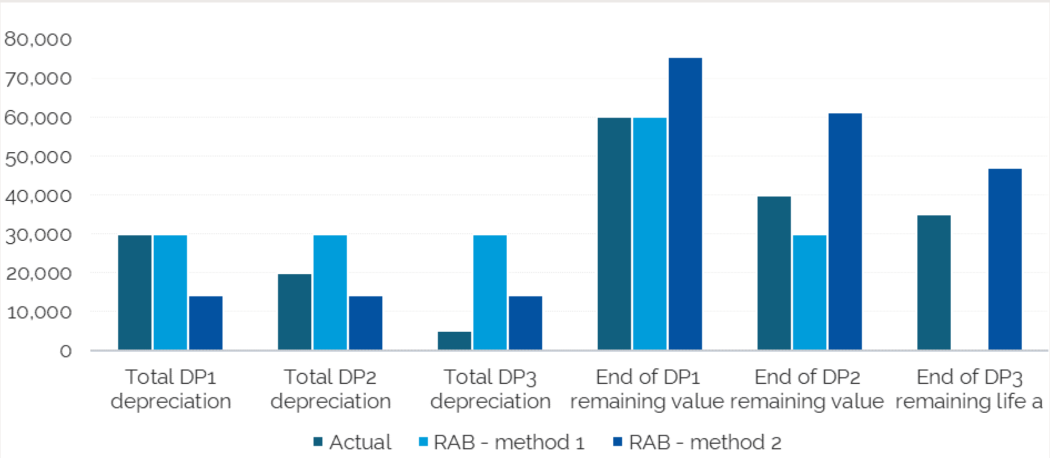
Method 1 produces the most accurate reflection of aggregate depreciation **in the short term**. But it will overstate the rate at which a group of assets with different asset lives depreciates if it is not regularly reset. This will arise due to short-lived (and therefore relatively fast depreciating) assets expiring, and longer lived (or slow depreciating) assets remaining. If the weighted life of the remaining bundle of assets is not regularly re-set with reference to the actual lives of the underlying assets the more slowly depreciating assets depreciate more quickly than they should.

The following simple example illustrates the issue. Assume a business has two assets, respectively worth $50,000 and $40,000. Asset 1 has a life of 50 years and Asset 2 has a life of 8 years. As shown in the table below, method 1 gives an average life of 15 years, and method 2 gives and average life of 31 years.

Box A.1 Average asset lives and regulatory depreciation

Asset	Opening Value ($) a	Asset Life (years) b	Annual depreciation ($) c = a/b	Method 1 average asset life (years) d = a/c	Method 2 average asset life (years) e = (a1xb1 + a2xb2)/(a1+a2)
Asset 1	50,000	50	1,000	50	na
Asset 2	40,000	8	5,000	8	na
Total/average	90,000	na	6,000	15	31

The figure below shows that method 1 accurately calculates RAB depreciation for the first 5-year determination period (DP1). However, without being reset the method over-estimates depreciation for DP2 and DP3. On the other hand, method 2 under-estimates depreciation for DP1 and DP2 and over-estimates it for DP3 and beyond. To date we have used method 2 to set initial asset lives because when we calculate (rather than re-set) the remaining asset life at the end of each DP, it provides a more reasonable depreciation profile over the (actual) life of the asset base.



A.2 Remove modelling requirement for discretionary expenditure

Under our previous approach to regulating the water businesses, discretionary expenditure was incurred when a business invested in projects that provided services or achieved outcomes beyond the standards/obligations in the business's operating licence or other regulatory requirements. Under that approach, we were required to maintain a RAB and calculate and notional revenue requirement (NRR) and price for each separate project.

All stakeholders that commented on our new framework expressed support for our intention to remove the modelling requirements for discretionary expenditure.[36]

Final decision

23. We will remove the modelling requirement for discretionary expenditure.

Our 3Cs approach better addresses discretionary expenditure. The framework is designed to provide incentives for the business to propose services/outcomes that customers want at prices they are willing to pay, and control costs in the long-term interest of customers. Under the 3Cs framework, there is no longer a need for separate RABs, NRRs and prices for discretionary projects.

We will roll the discretionary RABs into the broader water, wastewater and stormwater RABs and include operating expenditure within the relevant opex category of water, wastewater and stormwater services

A.3 A simplified asset disposals policy

An asset disposals policy addresses the risk that customers are worse off if the business:

- has not disposed unneeded assets, or
- has disposed assets for short-term financial gain at the expense of service quality and/or higher future costs.

The value of asset disposals we deduct from the RAB is referred to as the 'customer share' of the asset sale value. Typically, asset disposals account for around 0.1% of the RAB. Asset disposals as a proportion of RAB peaked at 0.2% for Sydney Water (at height of its land sales) and 1% for Hunter Water (when it sold its head office).

In our Draft technical paper we proposed to simplify our approach by sharing the net revenue received from **all** asset sales 50:50 between customers and shareholders, where net revenue means revenue net of sales and rehabilitation costs and capital gains tax. We would allow exceptions on a case-by-case basis, subject to materiality of the impact on prices. We have decided to adopt this approach.

How stakeholders have shaped our thinking

Businesses broadly expressed support for a simplified asset disposals policy.[37] However, Sydney Water requested a sharing ratio of 42:58 (in its favour), which is the ratio we set for pre-line-in-the-sand (LIS) 'significant' disposals under our 2018 policy[38] and which we have applied to most of Sydney Water's land sales since 2018[h] The ratio represents the value of the RAB as a proportion of the depreciated replacement cost (DRC) when the LIS RAB was established (2000).

We consider a 50:50 share ratio is more appropriate for the following reasons:

[h] Under our 2018 policy all land sales are deemed 'significant' because they attract capital gains tax.

- On balance the businesses are no worse off under our recommended approach over the long term because:
  - Under our 2018 policy the businesses were required to pay capital gains tax (CGT) out of their share of revenue (58% for Sydney Water), In contrast, under our proposed policy customers pay CGT because we subtract the amount from disposals revenue before applying the sharing ratio.
  - Under our 2018 policy, 100% of revenue from 'non-significant' disposals (net of selling costs) was allocated to customers and businesses kept 0%. Under our recommended policy customers get 50% and the business keeps 50%. Most disposals fall into this category, except land sales and Hunter Water's head office sale in 2014.
- Using the 2000 RAB:DRC ratio implicitly assumes that all disposals are pre-LIS assets, which is not true and will become increasingly less so over time.
- The RAB:DRC ratio is not an exact measure of the 'true' regulatory value of pre-LIS disposals. For example, had we established Sydney Water's RAB in 2002 (using the same discounted cash flow methodology that we used in 2000) the RAB:DRC ratio would have been in the order of 35:65 following a 34% increase in the DRC due to a revaluation.
- If we adopted a 42:58 ratio for Sydney Water, we would need a bespoke ratio for each business. This would introduce unnecessary complexity given the materiality of disposal and the provision under our recommended approach for exceptions on a case-by-case basis.

We estimate that applying our new policy to Hunter Water's head office sale would have increased their NRR by about 0.1% over the 2016 determination period, and a typical residential customer bill by around $1 per year. We intend to treat once-off disposals of this magnitude as potential exceptions.

Final decision

24. IPART will
    - share revenue from disposals (net of selling and rehabilitation costs and capital gains tax) 50:50 between customers and shareholders
    - allow exceptions on a case-by-case basis subject to materiality.

We will deduct the value of asset disposals from the RAB (i.e. the customer share) as follows:

- As a default, adopt a 50:50 sharing ratio for the proceeds from all asset sales (net of efficient asset selling, capital gains tax and rehabilitation costs). This will apply to all assets, regardless of when they were acquired or whether they were operational when the RAB was established.
- Consider exceptions to the default only if the business or IPART can demonstrate reasons for doing so and if there is a material impact on prices.
- Continue to not adjust the RAB for routine write-offs and write-downs. These reflect accounting practice rather than underlying regulatory values.

We consider this approach is proportionate and balances simplicity and risk. The 50:50 sharing ratio is consistent with Ofwat's approach to land sales,[39] Sydney Water's 2015 proposal for land sales[40] and our approach to sharing rental revenue. Our treatment of capital gains tax is consistent with our approach to tax on cash capital contributions.

We will provide guidance in the handbook on exceptions and materiality thresholds.

What were the problems with our previous approach?

Our current (2018) asset disposals policy is complex, not always well understood, and potentially difficult to implement. It was developed in response to Sydney Water's and Hunter Water's land sales programs and Hunter Water's head office sale.

Our 2018 policy distinguishes between significant and non-significant assets. A significant asset is an asset/class of assets with a value more than 0.5% of the RAB, or one that would attract CGT. There are 3 types of disposals with different rules under each:

- Significant pre-LIS asset: the customer's share of the sales value (net of efficient asset selling costs and rehabilitation costs) to be deducted from the RAB equals the ratio of RAB to the DRC at the time the RAB was established. This is around 40% for most businesses. In practice, this rule applies to the sale of land purchased before the RAB was established.
- Significant post-LIS asset: establish a regulatory value of the asset by tracking actual capital expenditures and adjusting for depreciation and indexation. In practice, we have applied this approach only to the sale of Hunter Water's head office and the sale of a small parcel of Sydney Water's land.
- Non-significant asset: allocate customers 100% of the sale value (net of efficient asset selling costs). In practice, all asset disposals have fallen into this category, except the sale of Hunter Water's head office and land sales.

The distinction between pre- and post-LIS assets has an arbitrary impact on incentives. For example, selling 2 otherwise identical parcels of land should not have a different impact on the RAB and future revenues.

Also, our previous policy does not adjust the RAB for significant pre-LIS assets if a business can prove the asset was non-operational at the line in the sand. Providing 'proof' is open to interpretation and has led to a wide scope of claims and a disproportionate amount of time and effort for an immaterial impact on prices.

A.4 A standardised approach to working capital

We include a working capital allowance in the NRR so businesses can recover the opportunity cost incurred due to the time between providing regulated goods/services to customers and receiving payment for those goods/services (net of benefits received due to a delay in making payments). The working capital allowance typically represents less than 1% of the NRR.

We use the following formulas to calculate the working capital allowance:

Net working capital = receivables – payables + inventory + prepayments

Working capital allowance = net working capital x nominal WACC.

In our Draft technical paper, we proposed to simplify the calculation of receivables by reverting to our pre-2018 working capital policy. Specifically, we proposed to calculate receivables with reference to only the number of days in the billing cycle (and no longer consider the number days customers are given to pay their bills or the practice of billing fixed charges in advance of service delivery).[i] We have decided to retain our 2018 policy except that we will standardise how we calculate 'days to pay' and 'days billed in advance'.

How stakeholders have shaped our thinking

We received mixed responses to our proposed working capital simplifications. Hunter Water supported the simplification,[41] and WaterNSW did not comment.

SDP opposed our simplification on the grounds that it underestimates their working capital requirements "owing to SDP's contractual arrangements with its customer, Sydney Water", under which Sydney Water has 30 days to pay.[42] Adopting the pre-2018 working capital policy would amount to a reduction of about 0.4% in SDP's NRR. Sydney Water opposed the simplification on the grounds of accuracy and pointed out that most of the work to embed the updated policy in modelling has already been done.[43]

The main aim of adopting the pre-2018 policy is to avoid spending a disproportionate amount of time on working capital. It also aimed to create greater symmetry between receivables and payables, (where the latter is measured by the standard contractual number of days the businesses are given to pay their bills, usually 30 days).

Given that most of the work has already been done to embed the approach in modelling, we consider our aims can still be achieved by retaining the key elements of our 2018 policy but standardising the 2 additional parameters for receivables that we added in 2018 (i.e 'days to pay' and 'days billed in advance'). Calculating the 'actual' number of 'days to pay' and 'billed in advance' for each business can be a time-consuming process, is inconsistent with our approach to payables and tends towards a cost pass-through rather than a benchmark efficient approach. Retaining 'days to pay' and 'days billed in advance' addresses both SDP's and Sydney Water's concerns.

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[i] Sydney Water, Hunter Water and Central Coast Council bill fixed charges in advance.

Final decision

25. We will update our 2018 working capital policy to:
    – Set 'days to pay' at the standard the number of days customers are given to pay their bills.
    – For businesses that bill fixed charges in advance, set the number of days billed in advance to 50%` of the number of days in the billing cycle.

We consider setting 'days to pay' the standard the number of days customers are given to pay their bills (usually 21 or 30 days) – rather than the 'actual' number of days between reading the meter receiving payment. – will both save time and create greater symmetry between payables and receivables.

For businesses that bill fixed charges in advance, our decision (i.e. to set the number of days charged in advance to 50% of the number of days in the billing cycle) is consistent with assuming the business reads the meters and bills customers on a rolling basis evenly throughout the year, but levies access charges for uniform quarterly periods.

We consider these changes will provide sufficient revenue for a benchmark efficient business to meet its working capital requirements.

What were the problems with our previous approach?

Our previous approach was complex and could be time-consuming, mainly due to how we calculated receivables.

In 2018, we revised how we calculate receivables.[44] In addition to estimating receivables based on the length of the billing cycle, we also allowed for:

- Further delays in receiving payment, which mainly occur because customers are given time to pay after receiving a bill.
- Billing fixed charges partly in advance of delivering services.

These additions add complexity and are not always well understood, which can divert attention from more material issues. The purpose of the additions was to more accurately match a business's cash flows. However, the accuracy is not symmetrical between debtors (receivables) and creditors (payables). Our approach to payables is the simple and standard 30 days of payment, which does not account for other scenarios.

A.5 Adopt a 50:50 sharing ratio for the profits from non-regulatory activities

Non-regulatory revenue is revenue from unregulated services using regulated assets. Non-regulatory revenue from all sources is less than 0.5% of the NRR.

Our previous approach was to share non-regulatory revenue 50:50 between customers and shareholders as a default and treat exceptions on a case-by-case basis. In the Draft Technical Paper we proposed to adopt a 50:50 revenue sharing ratio between customers and shareholders for all non-regulatory revenue. We have decided to instead adopt a 50:50 **profit** sharing ratio and allow for exceptions on a case-by-case basis subject to materiality and a very strong case.

How stakeholders have shaped our thinking

There was no support for our draft decision, on the grounds that potentially worthwhile projects would not be viable, including projects that support action on climate change or a circular economy. We agree with this assessment.[45]

Sydney Water proposed a set of revenue sharing rules based on the type of project and the incremental costs as a share of revenue. [46] A key feature of their proposal is that a 50:50 ratio would apply to projects where incremental costs are less than 10% of revenue, and a 5:95 ratio would apply to other qualifying projects. We consider these rules would be unfair to customers. For example, as shown in **TableA.1**, if incremental costs were 20% of revenue the profit would be 80% of revenue. The business would retain 94% of profit while customer would receive only 6%. The profit share would be equal only for projects where the incremental costs were 90% of revenue. In addition, Sydney Water's proposed approach could provide a strong incentive for businesses to over-estimate the costs of marginal projects to push them into 5:95 sharing category.

Sydney Water is of the view that some non-regulatory revenue would be a by-product of least-cost options for regulated costs, for example renewable energy projects where excess energy is sold to the grid. Sydney Water proposed that the costs of these projects are include in regulated costs and 100% of non-regulatory revenue is shared with customers. We consider this a reasonable proposal.

Sydney Water further proposed to not share any revenue from projects with an income stream of 5 years or less. We see no reason to allow the business to retain 100% of the revenue from these activities.

Table A.1 Non-regulatory revenue sharing under Sydney Water's proposed rules

	Project A	Project B	Project C	Project D	Project E	Project F
Incremental costs as share of revenue	8%	10%	20%	50%	80%	90%
Revenue sharing ratio	50:50	5:95	5:95	5:95	5:95	5:95
Revenue ($)	100	100	100	100	100	100
Incremental costs ($)	8	10	20	50	80	90
Profit ($)	92	90	80	50	20	10
a. Customer share of **profit** (=share of revenue) ($)	50	5	5	5	5	5
Business share of **profit** (= share of revenue -incremental costs) ($)	42	85	75	45	15	5
Business share of profit (%)	46%	94%	94%	90%	75%	50%

Final decision

26. For non-regulatory revenue we will
    – Apply a sharing ratio of 50:50 to the profit from non-regulatory activities (i.e. revenue net of incremental costs) and allocate 100% of losses to shareholders.
    – Allow for exceptions:
        a. on a case-by-case basis, subject to materiality and a very strong case
        b. for efficiency projects where majority of the benefit is internal savings and non-regulatory revenue is part of the business case for why it is the most efficient option. In these cases, the costs are included in regulated costs and 100% of non-regulatory revenue is allocated to customers.

In the Draft Technical Paper we did not propose to share revenue net of incremental costs (i.e. profits) because we had ruled out this approach for the biobanking scheme on the grounds that doing so "would substantially increase the regulatory burden. IPART would need to assess the prudency and efficiency of all Scheme participation costs to derive a profit balance."[47] Instead, we applied a 10:90 revenue sharing ratio and thereby avoided the need for detailed information on costs. But to apply Sydney Water's proposed approach we would need information on incremental costs anyway in order to verify which sharing rule applies to each project and when.

The over-arching objective of a policy on non-regulatory revenue is to provide incentives to the business to make efficient use of regulated assets so that both the business and customers benefit. This objective is achieved by a policy that:

- Provides fair compensation to the parties (i.e. customers) for the RAB and overhead support used in providing the service, and to the business in undertaking the non-regulated activities.
- Is simple to implement.
- Provides certainty of regulatory treatment to the business to assist in project planning and project approval.

We consider the best way to achieve our objective is to apply a sharing ratio of 50:50 to all non-regulatory revenue net of incremental costs (i.e. applying the sharing ratio to the profits). But where the activity incurs a loss, shareholders should carry the loss because customers should not bear the risk of loss for activities over which they have no control and from which they do not directly benefit.

With regard to the regulatory burden of profit sharing, we consider a proportionate approach to assessing costs and revenues would be appropriate given the materiality of non-regulatory revenue. To achieve this, we would require the business to provide information on the revenues and incremental costs[j] of each scheme. We would reserve the right to scrutinise the information in detail should we consider it necessary but expect the need for scrutiny would be the exception rather than the rule (similar to the 'by exception' approach to ex-post capex reviews).

We will work with the businesses to develop the details of how to implement profit sharing and will include guidance in the handbook based on the outcomes of our consultation. We will apply this approach from the start of the next determination period.

What were the problems with our previous approach?

Businesses are concerned about the incentive effects of our default 50:50 revenue sharing ratio which has led to a case-by-case approach to exceptions. This approach risks imposing a high regulatory burden on both the businesses and IPART because there is a strong possibility that there will by many requests for exceptions, each of which in effect would be a mini-review. Our previous approach also imposed very detailed information requirements, modelling and proposals in pricing submissions. The business and IPART spent a disproportionate amount of time and effort for a small impact on prices. In addition, a case-by-case approach creates uncertainty for the business and makes planning difficult.

A.6 No decision on a pre-tax WACC for businesses that do not do tax accounting

In 2012, we adopted a post-tax WACC because a pre-tax WACC tends to overestimate the tax a business pays. For businesses that do tax accounting, we obtain forecasts of tax depreciation based on businesses' existing financial modelling of tax depreciation. However, WAMC and CCC do not do tax accounting. To calculate a post-tax WACC for WAMC and CCC we calculate a tax asset base (TAB) to estimate tax depreciation.

For businesses that do not do tax accounting, in our Draft Technical Paper we proposed to use a (real) pre-tax WACC with an effective tax rate roughly based on a nominal cost of debt. The resulting tax provision is unlikely to be less reliable than our existing approach, and it could in fact be more reliable over time.

[j] For example, we would require the businesses to provide information on incremental: operating costs; capital expenditure; cash capital contributions and grants; annuities or return on assets plus depreciation and underlying WACC and asset life assumptions; income tax liabilities; and avoided cost claims.

As a second-best option, we proposed in our Draft Technical Paper to use RAB depreciation (instead of using a TAB) to calculate tax depreciation.

The impact on prices of adopting either of these approaches would be small. The tax allowance typically accounts for around 2-4% of the NRR.

We received no submission or other feedback on this proposal.

Final decision

27. We will not make a decision at this time on using a pre-tax WACC for businesses that do not do tax accounting.

We have investigated alternative ways to achieve our intended outcome, which is to avoid the need to calculate a TAB. However, we need more time for further modelling and consultation. Our default position is no change to our existing approach, noting that the modelling will be simpler anyway because we will have few RAB (and therefore TAB) categories.

What were the problems with our previous approach?

In summary, we conduct detailed modelling for little benefit. The TAB is like the RAB in structure, but with some important differences. We did not have an accurate basis on which to set the initial TAB so we simply set it equal to the RAB. Since the TAB is not indexed, over time it becomes increasingly small relative to the RAB, therefore the tax allowance becomes larger, all other things being equal. Also, we do not have an accurate basis on which to reset remaining tax lives. Therefore, remaining asset lives becomes increasingly unreliable as we recalculate them at the end of each determination period or re-set them with reference to RAB asset lives.

A.7 Simplify WAMC modelling

WAMC modelling has become disproportionately complex over time. In the Draft Technical Paper we indicated our intention to fundamentally re-think WAMC modelling.

How stakeholders have shaped our thinking

In its submission WaterNSW did not specifically comment on WAMC modelling but requested a streamlined framework.[48] In further discussions, it has express support for (far) fewer RAB asset categories. The extent of additional simplification will depend largely on whether WAMC simplifies its pricing structures.

The Natural Resources Access Regulator (NRAR) and DPE have indicated their support for simplified modelling.

Final decision

28. We will simplify WAMC modelling

We will continue to work with the WaterNSW, DPIE and NRAR to simplify WAMC modelling.

What were the problems with our previous approach?

WAMC prices involves 3 models, with a combined total of around 90 separate RAB and TAB roll forward calculations, and 45 separate NRRs. Also, these calculations are performed after costs have been allocated to water sources and valleys in a process that is complicated and not transparent. The modelling is further complicated by pricing structures, and complex minimum bill calculations.

B Glossary

Term	Definition
3Cs	The 3 pillars of our new framework: Customer, Cost, and Credibility. The 12 principles we use to grade businesses' proposals are grouped under these pillars.
Assessment tool	Guidance material to assist businesses preparing pricing proposals. It sets out, for each of the 12 principles in the framework, the key considerations IPART is going to make when assigning a grade to a proposal.
Base-Step-Trend approach	The approach IPART will use when setting operating expenditure allowances. 'Base' refers to the efficient recurring expenditure required each year, calculated from recent past data. 'Step' refers to changes in expenditure caused by new requirements or new processes. 'Trend' refers to predictable changes in expenditure over time due to known factors such as demand growth or inflation
Building blocks model	IPART's standard method for calculating a business's required revenue. Costs are broken down into five components to establish the amount of revenue needed to recover them.
Cap-and-collar	Cap on the maximum amount of benefits to be paid out through financial incentive schemes.
Capital Efficiency Sharing Scheme (CESS)	An incentive scheme to provide water businesses with a fixed share of any efficiency gains (or losses) associated with capex during a regulatory period.
Carve-out	Mechanism to allow businesses to exclude some uncontrollable costs from the calculation of capital expenditure incentive schemes.
Cost pass-through	Tool to allow businesses to pass some costs directly to customers within the determination period, under limited circumstances.
Customer	In the context of this report, 'customer' refers to direct bill payers as well as end users who might not be in a direct paying relationship with a water business (for example, an occupant or tenant of a serviced property).
Determination period	The period of time over which a determination of maximum prices applies.
Discount factor	The factor used to modify an annual amount to convert it to net present value terms.
DPE	Department of Planning and Environment in New South Wales.
Early engagement	Opportunity for businesses to engage with IPART one to two years before submitting their proposals.
Efficiency Benefit Sharing Scheme (EBSS)	An incentive scheme to provide water businesses with a fixed share of any efficiency gains (or losses) associated with opex during a regulatory period.
Efficiency factor	Factor applied to a business's forecast expenditure, when appropriate, to adjust it for ongoing productivity improvements.
EPA	Environment Protection Authority, the primary environmental regulator for New South Wales.
ESC	Essential Services Commission, the independent regulator of essential services in Victoria.
Expenditure review	IPART's method for reviewing a business's expenditure to ensure customers are only paying efficient costs.
Financial incentives	Mechanisms to adjust a business's revenue requirement based on its performance, for examples by rewarding the quality of a proposal (ex-ante incentives) or realised improvements in efficiency (ex post incentives).
Handbook	Guidance material IPART is developing in consultation with water sector stakeholders, to provide information on how to implement the new framework succesfully. The handbook will be released after the Final Report, and it will be a living document to be continuously updated.
Incentive payments	The amount calculated through the application of an incentive scheme that is used to modify the revenue requirement in a subsequent regulatory period.
IPART Act	The *Independent Pricing and Regulatory Tribunal Act 1992,* which establishes IPART's regulatory role and functions in New South Wales.

Term	Definition
LIS	Line in the sand. The LIS 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.
Net Present Value (NPV)	The discounted value of a stream of benefits (or costs) taking into account the time value of money.
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..
Outcome Delivery Incentive (ODI)	An incentive scheme to provide financial benefits (penalties) for achieving (not achieving) customer agreed outcomes.
Price controls	Methodologies used by water businesses and the regulator to set prices charged to customers. Main examples are price caps, and revenue caps.
RAP	Regulators Advisory Panel
Regulatory Asset Base (RAB)	Calculated as the economic value of all assets the business owns. The RAB is used as basis to calculate the revenue we provide to businesses in our determinations.
Regulatory period	The period of time over which a determination of maximum prices applies.
Re-opener	Option to reopen a determination and replace it partially or entirely. This is a last resort solution in case unforeseen cost changes materially impact a business's capacity to carry out its services.
Revenue requirement	Amount of revenue a business should recover from customers to cover its costs, as calculated by IPART during a price determination.
Revenue risk	The risk of businesses not collecting enough revenue from customers because of unforeseen increases in expenditure that aren't reflected in the revenue allowance.
Shadow price for leakage	The value of leaked water calculated to send efficient signals for water conservation to businesses. This is an example of ODI.
Sharing ratio	The fixed ratio of sharing of gains (or losses) between customers and a water business.
Stakeholder submission	Submission prepared by stakeholders in the sector (such as water businesses, advocacy groups, and other regulators) in response to our Draft Report or Discussion Papers
True-up	Mechanism to allow businesses to pass some unexpected costs to consumers in the following determination period. This is reserved for limited circumstances.
Underspend	Actual expenditure savings in any year of a regulatory period compared to forecast expenditure. A negative underspend is an overspend.
Weighted average cost of capital (WACC)	The post-tax real cost of capital as determined by IPART as part of a regulatory review.

[31] Hunter Water submission to IPART Draft Report, August 2022, pp 26-27; Sydney Water submission to IPART Draft Report, August 2022, pp 52-53: Essential Water submission to IPART Draft Report, August 2022, p 2.
[32] SDP submission to IPART Draft Report, August 2022, p 13.
[33] WaterNSW submission to IPART Draft Report, August 2022, pp 20-23.
[34] IPART *Review of WaterNSW's rural bulk water prices from 1 October 2021 to 30 June 2025, Final Report*, September 2021, p 6.
[35] WaterNSW submission to IPART Draft Report, August 2022, pp 20-23.
[36] Hunter Water submission IPART to Draft Report, August 2022, p 27; Sydney Water submission to IPART Draft Report, August 2022, p 53.
[37] Hunter Water submission to IPART Draft Report, August 2022, pp 27-28; Sydney Water submission to IPART Draft Report, August 2022, pp 53-55.
SDP submission to IPART Draft Report, August 2022, pp 13 -14.
[38] IPART Asset Disposals Policy Paper (for application to water businesses). Final Report, Policies. February 2018.

[39] Ofwat, PR19 Delivering Water 2020: Our final methodology for the 2019 price review, December 2017, p 207.
Sydney Water, Regulatory Treatment of Land Sales, Sydney Water submission to IPART, April 2015. Confidential submission.
[41] Hunter Water submission to IPART Draft Report, August 2022, p 28.
[42] SDP submission to IPART Draft Report, August 2022, p 13.
[43] Sydney Water s submission to IPART Draft Report, August 2022, p 55.
[44] IPART, Working Capital Allowance Policy Paper, Final Report Policies, November 2018.
[45] Hunter Water submission to IPART Draft Report, August 2022, pp 28-29; Sydney Water submission to IPART Draft Report, August 2022, p 56.
SDP submission to IPART Draft Report, August 2022, p 14; WaterNSW submission to IPART Draft Report, August 2022, p 23.
[46] Sydney Water submission to IPART Draft Report, August 2022, pp 56-60.
[47] Letter to Sydney Water and Hunter Water RE: Proposed regulatory treatment of participation in the Biodiversity Offset Scheme, 2018 (unpublished).
[48] WaterNSW submission to IPART Draft Report, August 2022, p 25.

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