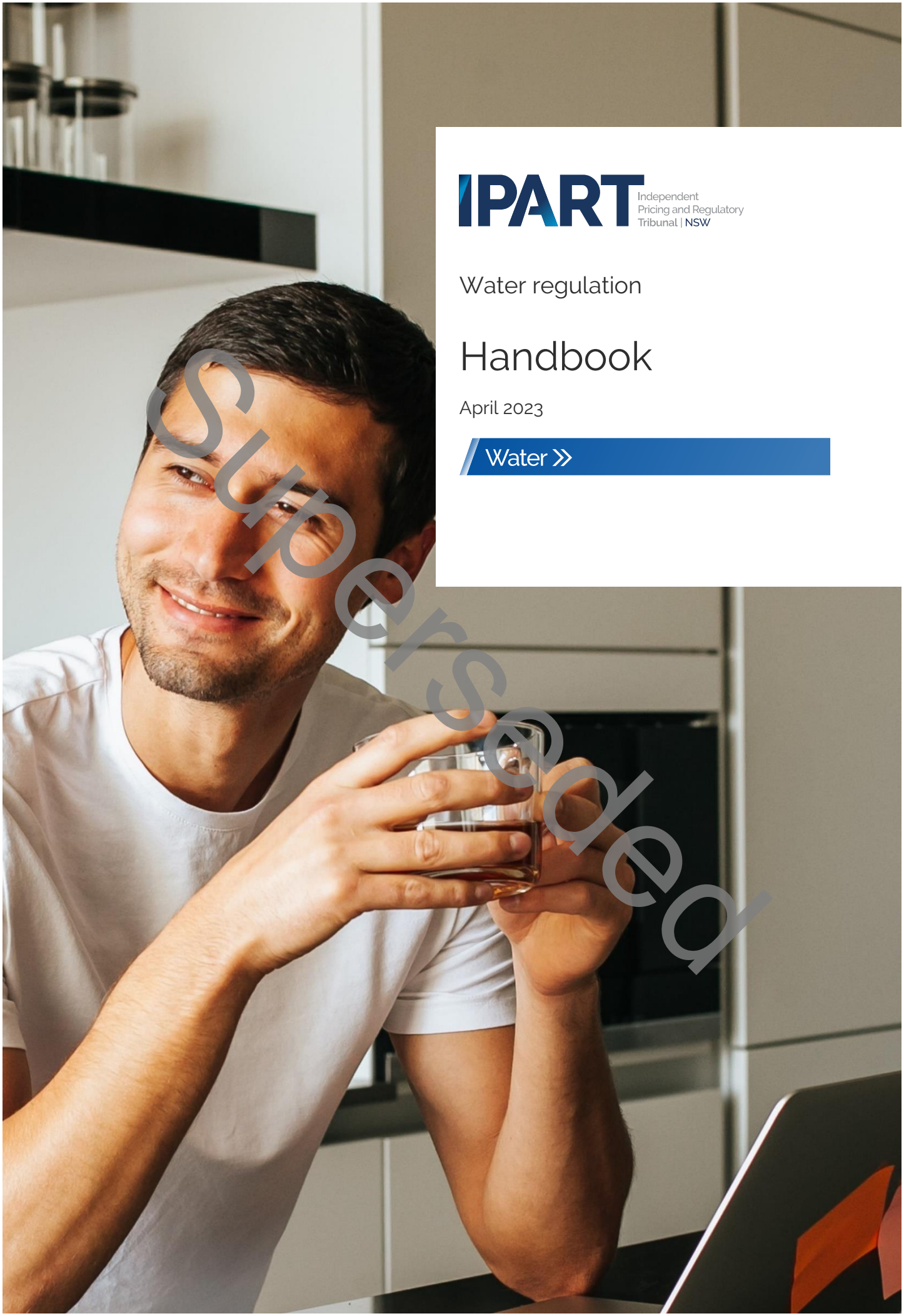

IPART Independent Pricing and Regulatory Tribunal | NSW

Water regulation

Handbook

April 2023

Water »

Tribunal Members

The Tribunal members for this review are:

Carmel Donnelly PSM, Chair
Deborah Cope
Sandra Gamble

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The Independent Pricing and Regulatory Tribunal

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

Acknowledgment of Country

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

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

Contents

Chapter 1

01

Introduction

IPART regulates the price and performance of several NSW water businesses. We ensure customers pay only what water businesses need to efficiently deliver the services their customers want. Our aim is to hold water businesses accountable in a way that delivers good short, medium, and long-term customer outcomes.

1.1 The 3Cs framework at a glance

Our framework focuses on customers, costs, and credibility – which we refer to as the '3Cs'. It is underpinned by 12 guiding principles (see **Figure 1.1**) which both IPART and the water businesses will use to develop and assess pricing proposals.

Figure 1.1 The 3Cs framework and guiding principles

The 3Cs framework is centred around pricing proposals that promote customer value. To apply the guiding principles, each business will actively involve and engage with its customers to develop a set of outcomes aligned to their preferences. Involving customers to set the priorities and outcomes that matter most is essential if water businesses are to identify better ways of delivering services.

1.1.1 A flexible, proposal driven approach

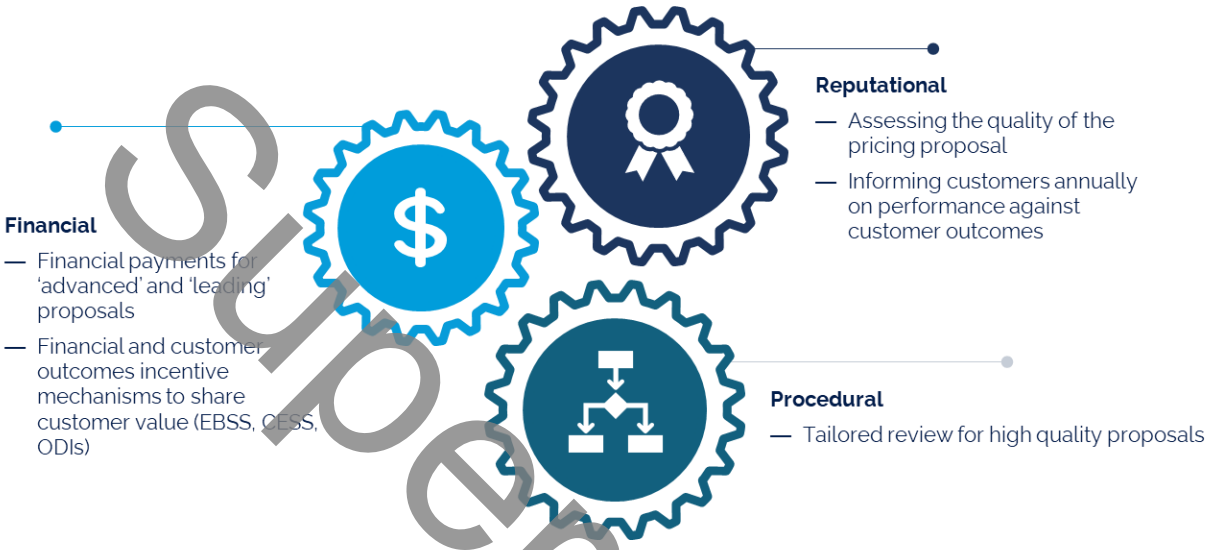
All water businesses will be expected to understand their customers' preferences in developing their pricing proposal to meet a 'Standard' assessment. While proposals will not be required to go above a 'Standard' assessment, our proposed framework is designed to motivate water businesses to develop 'Advanced' and 'Leading' proposals.

Each business will self-assess its proposal as either 'Standard', 'Advanced' or 'Leading' against the 3Cs framework and guiding principles, reflecting the value being delivered to customers. IPART will determine whether the pricing proposal promotes the long-term interest of customers at a 'Standard', 'Advanced', or 'Leading' level, using the same criteria. We will require a business that submits a 'Sub-Standard' proposal to submit a revised proposal that will deliver better customer outcomes.

1.1.2 Incentives to promote customer value

Our framework includes a range of incentives aligned to customer value. Through our assessment process, we provide procedural, reputational and financial rewards for high-quality pricing proposals (see **Figure 1.2**).

Figure 1.2 Incentives to promote customer value



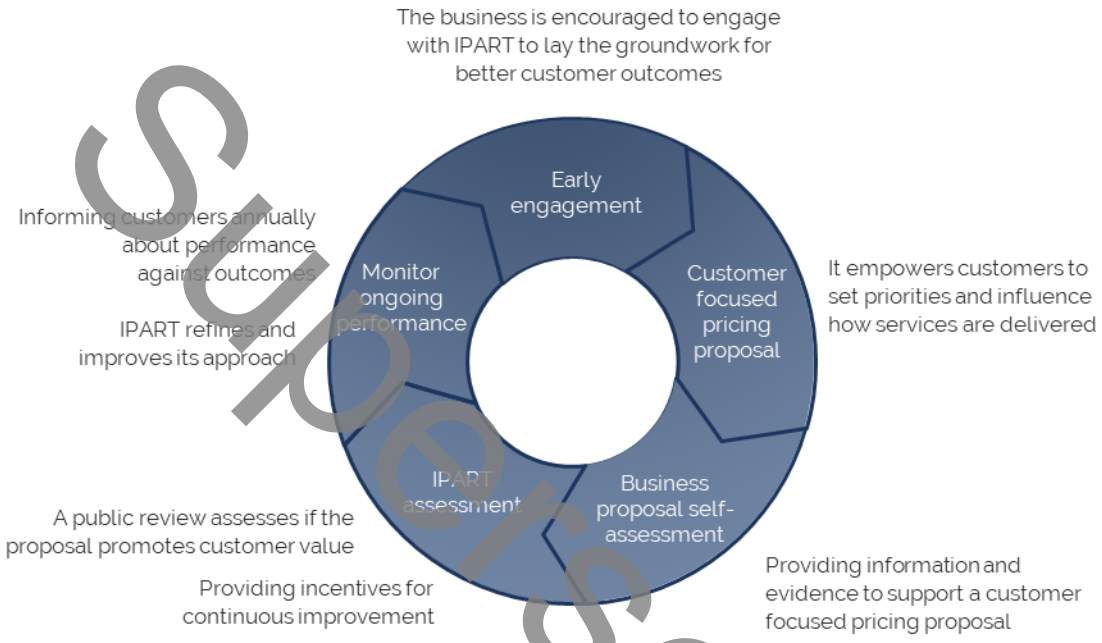
Our monitoring, reporting and accountability framework motivates businesses to deliver and promote customer value. The use of financial and customer outcome incentive mechanisms within this framework allows businesses that demonstrate a strong understanding of their customers to share value created from sustained improvements in performance and reduced costs.

Similarly, these incentives hold businesses to account and penalise those that do not deliver their commitments to customers.

1.1.3 Business proposals drive how we employ our regulatory tools

Our framework asks each water business to submit a proposal every 5 years that demonstrates it is promoting customer value. **Figure 1.3** provides an overview of this engagement and price setting process.

Figure 1.3 The 5-year cycle of engagement and price setting



We are maintaining some core elements of our previous approach. For example, we are continuing to apply a building block approach, but it has been streamlined and simplified.

1.2 Roles and responsibilities

Expectations for all parties

The below sets out the 'ground rules' for how we expect all parties (IPART, water businesses, community representatives and customers) to interact. We expect all parties to:

- **Engage genuinely**. Participants should be able to speak freely and comfortably.
- **Be open-minded and collaborative**. Be willing to listen to other views, including when ideas and positions are challenged, and be open to genuine debate and collaboration to explore solutions.
- **Provide clear information in an accessible and timely manner**. In relation to IPART and the water businesses, be responsive and share relevant information that is accessible for effective communication. Information should be provided in a timely manner, so participants are able to be well-informed and contribute meaningfully.
- **Respect sensitive and confidential information.**

Role of IPART

We will provide water businesses with guidance to enable them to successfully implement the 3Cs framework. Stakeholders can expect IPART to:

- Provide businesses with clear, consistent, and concise guidance and information to help businesses understand our expectations when a business is developing its proposal.
- Provide businesses with feedback on its strategies and plans as well as identify areas where further justification and supporting evidence may be required.
- Proactively engage with board directors, executive leadership teams and regulatory teams, to ensure businesses understand the objectives and application of the framework.

IPART will not provide specific advice or decisions during early engagement as we will be assessing a proposal 'as a whole package' once it is submitted (see section 3.3). We will follow our consultative review process, including engaging with stakeholders, seeking submissions on issues papers and draft reports and holding public hearings and workshops.

Our consultation will not replicate the customer engagement undertaken by water businesses. Rather, we are aiming to ensure that we understand the context surrounding a pricing proposal and its priorities from the customer's perspective.

Role of businesses

We expect water businesses to develop their pricing proposals to deliver safe, reliable services to customers now and into the future. Water businesses will communicate and consult with their customers and the community and reflect customer views in strategies, plans and the pricing proposal.

A water business can engage with IPART 1 or 2 years ahead of its next price review. The business can use the feedback from early engagement to refine the development of its proposal and self-assessment, identify potential information gaps and minimise the chance of surprises during the price review period. This will help maximise the potential benefits of the 3Cs framework and the outcomes for customers and community.

1.3 Purpose of this Handbook

This Handbook serves 2 main purposes:

- It guides water businesses in preparing their proposals and managing ongoing performance under our 3Cs framework, by setting out our expectations of businesses and outlining our regulatory processes.
- It explains the key elements of our approach to all stakeholders.

1.3.1 Structure of this Handbook

This Handbook supersedes our existing Guidelines for Agency Submissions. It has 7 parts:

- Chapter 1: Introduction
- Chapter 2: Review process and regulatory approach
- Chapter 3: Engagement and long-term planning
- Chapter 4: Elements of a pricing proposal
- Chapter 5: Addressing the changing revenue needs of water businesses
- Chapter 6: How we use financial incentives to drive performance
- Chapter 7: How IPART monitors ongoing performance.

1.3.2 Amendments to this Handbook

We will undertake additional consultation with the water businesses and stakeholders if we propose to amend this Handbook. For example, this may occur if we consider additional guidance is required on elements of the 3Cs framework or when we identify areas that need updating as we learn from price reviews.

Chapter 2

Review process and regulatory approach

02

This chapter provides an overview of our role in the price review process under the 3Cs framework and how we assess pricing proposals and reward high quality proposals.

In general, a price review process will start in September, before the business's existing determination period ends, starting with the business lodging its pricing proposal to us. Our review process will take 9 months during which we will hold a Public Hearing and publish an Issues Paper, Draft Report and Final Report.

At the end of our price review, we publish a pricing determination, a legal document that sets out maximum prices for regulated services (or a formula for setting these prices) which usually start from 1 July. These prices are set to incentivise and provide sufficient revenue for the business to efficiently deliver regulated services, meet operating licence conditions, and deliver on agreed customer outcomes over the next determination period.

Our regulatory review process, and the decisions we make, will be based on the quality of the business's pricing proposal. This is because the 3Cs framework is a 'tiered' regulatory framework based on our level of confidence that the business's pricing proposal promotes the long-term interests of customers. The overall grading we ascribe to the pricing proposal is a reflection of that confidence.

Our tiered approach supports more efficient reviews that focus IPART's and the business's time to the 'key' issues. It provides additional incentives to reward high-quality proposals from the business. The financial incentives for ongoing efficiencies allow us to streamline future reviews, because they encourage businesses to demonstrate that historical expenditure is efficient and reliable for setting future prices.

The following sections provide more detail about:

- our standard timeline for a price review, including the core stages of our review process and when there are opportunities for stakeholder contribution
- how we will assess a business's pricing proposal under the 3Cs framework
- how our 3Cs framework incentivises businesses to develop a high-quality proposal
- how a business with a high-quality proposal benefits from a streamlined review process.

2.1 Our standard review process and timeline

Figure 2.1 and **Table 2.1** illustrate our standard 9-month review process under our 'propose-respond' approach. In general, each business will submit its proposal in September before the end of its existing determination period. The review process will run over 9 months and we will publish a Determination in May/June the following year. In that time, we will typically hold a Public Hearing and publish an Issues Paper, Draft and Final Reports. Stakeholders will be invited to provide feedback at particular times throughout the process.

In some instances, we may consult with a business and modify the order, and exact timing, of the stages. For example, some reviews may run from August to May, depending on the circumstances of each review (e.g. Central Coast Council).

A 9-month review starting from September is our default approach. There may also be flexibility for variances to the length and start date of a price review.

Figure 2.1 Standard timeline for a price review

Table 2.1 Standard process stages for a price review

Process stage	Process stage activities
Business submits pricing proposal	The price 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 the 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. We expect to include a preliminary grading and scope for the expenditure review in the Issues Paper. Should the Issues Paper not have a preliminary grading, we will publish a preliminary grading by 30 November.
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 make, as well as the draft 'grade' we are assigning to 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.

2.2 A proposal's quality determines our regulatory approach

2.2.1 How we will assess the quality of a proposal

We will assess businesses' pricing proposals against the 12 principles in our 3Cs framework to grade the quality and ambition of a pricing proposal (see **Appendix B**). These are the same principles that the businesses will apply in making their self-assessments, and our assessment will in effect act to affirm or challenge the businesses' self-assessments. The businesses will identify focus principles which, if well justified, will be given greater emphasis in the assessments. However, the businesses should not lose sight of non-focus principles and should self-assess against all 12 principles.

6	4	2
Customer principles set out expectations on how the business identifies and integrates customer preferences into its planning	**Cost principles** relate to how the business demonstrates that customer needs and preferences are delivered in the most cost-efficient manner	**Credibility principles** focus on whether the business provides assurance that its plans and customers outcomes are deliverable

We will consider each of the principles and evaluate a business's proposal based on the information and evidence provided in the proposal and assign a grade of Leading, Advanced or Standard (as explained further in section 4.8.2). Our assessment will not be a simple weighted average of a 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 potential trade-offs should be driven by customers.

The business should demonstrate that its focus principles reflect the most important priorities for its customers, noting that these may change between reviews as customer preferences, and needs, change over time. Identifying focus principles helps ensure a business delivers on outcomes that provide the best value for customers. It may be that some principles are not as important to customers and therefore do not warrant as much attention.

Ultimately, we would decide whether we agree with the business's self-assessment. The highest grade we will assign to a business's proposal is what the business has put forward as part of its self-assessment. That is, we will not upgrade a proposal's grade, but we may downgrade it.

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 a business is rewarded if it delivers its customer outcomes and improvements in performance.

If we determine the proposal to be unacceptable or to not promote the long-term interests of customers, we may grade a proposal to be Sub-Standard. In such cases, the business 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 expect this to be rare.

Our assessment of a proposal as being of a high quality will reward the business in 3 ways:

1. **Reputational** – a higher quality proposal provides a public signal about the quality of the proposal and the customer value it represents.
2. **Financial** – an Advanced or Leading proposal, with a realistic self-assessment, will deliver financial rewards.
3. **Procedural** – a higher quality proposal can lead to a more streamlined expenditure review process.

2.2.2 Reputational incentives encourage high quality proposals

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

We consider a business that achieves an Advanced or Leading proposal grade would face a strong reputational incentive to avoid a downgrade to Standard at the subsequent price review, thereby encouraging ongoing performance improvements.

2.2.3 Financial incentives reward Advanced and Leading proposals

Businesses can earn a financial reward from delivering Advanced or Leading proposals that deliver customer value and demonstrate step changes in performance that will benefit customers. Where we agree with the business that its proposal is Advanced or Leading, a financial reward – calculated as a percentage of the revenue requirement – will be added to the forecast revenue requirement. On the other hand, where we find that a business's self-assessment is over-confident or where a business's subsequent proposal backslides from a previous grading of Advanced/Leading to Standard, a financial penalty will be incorporated in the form of a reduced revenue requirement.

The size of any financial reward or penalty received by the business will depend on:

- our grading on the previous proposal – in the first round of assessments under the 3Cs framework, this will be taken to be a Standard grade
- the business's self-assessment of its current proposal
- our assessment of the current proposal.

Each business is considered to start with a Standard grade 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 2.2.**
2. If a business's previous pricing proposal was assessed as Advanced, it will be expected to submit a pricing proposal that meets this level. 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 an Advanced business makes a step change in performance to a Leading level, it will receive a financial reward as described in **Table 2.3**. However, if an Advanced performance backslides, there is a symmetric consequence for underperformance, providing a strong incentive to maintain ongoing performance.
3. If a business's previous pricing proposal was assessed as Leading, 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 grade may be difficult to sustain. A Leading business that maintains a Leading performance will receive a financial reward as described in **Table 2.3**.

When calculating financial rewards, we compare the grade we assign to a pricing proposal to the grade the business indicated in its self-assessment. As shown in **Table 2.2** and **Table 2.3** below, businesses are penalised if their self-assessed grade is higher than our grade. This is intended to encourage businesses to put forward their best proposal while ensuring it is realistic and feasible. This is in line with our credibility principles, where we expect businesses to be realistic and forthcoming about their proposal.

Table 2.2 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 2.3 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%

Importantly, these rewards work with the balanced financial incentives to ensure high-quality proposals translate into customer value (see **Chapter 6**). The grading 'payments' share the customer value that the business has identified, and act as an up-front payment to support more innovative and ambitious targets. The incentive schemes ensure these grading 'payments' are retained by the business only if they deliver the proposed level of customer value.

2.2.4 Higher quality proposals allow a streamlined review process

The 3Cs framework better aligns IPART's and the businesses' goals: creating value for customers. This means that the need for a forensic review of costs should be reduced. As a result, a proposal that we consider to be of high quality demonstrates to us that its proposed costs are in customers' interests. Therefore, we can have greater confidence that a business's decisions are efficient. This allows us to streamline the review process and reduce regulatory costs while still protecting customers.

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. A business that achieves an Advanced or Leading grade may face more targeted expenditure reviews in the areas where there is greatest uncertainty, or where genuinely new ways of doing things have been proposed and there is insufficient information to justify the proposal.

We also may conduct a targeted review of expenditure relating to a particular customer outcome, where the outcome is not covered by an Outcome Delivery Incentive or is difficult to ascertain the customer value the expenditure delivers.

We will decide, based on the quality of the proposal, whether to engage consultants to support our review of the business's proposed expenditure. Generally, consultants would review the efficiency of the business's forecast expenditure – from the perspective of customer value and cost efficiency. As outlined below, we will only review a business's historical expenditure in limited circumstances.

Ex-post expenditure reviews by exception

Capital expenditure is recovered from customer prices over time by adding the value of actual capital expenditure to the RAB. When we set prices, we include the forecast capital expenditure, but actual expenditure can vary greatly from forecasts. We have the option to review actual expenditure over the previous period and amend the RAB to ensure only efficient expenditure is recovered through future prices. This process is known as an ex-post review of capital expenditure.

We conduct ex-post capital expenditure reviews by exception, rather than by default. Automatic ex-post reviews contradict the intent of the 3Cs framework for businesses. When we do review it, we may target areas where:

- the business has a significant capital project
- the business significantly overspends its allowed capital expenditure
- assets are repeatedly deferred and re-proposed
- evidence of underperformance exists, such as unmet service targets.

We are building our capacity to benchmark efficient capital expenditure to support the targeted use of ex-post reviews.

We may conduct an ex-post expenditure review where a business has earned a grading payment but did not have the financial incentive schemes in place over the same period. Incentive schemes help ensure the grading payment is retained by the business only if they deliver the expected level of customer value. Where a business has received a grading payment without the incentive schemes being in place, we may use a full ex-post expenditure review to assess whether customer value has been delivered and whether the grading payment received for the period is appropriate.

Reviewing systems and process

If we can be satisfied a business has effective systems, processes, data and long-term planning in place that promotes good decisions, we can be more confident in the efficiency of expenditure proposals.

We may decide to conduct a systems and process review in advance of the next price review, depending on whether we identified any areas of particular concern based on our previous review. We may assess the business on these areas before the price review process. This will provide an early indication of the scale and scope of the future expenditure review, while smoothing regulatory burden over the period before the price review. It also allows time for a business to address recommendations from the systems and process review in its pricing proposal. We will consult with the business on the appropriate timing for these reviews.

We may engage a consultant to assist us with this review. The review will look different for each business, but at a high level we are looking for evidence that systems are:

1. customer-centric
2. high quality
3. well-integrated across operations.

Businesses with high-quality systems, processes, data and long-term planning can expect narrower, more tailored expenditure reviews during the price review.

2.2.5 Higher quality proposals support greater flexibility in form of regulation

The price review process will depend on our grading, which in turn will be influenced by the business's proposal for its form of regulation, and the needs and preferences of its customers.

Our 3Cs framework allows all businesses, irrespective of grading, to propose alternative forms of price control and introduce flexible pricing arrangements (for more detail on each form of regulation, see section 4.7.3).

Chapter 3

Engagement and long-term planning

03

This chapter outlines our expectations for water businesses when planning and preparing for an upcoming price review.

The regulatory process is designed to be ongoing, with each review fitting into the broader planning processes of the business (rather than being a standalone event that happens every 5 years). We expect that each business will put its best pricing proposal forward, demonstrating how it will promote the long-term interests of customers over both:

1. the determination period
2. as part of a long-term plan that delivers services sustainably, equitably and efficiently to current and future customers.

This requires the business to have a strong understanding of its customers and have well-evidenced (but flexible) long-term plans.

To support high-quality proposals, we encourage each business to take the opportunity to engage and seek guidance through early engagement with IPART ahead of its price review. This is an opportunity for businesses to share with IPART their early plans, strategies and issues, and for IPART to provide feedback on alignment with the 3Cs framework. Through early engagement, we also support good proposals by allowing each business to propose focus principles for its upcoming price review. This process is intended to put in place a 'no surprises' approach for all parties.

We expect that engaging with customers and long-term planning is a constant for businesses and not just for the purpose of providing a pricing proposal. Early engagement with IPART, on the other hand, is specifically to obtain feedback while developing a proposal. In the 1 or 2 years ahead of a price review, we expect that customer engagement, long-term planning and early engagement with IPART are interwoven, informing and updating one another and feeding into developing a business's pricing proposal.

Figure 3.1 The 3 streams are intertwined

Our 3Cs framework encourages water businesses to:

- Ensure a customer-centric approach in developing its pricing proposal.
- Develop long-term plans that reflect customer preferences - ensuring that customer preferences, feedback and insights from its customer engagement process are integrated into its long-term planning.
- Engage early with IPART to present how its customer engagement strategy is being used to develop outcomes, explain how customer outcomes are linked to its plans and proposals and propose its focus principles for the upcoming price review.

3.1 Engaging with customers

Customers should be central to businesses' operations. Our 'customer centricity' principle emphasises that bespoke customer engagement processes are not a goal in and of themselves, but rather one of many tools for the business to promote the long-term interests of customers.

Each business should seek to understand what services, products and prices their customers value and need. When provided fit-for-purpose information regarding future challenges, and through tailored engagement channels, customers can weigh up and make decisions that support better value-for-money services.

Customer engagement should be an ongoing process, not just prior to a price review, so that the business continues to deliver value for money. We would expect water businesses to continue to regularly engage with customers to understand their changing needs and preferences and then adapt their plans and expenditures to reflect them.

3.1.1 Developing a customer engagement strategy

We do not prescribe the method by which a business engages with its customers. We do, however, expect that a business demonstrates how it would engage with its customers in a meaningful way to understand its customers' needs and preferences, and that these insights are used to inform its proposal. A well-developed customer engagement strategy with supporting evidence is one of the features of a high-quality pricing proposal.

We expect customer engagement strategies to demonstrate:

- characteristics of good practice customer research and engagement, with opportunities for a representative set of all the business's customers to participate in developing the business's pricing proposal;[a]
- how customers will have the opportunity to challenge the business's performance, plans and long-term delivery strategies:
- how it will ensure the effectiveness and quality of its customer engagement.

Below we set out examples of principles for good practice customer engagement, including case studies from other jurisdictions and sectors. The case studies presented are for information and to demonstrate that there is no one-size-fits-all approach. Customer engagement is context-dependent for each business.

[a] Other sources of principles for customer engagement include the AER's Better Reset Handbook; Ofwat's PR24 and beyond: Customer engagement policy – a position paper; and Energy Networks Association's Customer Engagement Handbook.

Example principle 1: Meaningful and sincere engagement

Customer engagement aims to understand customer needs and preferences, so a business can incorporate this into its plans and proposals.

We expect businesses to provide customers with information in a form that is accessible and easy to understand, so that it enables customers to make informed contributions to the engagement process. We would expect executive leadership and Boards to be involved in customer engagement, to foster a culture of excellence in the process and embed it as a business-as-usual activity.

We expect customers to feel they understand the issues at hand, that the business understood their views, and understand how their contributions and inputs are used.

Box 3.1 Case study – Meaningful and sincere engagement

Australian Gas Infrastructure Group

Australia Gas Infrastructure Group (AGIG) set out to embed a genuine customer focus into all aspects of its future planning for the South Australian Gas Distribution Network (AGN).

To ensure genuine and effective engagement, AGIG designed an iterative engagement process to integrate customer engagement as core business, aligned to its values and business process. Customers and stakeholders were involved in all stages of the process, including early discussions which informed decisions, rather than being consulted after decisions or positions were formed.

To do this, AGN designed a program which included a series of 22 iterative customer workshops and more opportunities for customers to be involved, including culturally and linguistically diverse communities. These workshops enabled customers to have open discussions on what was important to them. AGN discussed the key issues of most importance, and then tested and validated proposals with their customers. AGN also tracked and documented all engagement activities, so any customer or stakeholder could see how feedback from engagement was used to inform plans. AGN also included an online engagement platform to support face-to-face engagement activities.

90% of customers and stakeholders found that the program was inclusive, transparent, well run and of a high standard. Additionally, 98% of customers felt they had the opportunity to have their say.

AGIG's campaign won the 2020 Energy Network Association's Consumer Engagement Award and noted that it was an example of a "genuine, solid engagement approach that was executed well and included genuine and extensive CEO involvement".

Source: Energy Networks Australia, Consumer Engagement report – 2020 Report, April 2020 pp 4-8.

Example principle 2: Diverse and inclusive engagement that is accessible and tailored to the customer base

Within a business's customer base, there will be a mix of different customers with varying preferences on how they prefer to receive information and be engaged.

We expect a business to identify and make engagement accessible to its stakeholders, including those stakeholders experiencing disadvantage or vulnerability. Businesses are expected to have regard to customers' differing capacity and access to engagement.

A business can utilise various customer engagement tools, techniques, data sources and leverage different levels of engagement, such as IAP2 Spectrum of Public Participation, to enable customers to participate and provide meaningful input.

Box 3.2 Case Study – Diverse and inclusive engagement that is accessible and tailored

Jemena Electricity Networks

Jemena set out an objective to 'truly allow customers to shape our Proposal'. 18 months ahead of its deadline for its pricing submission, Jemena started planning for its engagement by asking 2 key questions early in its engagement process – (1) How do customers want to engage? (2) What topics do customers want to engage on?

To answer these questions, Jemena conducted early engagement with its customers to understand the best way to engage with them. This included residential and small business customers, large business customers, local councils and retailers. Residential customers were also segmented into vulnerable households, age-specific and early adopters focus groups.

Through this early engagement process with its customers, Jemena was able to identify how its customers wanted Jemena to engage with them and what was needed to engage with them effectively. For example, residential and small business customers identified that engagement should include simple documents that are easy to understand; be structured in a way that is designed specifically for customers; start any discussion from the customer's perspective and not Jemena's; and to take customers through a journey over multiple sessions. In contrast, large business customers preferred a one-on-one meeting rather than a time-consuming forum.

Jemena identified that this was "invaluable during the execution" of its formal engagement program.

Box 3.2 Case Study – Diverse and inclusive engagement that is accessible and tailored

Through this early engagement process, Jemena was able to identify that it needed to refine its approach to "really unlock the benefits of collaborating" with residential customers. To do this, Jemena established a deliberative forum –the People's Panel – that would be geographically and demographically representative of its residential customer base. The People's Panel was engaged under the 'collaborative' level of engagement in the IAP2 Spectrum of Public Participation. The People's Panel was provided information, time and authority to make recommendations to Jemena.

Jemena's engagement strategy was awarded Energy Networks Australia's 2019 Consumer Engagement Award. It was the unanimous choice of the judging panel.

Source: Jemena Electricity Networks, 2021-26 Regulatory Proposal - Overview, pp 9-25; Jemena Electricity Networks (Vic) Ltd, 2021-26 Electricity Distribution Price Review Regulatory Proposal, Attachment 02-02, Community consultation report, January 2020; and Energy Consumers Australia, Energy Network Annual Award Winners Announced - Media release, September 2019.

Example principle 3: Balance customer, community and environmental needs

Water is critical to our communities, environment and economy. We expect businesses to demonstrate how they have considered and balanced their customers' and communities' diverse views and preferences in developing their plans and proposals.

Box 3.3 Case Study – Balance customer, community and environmental needs

Yarra Valley Water (YVW) – ESC 2018 price review

A cornerstone of YVW's customer engagement process was the establishment of its citizens' jury. The jury comprised of 40 individuals that were descriptively and geographically representative of its customers. The goal of the citizens' jury was to provide recommendations to YVW on the balance between price and service which is fair for everyone.

To empower its citizens' jury, YVW provided jury participants with information, time and authority to provide a set of recommendations.

YVW provided a comprehensive information pack to the jury and responded to all requests for information. The jury also had opportunities to hear from stakeholder-nominated experts and other experts of their choosing.

Box 3.3 Case Study – Balance customer, community and environmental needs

YVW deliberately delayed the citizens' jury so that it could provide the jury with the complete breadth and depth of its initial customer research and insights (including research from different customer segments such as local government, business, community groups and customer segments). This was to ensure that the jury's deliberation would consider all relevant information.

The citizens' jury deliberated for five-and-a-half days of meetings over 4 months. This was to allow sufficient time for the jury to fully consider the remit, seek additional information and consult with their peers and communities.

To provide recommendations to YVW, the jury established a 'fair for everyone' criteria and guiding principles. This includes the criteria of 'understanding others and considering alternatives' which considered alternative points of view; different needs and expectations of diverse groups of people within the YVW community; and the impact of its recommendations on individuals, local communities and society as a whole.

The jury made 10 recommendations. YVW accepted 8 of the 10 citizen jury recommendations in full, and the remaining 2 with minor adjustments in its pricing proposal.

The ESC assessed YVW's overall submission as 'Advanced' and YVW's engagement as 'Leading'. The ESC considered that YVW's engagement provided a fair opportunity for customers to participate and to influence its proposal. In particular, the ESC noted the quality of information that YVW provided to its citizens' jury.

Source: Yarra Valley Water, Yarra Valley Price Submission, September 2017, pp 18-29 and pp 132-149; and Essential Services Commission, Yarra Valley Water final decision, May 2018, pp 29-30.

Example principle 4: Relevant, timely and appropriate

Customer engagement should identify customer values, issues of priority and agreements on how the business would deliver on these expectations. We expect topics covered during customer engagement to be priorities for customers, and for a business to be able to demonstrate both:

- how it identified topics relevant to its customers
- how customers have had the chance to influence these topics.

Box 3.4 Case Study – Relevant, timely and appropriate

Goulburn Valley Water provides services to 54 different towns. Customers receive a different set or quality of services depending on where they live. For example, some customers may receive water and wastewater services, or water only. Customers may also receive differing levels of water pressure, both from town to town and in different areas of the same town.

To adopt a relevant and authentic approach, Goulburn Valley Water decided early to talk face-to-face, with customers in all of the 54 towns it services to understand what customers value. It set up 'Water Cafes' at public events or public places with engagement tailored to each of the 54 towns including using a mix of 3 approaches - employees having discussions with customers to ask key questions and recording comments; sitting down with customers to complete a survey on the spot; and referring customers to its online survey. This engagement activity involved over one-quarter of Goulburn Valley Water's employees, including its Executive Management Team and emerging leaders group.

To test engagement results, Goulburn Valley Water established a 'Mini-Public', a deliberative forum, whose members were representative of its customer base.

Goulburn Valley Water also sought feedback from a range of other customer groups including plumbers, builders, land developers, and major customers. This was done through meetings and surveys to gauge levels of satisfactions with Goulburn Water Valleys' services and understand potential areas for improvement.

The ESC assessed Goulburn Water Valley's overall proposal and engagement as Leading. It found Goulburn Water Valley's engagement to be inclusive and tailored to suit its circumstances. The ESC considered the range of methods to be effective in providing customers with an opportunity to participate, and well suited to the issues discussed.

Source: Essential Services Commission, Goulburn Valley Water final decision, June 2018, pp 6 and pp 29-30; and Goulburn Valley Water, Price Submission 1 July 2018 to 30 June 2023, September 2017, pp 6-9.

Example principle 5: Transparent and accountable

We expect businesses to demonstrate how they ensure customers understand the overall impact of their preferences and willingness to pay. This should include how decisions will impact different customer and community groups and the impact for current and future customers.

Box 3.5 Case Study - Transparent and accountable

Powerlink Queensland

For Powerlink Queensland's 2023-27 revenue determination, it set an objective of delivering a proposal that was capable of acceptance by its customers, the AER and its own organisation.

To do this, Powerlink commenced with a co-design workshop to develop Powerlink's engagement approach. Powerlink established a Revenue Proposal Reference Group (RPRG) as a sub-set of its wider customer panel. The RPRG enabled deeper and more regular engagement (10 times over 12 months) on key topics and was therefore able to develop a greater awareness and understanding of the issues, trade-offs and consequences of taking various courses of action. For example, Powerlink provided 6 successive forecasts on the Revenue Proposal to customers prior to lodgement and released 6 versions of its engagement plan. Customers were also given the opportunity to review and approve detailed minutes of engagement meetings.

Additionally, Powerlink's Board and executive team participated in co-design workshop and attended customer panel and RPRG meetings.

Powerlink's engagement process was awarded the Energy Networks Industry 2021 Consumer Engagement Award. Powerlink's co-design approach was found to enable customers to influence Powerlink's engagement strategy and revenue proposals to a degree not previously seen in the industry. In particular, the Energy Networks Industry considered Powerlink's process was transparent, resulted in no surprises in its Revenue Proposal, built customer capacity and understanding, and helped drive a culture of constructive discomfort in Powerlink.

Source: Energy Networks Australia, Consumer Engagement report – 2021 Report, April 2021 p13.

Example Principle 6: Representative, reliable, and valid design

Credible results from customer engagement require customer engagement to be designed so that it produces results that are an accurate representation of the views and preferences of the business's whole customer base.

Customer engagement design should be free from systematic error. For example, selection bias commonly occurs in customer engagement processes where customers 'self-select' or 'opt-in' to an engagement process. This results in skewed outcomes that are not representative. Good engagement practice requires a business to randomly select participants with a statistically valid sample size that is representative of all its customers and communities.

Good customer engagement should be designed to eliminate or minimise systematic error and demonstrates how results are both reliable and valid. Likewise, we expect customer engagement to avoid the use of biased survey questions that result in unreliable and inaccurate views and feedback.

Box 3.6 Case Study - Representative, reliable and valid design

Jemena Electricity Network

Jemena adopted a deliberative process to create a People's Panel that would undertake a series of iterative engagement activities to build capacity and participate in in-depth discussions to make recommendations on topics relevant to Jemena's 2021-2025 price review.

Jemena partnered with Capire Consulting Group to recruit a representative People's Panel that was reflective of Jemena's customer base.

To establish a representative People's Panel, Jemena first considered what the statistically valid sample size should be to enable reliable results. To do this, it used ABS Census Data to estimate Jemena's distribution area to have a population of approximately 1.1 million. This estimate was then used to determine 43 people to be the statistically valid sample number for the People's Panel.

It then considered how to create a panel of participants that represented the diversity of Jemena's community. To do this, it used ABS Census Data to map demographic characteristics of Jemena's distribution area including age, suburb, place of birth, and homeownership. For each characteristic, it determined the target number of people using ratios, for example if ABS data indicated that 20% of the population live in a particular suburb, then 20% of the 43 participants should live in that suburb.

After determining the appropriate makeup of the People's Panel, Jemena recruited participants using different methods such as an online expression of interest, letters, newspaper advertisements and social media updates.

Box 3.6 Case Study - Representative, reliable and valid design

In the end, Jemena recruited 48 people to allow for any drop off in participants leading up to, or during the sessions. The final number of people who attended all sessions was 43.

In designing its People's Panel, Jemena recognised the potential limitations of its process. For example, it recognised that the final membership of its People's Panel was not a statistically accurate representation of its population due to people dropping out or lack of registrations for some demographic categories (e.g. no people who were 15-19 years of age expressed interest).

Jemena won the Energy Networks Australia 2019 Consumer Engagement Award.

Source: Jemena Electricity Networks (Vic) Ltd, 2021-26 Electricity Distribution Price Review Regulatory Proposal, Attachment 0202, Community consultation report, January 2020.

3.2 Develop long-term investment plans

Robust long-term planning is essential to delivering in customers' long-term interests. It allows businesses to make prudent investment decisions today that are ready for and resilient to future challenges. Water businesses:

- are responsible for managing and planning for growth in their network, changes in the level of demand from households and businesses, and the need to respond to a changing climate and local environment
- need to respond to, and take advantage of, better ways of managing their assets in response to innovation and changing customer preferences.

The water businesses need to take a long-term view of their operations, and our 3Cs framework is designed to give the businesses greater flexibility in meeting that challenge.

Plans need to be continually updated with new information to ensure the business is sufficiently nimble, adaptable to new conditions and is managing risks. This includes information on evolving customer preferences, which requires a feedback loop between ongoing engagement with customers and the business's long-term plans.

We also expect businesses to engage with regulators and government agencies to share findings on customer preferences and promote customer outcomes, and to share information and collaborate on the development of government strategies, plans and new or changing regulatory requirements.

We expect a business to provide us with its long-term investment plans in some detail, together with supporting evidence and assumptions. We do not intend to micro-manage the investment programs, but we need to be confident that the investment plans are designed to deliver in the long-term interest of customers.

We would expect long-term investment plans to incorporate and address the following key investment drivers:

1. water supply needs, including adapting to climate change and ensuring resilient water supply
2. growth in network and customer connections due to:
   a. increasing density in existing areas
   b. extending services to existing properties
   c. extending services to new areas
3. changing community expectations or regulatory requirements for performance standards and environmental outcomes
4. management of ageing assets.

Below we outline examples of the types of information we would expect to see for each of these investment drivers in a business's long-term investment plans. This list is not exhaustive – it will be the businesses' responsibility to ensure its long-term investment plans include information to demonstrate that it is in the long-term interest of customers and is underpinned by robust evidence. Separately, we outline key considerations on costs and scenario analysis relevant to each of these drivers that we expect long-term investment plans to address.

3.2.1 Water supply needs and resilience

Long-term planning for water security is a crucial role for most of the water businesses we regulate. We expect the long-term investment plans to outline the business's assessment of the need for water supply augmentation. We expect this to include an explanation of the method used for the assessment, and key information inputs and assumptions over the planning horizon around:

- population growth and changes in usage behaviour and demand
- changes in industrial and agricultural water demand
- changing environmental and cultural water needs
- system yield and water security risk, including assumptions around climate variability and rainfall, drought and contamination risk.

The long-term investment plans should outline options considered for meeting future water needs and for ensuring resilience in the context of a changing climate, including integrated water cycle management options, leakage reduction and non-capital options (e.g. water conservation initiatives). We expect the business to provide justifications for the preferred solutions and timing of the investments, and explain how the investment plans align with relevant business and Government strategies and plans, such as:

- NSW Government's Greater Sydney Region Plan and District Plans
- Councils' Local Environment Plans
- Regional water security plans, such as the Lower Hunter Water Security Plan and the Greater Sydney Water Strategy & Implementation Plan
- water businesses' own Long Term Capital and Operational Plans and Drought Response Plans.

3.2.2 Growth in network and customer connections

In setting out long-term investment plans to meet growth in network and connections, we expect the business to outline the method for its growth forecasts, and key information inputs and assumptions. The business would outline options considered for meeting forecast growth and provide evidence that justifies the preferred solutions and timing of the investments. It would explain how the investment plans align with relevant business and Government strategies and plans, such as:

- NSW Government's Greater Sydney Region Plan and District Plans
- Councils' Local Housing Strategies and Local Environment Plans
- water businesses' own Growth Servicing Plans and Long Term Capital and Operational Plans.

3.2.3 Changing community expectations and regulatory requirements

Ongoing customer and community engagement is a cornerstone of the 3Cs framework. Through this process, the businesses should develop deep insight into customer expectations and preferences. We expect a business's long-term investment plans to clearly explain how customer and community expectations and preferences have driven the development of the plan.

We further expect a business to explain and justify assumptions about future customer and community preferences and regulatory requirements for system performance standards and the standards of environmental performance. The business should also explain how engagement with regulators has informed these assumptions.

The business plans would include options considered for meeting customer and community preferences and regulatory requirements, and the justification for the preferred solutions and timing of the investments. This would include explaining how it has considered willingness to pay, including any affordability metrics used, particularly where it is proposing to deliver performance above minimum regulatory requirements.

3.2.4 Managing ageing assets

A significant portion of a water business's costs is related to maintenance, replacement, or upgrades, of existing assets. We expect the long-term investment plans to include the business's asset management strategy. This includes how the business ensures line of sight from its customer outcomes and expected future needs through to its asset management approach. This also includes how it will seek to strengthen and evolve its asset management practices to adapt to future challenges and ensure customer value of assets is maximised.

For key assets that are expected to be replaced or upgraded over the long-term planning horizon, we expect the business to outline the drivers for replacement or upgrade, the options considered and the justification for the preferred solution and timing of the replacement or upgrade.

3.2.5 Considering climate change

Long-term investment plans should consider the impacts of a changing climate. The long-term plan should include if and how the business considers and monitors climate change impacts and risks. This may include:

- adaptation and resilience strategies
- any aspirational targets for net zero emissions and supporting documents on how the targets were determined
- an environmental management system that addresses climate change
- climate change impacts assessment on assets and asset management
- climate risk assessments conducted on its operations and asset management (adopting relevant climate emissions scenarios and timeframes)
- a climate change risk statement

- climate risk prevention measures
- insurances that cover climate risks
- climate-related financial reporting and sustainability reporting
- reports on climate change matters to other agencies.

3.2.6 Cost considerations

The long-term investment plans should address and provide evidence on matters such as:

- How might key input prices (including labour and materials) change in the future?
- What productivity improvements can be expected to be realised over the multi-decade planning horizon?
- What technological innovations, including those in use at a small scale or on a pilot basis now, can be expected to form part of the service delivery network within the planning horizon?
- What cost shocks might need to be taken into account over the planning horizon, including from climate change, international events and financial markets?

3.2.7 Scenario-based planning

The key uncertainties concern future climatic conditions, including rainfall patterns, technological opportunities, population trends and consumer behaviour. We would expect a robust multi-decade plan to set out in some detail a range of plausible alternative future states and consider what would be the most effective response by the business to each one of the following uncertainties:

- Future climatic conditions
- Future technological opportunities
- Future population trends, consumer behaviour and community expectations.

3.3 Engage early with IPART

Under our 3Cs framework each business is expected to engage with us around 1 to 2 years before its pricing proposal. It provides an opportunity for us to have a structured discussion with each business to identify potential concerns early on, and for IPART to understand how to best support the sector when implementing the 3Cs framework.

Early engagement is consistent with the intent of the 3Cs framework to promote bilateral trust in the sector and streamline the regulatory process. This process builds on our commitment of maintaining an open-door policy during the determination period, up to the point of lodging a pricing proposal, to encourage businesses to check in with us as they develop pricing proposals.

Early engagement provides an opportunity for us to have a structured discussion with water businesses, so that we have a clear understanding of how a proposal will address our 3Cs pricing framework, and how effectively the framework promotes customer outcomes. During early engagement, each water business is expected to:

- Present an overview of how their customer engagement strategy will be used to identify focus principles, 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.
- Propose focus principles for the review and explain how its proposed principles align with customer preferences.

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 the businesses, it is not meant to produce binding decisions or to substitute our price review processes. Our assessments will be based on the pricing proposal 'as a whole package' at the time of lodgement. As with all of IPART's reviews we will consult and seek feedback from all stakeholders on the pricing proposal. IPART is committed to transparency and accountability.

3.3.1 When is early engagement with IPART expected?

In the first round of reviews under the 3Cs framework, each water business is expected to engage with IPART 1 to 2 years before their pricing proposal is due.

In future price reviews, there may be less need for early engagement and it could become optional for businesses that submitted an Advanced or Leading proposal in its prior price review. In contrast, we may continue to expect early engagement if the business's previous pricing proposal was assessed as Standard.

3.3.2 How will early engagement with IPART work?

We expect early engagement to be primarily business-led. It is an opportunity for a business to seek IPART's feedback on issues early and plan for the regulatory review. This will avoid the risk of plans and strategies not aligning with IPART's expectations.

Early engagement will give businesses the opportunity to seek and receive feedback from the Tribunal, including questions that the Tribunal may raise during a price review, and the type of information that the Tribunal may seek in the business's pricing proposal.

There may be some instances, however, where IPART may initiate engagement with businesses. For example, if we identify areas of particular concern from our previous review, we may conduct an additional systems and process review in advance of the following price review. This could, for example, involve IPART delving further into areas for details to support our evaluation of pricing proposals.

Early engagement may involve the Regulators Advisory Panel (RAP), particularly where there are issues, such as long-term plans, that require the attention or collaboration between regulatory bodies (see section 3.4 below).

Regular engagement between IPART and water businesses

Under the 3Cs framework we commit to proactively engage with board directors, executive leadership and regulatory teams to ensure businesses understand the objectives and application of the framework. To do this, we will meet regularly with a water business in the period (1 to 2 years) leading up to them submitting their pricing proposal, as set out in **Table 3.1**. This gives businesses various options to 'check-in' with us to seek early feedback and identify potential information gaps to refine the development of its proposal. Businesses will benefit from early engagement as it will provide us with the opportunity to clarify our guidance and expectations as well as provide an indication on what the Tribunal may ask and consider when assessing a pricing proposal. This should reduce the chance of surprises during the price review period.

Table 3.1 Indicative meeting schedule between IPART and a business

Who	Regularity of meetings during early engagement
Tribunal and water business's Board (or equivalent)	Every 6 months
IPART and water business's executive leadership team	Every 3 months
IPART and water business's regulatory team	Every 2 months

To promote openness and transparency and reduce the risk of real or perceived regulatory capture, meetings between the Tribunal and Boards (or board equivalents) and the purpose of these meetings will be published on our web site every 6 months. This is consistent with our standard approach to proactive disclosure.

Explain customers' influence on outcomes and the link between outcomes and plans

We expect businesses to explain how:

- it will ensure that the customers' voice is considered and incorporated into developing its outcomes and inform how services are delivered to customers
- customer outcomes will be used to inform its long-term capital planning and asset management, business plans and pricing proposal.

There is no one method that can demonstrate this. As outlined earlier in the handbook, businesses with high-quality proposals in other jurisdictions and sectors have adopted different means of demonstrating how they incorporated customer feedback into the development of its plans and proposal. In general, we consider a high-quality proposal to be able to demonstrate:

- Iterative, interlinked and adaptive customer engagement process that shows how engagement was used to inform and develop outcomes, and how those outcomes were then used to inform the next round of engagement, plans and proposal.
- Customer driven outcomes, with associated performance measures, activities and mechanisms which hold the business accountable for delivering on outcomes.
- Clear logic illustrating how customer outcomes are linked to performance measures, activities, plans and proposal.

Propose and explain how the focus principles align with customer preferences

NSW water businesses are diverse. They service different geographies and populations and face unique challenges. As such, the principles of the 3Cs framework that are most relevant may vary for each business and over time. For instance, retail businesses are likely to have more focus principles from the 'customer' pillar than wholesale businesses. Each business will propose focus principles according to its customer base.

Through early engagement, we expect a business to explain how it identified its focus principles through its customer engagement process and the development of its long-term plans, and how they are consistent with its customers' priorities. We will generally expect each business to have at least one focus principle from both the 'Customers' and 'Cost' pillars.

Focus principles identified in early engagement are not binding for the businesses. Circumstances may change or additional information may be revealed that may require a business to change its focus principles.

3.4 The Regulators Advisory Panel

The Regulators Advisory Panel (RAP) will be made up of IPART, the NSW Environment Protection Authority (EPA), NSW Department of Planning and Environment (DPE) and NSW Health. Other entities, such as customer advocacy groups, may be invited to participate as observers. Its purpose is to promote better collaboration between water regulators for the benefit of customers.

The RAP is not a decision-making body. Rather, it is a forum that will meet at least twice a year (or more frequently if required) to:

- develop a consistent, overarching objective for water regulation
- promote transparency in establishing regulatory standards
- discuss government policy objectives.

Businesses can bring specific issues to the attention of the RAP, or request to present to the panel if an issue requires attention/collaboration between regulatory bodies.

The Memorandum of Understanding between the RAP members, once formalised, and high level minutes from each meeting will be published on the IPART website. We anticipate the first meeting will be held in mid-2023.

Chapter 4

Elements of a pricing proposal

04

Under the 3Cs framework, each pricing proposal needs to explain how it will promote long-term customer interests, justify the outcomes and expenditure it has proposed, and provide evidence that these plans will be delivered (i.e. credibility). This section provides an overview of some of the key elements that we expect to see in pricing proposals.

Figure 4.1 Elements of a pricing proposal

We expect a business's pricing proposal to address the 4 key elements shown above and how they interact with one another. The pricing proposal should have sufficient detail and explanation for these elements covering, but not limited to, the items shown in **Table 4.1** below in and discussed in this chapter.

Table 4.1 Pricing proposal considerations

4.1 Proposal audience and style

A business's pricing proposal needs to align with the 3Cs framework and provide a clear narrative on how it ensured customer centricity, how it proposes to recover the efficient costs to deliver customer services and outcomes, and how it will remain accountable to its commitments.

A business's pricing proposal needs to include information and evidence to support its pricing proposal and self-assessment. This includes detailed data in its information returns (e.g. the Annual Information Return (AIR) and Special Information Return (SIR)) and supporting evidence in the form of attachments. We may also request additional information or evidence from a business to support its assessment of its proposal.

We would encourage businesses to produce plain English customer-focussed summaries of their proposals.

4.2 Customers at the centre

We expect customer preferences to be a core part of a business's decision making. The business's proposal would demonstrate how customers and community preferences and needs are at the heart of its decision making.

A business is expected to describe how it engaged with its customers and community and explain how its customer engagement approach, from planning through to decision making, aligns with good practice engagement principles (see **Chapter 2** for example principles) and ensured customer centricity in its proposal. This should include, for example, how its engagement was representational, accessible to its customer base and community, and how customers were able to influence the topics considered as part of the engagement.

Businesses are expected to detail how it incorporated insights and learnings from customer engagement into its plans and proposal. This includes how customer engagement was used to identify the focus principles underpinning a business's proposal, how the business considered and balanced any divergent views, and how it proposes to manage any potential trade-offs to keep the long-term interests of customers at the core of all plans.

A business's proposal would set out customer, community and environmental outcomes and associated performance measures. The proposal needs to detail how it incorporated insights from its customer engagement into the development of its outcomes and how the outcomes (and associated performance measures) will deliver on the long-term interests of customers (see **Box 4.1** for further detail).

Box 4.1 Setting outcomes and performance measures

Outcomes

We expect a business to develop customer, community and environment outcomes through its engagement with its customers.

Outcomes are statements that reflect what customers want and value. Proposed outcomes should reflect the feedback provided and decisions made in response to customer engagement, thereby driving improved customer value. They should be written from the customer's perspective, be short and succinct, avoid technical jargon and be readily understood by the business's customers, as well as being within the business's realm of control (i.e., credible).

There is no set limit on how many outcomes a business must develop. However, we would expect the business to propose outcomes across each of the customer, community, and environmental dimensions.

Box 4.1 Setting outcomes and performance measures

Performance measures

For each outcome, we expect businesses to develop suitable performance measures and demonstrate a clear link between outcomes and performance measures. This would include how the business's activities and programs are linked to outcomes and performance measures.

There is no limit on the number of performance measures, however, the suite of performance measures together should meaningfully demonstrate how the business is delivering on each outcome. To do this, businesses can develop various types of performance measures, including efficiency, effectiveness, and equity performance measures.

Each performance measure would be a quantifiable measure of success that demonstrates improvement in performance that customers value with clear timeframes.

4.2.1 Determination period

Under our 3Cs framework, the default length of a determination period is 5 years. This is intended to facilitate and encourage better long-term planning. A business can propose a shorter or longer determination period, but this needs to be clearly justified in its pricing proposal and supported by customers.

Determination period aside, we would welcome inclusion in the proposals of indicative prices paths over a longer horizon. This would demonstrate that the businesses are considering the long-term price impacts of their investment plans and allow stakeholders to provide better informed comments on the businesses' proposals from a long-term point of view. It could also allow early indication of potential affordability issues, which might require further policy consideration.

Any such long-term price paths would need to be accompanied by clear articulation of underpinning assumptions and sensitivities. The business would also need to explain how the long-term price path aligns with its long-term investment plan, described in section 3.2.

We note that, if such a long-term price path over time proved to be reasonably robust, it would strengthen the case for longer-term determination periods, if it could also be shown to be in the long-term interest of customers.

4.3 Historical performance

A business's proposal should describe its performance over the current determination period and provide reasons for any material deviations over the period relative to regulatory or operating licence requirements, decisions made by IPART or commitments made by the business in its previous proposal. This includes performance in relation to:

- Service levels, customer outcomes, performance and output measures
- Target revenue
- Sales volumes and connections
- Operating and capital expenditure
- Implementation of the determination

The business should also explain the impact of any deviations on customers, the community, the business and shareholders over the determination period, and how the deviations have influenced the current proposal and may impact on these parties in the forthcoming determination period.

4.4 Forecast expenditure and revenue requirement

We expect that a pricing proposal includes a clear estimate of the revenue required to be recovered over the determination period, based on the building block methodology. The estimated revenue requirement needs to be based on robust estimates of capital and operating expenditure.

4.4.1 Revenue requirement

A business needs to estimate its notional revenue requirement using the building block methodology. Under the building block model, costs are broken down into 5 components to establish the amount of revenue needed to recover them. An overview on how to apply the building block model and estimate the business's notional revenue requirement is provided in **Box 4.2.** The full building block model template can be accessed here.

Box 4.2 Building block model

For a regulated businesses that has a regulatory asset base (RAB), the business's revenue requirements should be calculated using a cost building block methodology. With our 3Cs framework, we simplified the building block model as detailed in Appendix A.

In this approach, the business's costs are broken down into 5 components (or building blocks) to establish the revenue that they should recover from customers. The 5 blocks are:

- **Operating expenditure allowance** to cover the costs of day-to-day maintenance and administration costs.
- Returns to the RAB, which recovers the capital expenditure gradually from customers over time. It is comprised of 2 building blocks – return on capital and return of capital (or depreciation).

  At each review, a business's RAB is established, which represents the economic value of all assets the business owns (both new and existing). The RAB is then multiplied by the Weighted Average Cost of Capital (WACC) – a measures of rate of return to investments – to set the **return on capital**. In effect, this step is to simulate the return the business would earn in a competitive market.

  An **allowance for depreciation** is then calculated for the RAB. This involves deciding on the appropriate asset lives and depreciation method to allow the business to recover the value of its assets over their assumed economic lives.
- **Working capital allowance** which represents the holding cost of net current assets.
- **Tax allowance** which approximates the tax liability for a comparable business.

Following the establishment of the notional revenue requirement, a business may then adjust the notional revenue required for any other revenue and costs, including, where relevant, any true-ups or cost pass-throughs such as drought costs (see **Chapter 5** for further information on true-ups and cost pass-throughs). Adjustments to the notional revenue requirement need to be justified with supporting information.

4.4.2 Forecast expenditure

A business needs to clearly detail how it will deliver on its customer services and outcomes at the lowest sustainable cost, in a manner that ensures the greatest long-term customer value.

We would expect a business's pricing proposal to include efficient operating and capital expenditure (opex and capex) required to deliver customer outcomes over the determination period. The proposal would explain:

- The method used to forecast expenditure and the key assumptions underpinning the expenditure forecasts.
- How key investments and significant expenditure items are consistent with long-term strategies and investment plans, and with the delivery of customer outcomes.
- The basis on which these expenditures are efficient, including productivity strategies, trend analysis and benchmarking analysis.

We expect a business's cost efficiency strategy to include an annual 'efficiency factor' that represents a realistic, yet challenging, target. A business needs to be able to justify its efficiency factor and identify efficiency activities and expected efficiency gains to deliver on its commitment.

Relevant supporting information should be made available to IPART on request, such as business cases and probabilistic cost estimates for capital projects.

A detailed breakdown of historical and proposed expenditure would be included in Annual and Special Information Return templates (AIR and SIR) provided by IPART.

Capital expenditure

The proposal would set out actual and forecast capex in each year of the current and proposed determination period by major service category and the relevant cost drivers, as specified in a business's AIR/SIR.

The AIR/SIR include forecasts for a total of 10 years from the beginning of the proposed determination period.

The pricing proposal would provide an overview of all major capital projects and programs. This includes explanations of their alignment with long-term plans and the delivery of customer outcomes, and how they represent the optimal approach to delivering these long-term plans and customer outcomes.

IPART's review of proposed capex will depend on the quality of a business's proposal. However, we expect the businesses to have in place robust investment governance frameworks, and to have available clear and thorough supporting documentation for all projects and programs that support the proposed investments and expenditure amounts (e.g., business cases). This documentation would be proportionate and reflect the appropriate stage of development for the project or program given the proposed timing of the investment. IPART may request this documentation as part of its expenditure review process.

For actual and forecast capex in the current determination period, we expect businesses to provide information on how outputs and outcomes have been delivered.

Predictive models for capex

We expect water utilities to develop and share with us predictive models for future capital expenditure. We plan to engage with the water businesses to develop our own predictive models to facilitate our discussions with businesses.

In the first instance, we expect such models to focus on asset replacements, accounting for factors such as asset type, expected asset life and local conditions. Over time, we would like to explore options for predictive models for other capex categories, such as for capex for growth, resilience, and adaptation to climate change.

Operating expenditure

The pricing proposal would set out actual and forecast opex in each year of the current and proposed determination period by major service category. The AIR/SIR should extend these forecasts for a total of 10 years from the beginning of the proposed determination period.

For the proposed determination period, we expect businesses to submit their opex forecasts using a base-trend-step (BTS) format for its recurrent controllable opex:

- The **base** is the current efficient level of recurrent controllable opex.
- The **trend** is any predictable change in the efficient level of recurrent controllable opex due output growth, productivity improvements and real input price changes.
- The **step** is any forward-looking step change in the efficient level of recurrent controllable opex due to a particular event, such as changes to regulation or the method of delivering a service.

This approach is similar to that used by the Australian Energy Regulator and the Essential Services Commission of Victoria.

Where a cost item is:

- non-recurrent (including cyclical, such as regulatory submission costs), or
- non-controllable (e.g., bulk water costs – where prices are set by IPART – and regulatory licence fees),

we would expect the businesses to provide separate forecasts for these items as variations to the BTS forecast. The business may also wish to provide separate forecasts for particular cost items where the business expects to see significant real change in input prices over the forward determination period, such as for the cost of insurance of dams or the cost of grid electricity.

Where there is considerable uncertainty around a cost item, either in terms of whether the cost will be incurred or the magnitude of the cost, we provide alternative mechanisms to manage such cost risks. **Chapter 5** provides guidance on the treatment of uncertain and unforeseen costs that may arise during the determination period.

Baseline recurrent controllable operating expenditure

Baseline opex reflects the business's efficient recurrent controllable opex in the second last year of the current determination period. This would be the most recent year with a full 12 months of data available.

The baseline opex would be adjusted to:

- remove non-controllable expenditure items to be forecast separately, as noted above
- remove one-off or non-recurring expenditure items incurred in the base year, or add normally occurring items that were not incurred in the base year
- remove additional cost savings or efficiency improvements expected or committed to in the final year of the current determination period, including any continuing efficiency improvement expectations set by IPART for the current period.

We would expect the pricing proposal to demonstrate the efficiency of the adjusted baseline opex (e.g., using benchmarking analysis), and provide justification for the adjustments and explain any deviations from the base-year opex allowance previously determined by IPART.

Trends in recurrent controllable operating expenditure

We expect businesses to propose a trend component that is applied to baseline expenditure to roll forward a reasonable baseline for the determination period. This trend component would reflect:

- The business's proposed efficiency factor for controllable opex productivity improvement.
- A meaningful measure of output growth, such as growth of customer connections or volume delivered.
- Expected real changes in input prices of rolled forward baseline costs – that is, where the combined effect of input price changes is expected to diverge significantly from forecast changes in the consumer price index. We model prices in real terms, so businesses can propose a trend factor relative to general price levels.
  - Where a business is seeking a higher input price adjustment for these reasons, the business would demonstrate that the increase is not offset by decreases in input prices for other cost items.
  - These input price impacts would not relate to cost items for which the business has proposed separate forecasts or step changes.

Step changes in recurrent controllable operating expenditure

Step changes are forward-looking changes in the recurrent controllable operating costs of providing services. Proposed step changes would reflect changes that have occurred since the completion of the base year or that will predictably occur over the next determination period. Step changes could relate to:

- Changes in regulatory obligations, such as operating licences, environmental protection licences, health or statutory obligations. These changes constitute a step change when they increase or decrease recurrent controllable opex.
- Changes to customer outcomes that require changes to recurrent controllable opex to increase customer value. For example, a business may propose a step change to opex to reduce its carbon footprint to meet a customer outcome of net zero emissions.
- Substitution between opex and capex that leads to a step change in recurrent controllable opex.
- New recurrent controllable opex resulting from new capex.

We expect a business to justify any step changes as part of its proposal. The drivers for any proposed step changes will need to be clearly identified, and the business will need to explain why the expenditure provided by the Base plus Trend components would not be sufficient.

4.5 Incentive mechanisms

The framework consists of 3 inter-related incentive schemes:

- Outcome delivery incentive (ODI) scheme – which provides water businesses with incentives for incremental changes in customer outcomes.
- Efficiency benefit sharing scheme (EBSS) – which provides incentives for continuous improvement in operating expenditure to promote customer value.
- Capital efficiency sharing scheme (CESS) – which provides incentives for efficient investment in capital expenditure to promote customer value.

If a water business wishes to apply incentive schemes in its upcoming determination period, it would be included in the pricing proposal. The pricing proposal needs to outline how these schemes fit into the business's proposed strategy to improve long-term customer outcomes. As financial incentives add complexity to the regulatory framework, businesses are expected to demonstrate that they have appropriate systems and processes in place to effectively anticipate and respond to changes to expenditure and risks. Proposals that outline a business's future expenditure needs are best placed to implement financial incentives effectively.

We expect that the incentive schemes will be applied in the initial determination period by businesses with self-assessed Advanced or Leading proposals. By implementing financial and customer outcomes incentive schemes, we can place less reliance on expenditure reviews by consultants.

However, for businesses with a Standard proposal, we expect businesses to provide us with confidence that expenditure proposals reflect efficient costs, that its internal systems and processes have a strong cost efficiency perspective and is able to respond effectively to the incentives schemes before including them as part of its proposal.

Once the incentive schemes have been implemented for a water business, there is an expectation that they will continue for subsequent determination periods. There may be circumstances where the schemes may need to be removed or amended which will be explored with the business at the time.

Further detail on the incentive mechanisms is in **Chapter 6**.

4.6 Managing risk

Within a determination period, there are uncertainties that may require additional costs (or avoided costs) to be shared between customers and the business if they arise. We expect a business to manage most typical business-as-usual cost risk within the cost allowance provided.

However, when there is a possibility of events that would cause a known, material cost that the business cannot control, a business can propose to include a cost pass-through (up front) in the determination. Cost pass-throughs are intended only for large variations in costs with material impact on a business. For any proposed cost pass-throughs, a business must explain and provide evidence for the efficient cost of a responding to the nominated event and propose a mechanism for recovering this cost.

Chapter 5 sets further details on mechanisms available to businesses to manage cost and revenue uncertainty within a determination period, including what principles a business is expected to demonstrate when proposing a cost pass-through.

4.7 Setting prices

After the business estimates the revenue required, it then needs to consider how it would recover the revenue over the determination period. This requires a demand forecast, along with decisions on the form of price control, tariff structures and price levels. In the context of rural water services, the first step is to determine how costs should be shared among impactors and beneficiaries.

4.7.1 Sharing of costs between rural water customers and the NSW Government

When setting maximum prices for the Water Administration Ministerial Corporation's (WAMC's) water management services and WaterNSW's rural bulk water services, we first need to determine how costs should be shared between rural water customers and the NSW Government, on behalf of other users and the broader community.

We comprehensively reviewed our rural water cost shares framework in 2019. In particular, we examined each of WAMC's 33 activities to understand who was creating the need for the activities (and therefore who should incur the costs). As a result, we revised the cost shares for several activities.[1] We made further revisions to this cost sharing framework as part of our review of WAMC's and WaterNSW's rural prices in 2021.[2]

The key principles underpinning IPART's cost sharing framework are outlined in **Box 4.3**.

Box 4.3 Who pays is based on who creates the need to incur the cost

We use the following funding hierarchy to determine who should pay WAMC's and WaterNSW's efficient costs:

1 Preferably, the party that creates the need to incur the cost should pay in the first instance.

2 If that is not possible, the party that benefits should pay.

3 When it is not feasible to charge the above parties (e.g. because of social welfare policy, public goods, externalities, or an administrative or legislative impracticality of charging), the NSW Government (taxpayers) should pay.

Source: IPART, Rural Water Cost Shares – Final Report, February 2019, p 23.

In future proposals, WAMC and WaterNSW should detail their proposed cost shares, and should explain how these are consistent with IPART's cost sharing framework and principles. The proposals should also explain how the businesses have sought to address any issues with the cost shares identified in previous reviews, and any further proposed changes would need to be clearly justified and supported by evidence.

4.7.2 Demand forecast

It is important that demand forecasts are robust and evidence based. Differences between forecast and actual demand over a determination period may lead to an over- or under-recovery of revenue for a water business and may have implications for prices.

Businesses' proposals are expected to include forecast demand for their services over the determination period. Forecast demand needs to be supported by robust modelling and be well evidenced. We expect businesses to explain their demand modelling methodology and clearly outline and justify any assumptions made.

4.7.3 Form of price control

Businesses can choose different forms of price control in their proposal. The 2 most common are price caps and pricing methodologies set by reference to a maximum revenue (revenue caps). This is explained in **Box 4.4** below. Businesses would propose the form of price control that is supported by its customers and aligns with the long-term interests of customers.

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. Any business seeking an alternative form of price control will need to propose a specific methodology for fixing the price as part of their proposal.

Box 4.4 Different forms of price control

The different forms of price control include the following:

- **Price cap** – Maximum prices are set at the start of the determination period and may be adjusted each year for inflation. This approach provides predictable prices for customers, but the regulated entity bears volume-related risk to the extent that price structures do not perfectly match the business's cost structures.
- **Revenue cap** – A regulated business receives its annual revenue requirement for a determination period, irrespective of the volume of regulated services provided. Customers bear any volume-related risk through price increases or decreases over the determination period, while any additional costs of say increased volume need to be accommodated within the original revenue allowance, thereby affecting the business' profits.
- **Weighted average price cap** – A maximum average price (or formula for a price) is set for each group of the business's prices for the first year of the determination. The regulator can set limitations on the extent to which some or all individual prices within the groups can increase during the determination period.

  Businesses can rebalance prices, so long as the weighted average of the prices does not exceed the maximum average price,[b] and they comply with any limitations imposed. The accuracy of volume forecasts will significantly affect the overall revenue that the business is able to earn while keeping within the cap.
- **Hybrid of the revenue and price cap controls** – A price control is in place but additional measures to mitigate the risk of the business under- or over-recovering its revenue requirement are also used.

[b] The Treasurer's permission is required to charge less than the maximum average price.

Consistent with our 'customer choice' principle, our framework recognises that customers have different preferences, and efficient business decisions may require varied levels of service. A business can include in its proposal customer choice pricing arrangements, including unregulated add-ons and services for customers who are willing to pay for them. For these arrangements, businesses must demonstrate how it engaged with its customers to develop these arrangements and provide supporting evidence on how it aligns with customers long-term interests.

4.7.4 Prices and tariff structures

A business's pricing proposal needs to propose the tariff structure and then propose the price levels necessary to recover the revenue required given forecast demand.

We have a number of pricing principles that we expect the businesses to reflect in its proposed prices. We outline the key pricing principles that apply to water utilities below.

Long-run marginal cost approach to set usage charges

For urban water retail businesses, we expect water usage prices to be set with reference to the long-run marginal cost (LRMC). The LRMC for water calculates the per unit cost of serving additional (permanent) demand for water services. It estimates the short-term production costs of serving demand, plus the long run 'opportunity cost' of current consumption in bringing forward investment in additional infrastructure (e.g. a future dam).

We expect retail businesses to provide estimates of their LRMC,[c] analysis of customers' preferences towards water prices, and estimates of cost variance due to drought.

We also expect the businesses to investigate and evaluate the merits of setting a wastewater usage price with reference to estimates of LRMC. We have established a working group with the businesses to explore issues around the estimation and application of LRMC to both water and wastewater usage prices.

We expect businesses to engage with their customers on price structure. A business may propose prices diverging from usage prices based on LRMC, for example to include an uplift to manage drought costs or where there are clear customer preferences for different pricing strategies.

Businesses can propose alternative pricing approaches that are supported by customers and address potential bill and affordability impacts.

For rural water businesses, where water trading schemes capture the value of scarcity, we would typically expect usage prices to reflect short-term costs of production. We would also expect a similar approach for usage prices to for the Sydney Desalination Plant and for bulk water supplied by WaterNSW in the Greater Sydney area (mainly to Sydney Water).

[c] The estimate is typically a range.

Service charges recover residual revenue requirements

Generally, usage charges do not recover all of a water business's revenue allowance. Service charges recover the remaining revenue (and in instances such as stormwater, all revenue). We would expect businesses to engage with their customers on how they propose to set service charges and how they have considered the following principles:

- water and sewerage service charges reflect the capacity available for the customer (based on size of water connection)
- service charges for houses and apartments are similar, and
- stormwater charges reflect the customers' land size.

We prefer smoothed prices

We also often smooth the revenues from the building block model, in present value terms, over the determination period to improve transparency and avoid unnecessary price fluctuations for customers. If a business proposes to set prices using a methodology (including by reference to maximum revenue), it should also explain whether it has smoothed prices over the period, and the reasons why or why not.

We have other pricing principles for less common situations

We also have pricing policies for:

- recycled water – see Review of recycled water prices for public water utilities, 2019
- wholesale pricing – see Wholesale pricing for Sydney Water and Hunter Water, 2017
- developer charges – see Developer charges and backlog sewerage charges for metropolitan water agencies, 2018

4.8 Credibility

We would expect a business's pricing proposal to set out how it will remain accountable to their customers for the decisions they make. A business will also demonstrate credibility through a realistic self-assessment against the 12 principles under our 3Cs framework. We would also expect a business's proposal to be quality assured and endorsed by its Board (or equivalent). A declaration of Board (or equivalent) endorsement demonstrates the Board's ownership of the proposal and provides transparency that it is confident the proposal would deliver in the long-term interests of its customers.

4.8.1 Accountability and reporting

To remain accountable and deliver on its commitments to customers, a pricing proposal needs to set a clear timeframe for when it will deliver on its proposed expenditures and outcomes and how performance and progress on key metrics will be communicated to its customers.

To demonstrate a business's commitment to continual improvement, a business pricing proposal should also identify and demonstrate how shortcomings or lessons from past determination periods are integrated into its current and long-term strategies.

4.8.2 3Cs self-assessment

Each business must self-assess the extent to which its proposal promotes customer value, encourages cost efficiency and is able to be credibly delivered. The 3 grades are:

- **Leading** – for businesses that are industry leaders in understanding their customers, innovating to deliver services customers want and driving costs efficiencies. The business also demonstrates how it delivers 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 conduct meaningful 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 on its grade, each business should refer to the 12 guiding principles that sit under the 3Cs, with particular emphasis on the focus principles agreed during early engagement. We do not expect businesses to assign a grade for each of the 12 principles. Instead, it should determine an overall assessment for the proposal as a package. Businesses should present to us supporting information to substantiate its grade.

Each improvement in performance above Standard should reflect an additional, tangible increase of customer value. We have not put a numeric requirement on the 'value' delivered because it can be difficult to measure, and we do not want to discourage businesses. A business does, however, need to show they are delivering a genuine improvement, and demonstrate this step change in customer value both quantitatively and qualitatively.

We would expect businesses to use the same approach to estimating the additional improvement in customer value that they would use to justify projects, initiatives or settings. We anticipate this process will include benefit calculations based on customer willingness to pay or other measures of economic value (e.g. the long run marginal cost of water savings) depending on how they are creating value.

We will review the quality, rather than the quantity, of evidence to substantiate the grade. As mentioned above, the evidence to substantiate a grading depends on:

- the size and type of services provided by the business,
- whether the business is seeking an Advanced or Leading grade, and
- whether the principle is a 'focus principle' (we will expect more evidence for focus principles).

4.8.3 Quality assurance and Board endorsement

Before submitting a pricing proposal to IPART, each business would obtain Board or Council (or equivalent) endorsement for its proposal. This endorsement demonstrates the Board's (or equivalent) ownership of the proposal – and provides transparency that it is confident the proposal would deliver in the long-term interests of its customers.

The pricing proposal, information return and any other material provided to IPART would also be subject to quality assurance (QA) check prior to lodgement. This ensures information is complete, accurate and consistent and helps avoid errors or delays in the price review process.

To demonstrate Board or Council (or equivalent) endorsement and assure the quality and accuracy of its submission, a water business is expected to include either a Board attestation signed off by the chair of its Board, or (for businesses where the principal governing body of the entity is a council) a copy of the council resolution(s), declaring that the pricing proposal:

- Is approved and endorsed by the principal governing body of the entity that the pricing proposal would best promote the long-term interests of its customers and that the proposal:
  - Is the business's best customer value proposition and is consistent with a Board-approved customer engagement strategy or equivalent document.
  - Would deliver services at the lowest sustainable cost and is consistent with a Board-approved cost efficiency strategy or equivalent document.
- Is prepared with the best available information of the water business's financial and operational affairs.
- Has been subject to a QA check, which certifies the accuracy and consistency of all data, including confirmation of the following:
  - Information in the business's pricing proposal is consistent with the business's information return (AIR and SIR), the business's financial accounts, and reports against output measures, as relevant. Where there are variations in figures, these need to be explained.
  - Figures in the business's pricing proposal are accurate and correctly sourced. The figures need to sum correctly. The use of nominal or real dollars should also be explained in clear and simple terms so that stakeholders can follow the logic of their use.
  - The business's pricing proposal includes proposed prices for all the business's regulated services.

Appendix E provides a pro-forma example of a Board's attestation.

Chapter 5

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. However, 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 risk 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.

Our revenue risk 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.

5.1 Options to manage revenue risks

Our 3Cs framework provides businesses with tools to address revenue uncertainty. However, we consider these mechanisms to be measures of last resort, typically to address a material change in costs or an event which materially affects a business's ability to deliver services.

As a result, we will scrutinise requests for revenue risk mechanisms closely. 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.

Businesses will be required to provide evidence clearly outlining the need for a mechanism, as well as setting out the impact on the business and customers if the mechanism is not implemented. We will carefully monitor how these tools are being used over time, to minimise the risk of overuse.

Our framework has a suite of tools businesses can use to manage revenue uncertainty within a determination period. These include cost pass throughs, true-ups, letters of comfort, and partial or full reopeners of a determination. These are explained further in sections 5.1.1 and 5.1.2 below and summarised in **Figure 5.2**.

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

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

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

5.1.1 Recovering costs through the price determination

Expenditure allowance

Most costs should be apportioned to the appropriate cost building blocks and recovered from the expenditure allowance. We review the business's evidence in the pricing proposal that the planned expenditure is efficient 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 costs are 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 (see section 5.3).

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 5.1**) 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.

Box 5.1 below provides examples of recent cost pass-throughs.

Box 5.1 Case study: Cost pass-throughs

In the Sydney Water 2020 price review, we included several cost pass-throughs in its price determination. This provided Sydney Water with mechanisms to manage a range of uncertain operating and capital costs.

The cost pass-throughs accounted for:

- The difference between Sydney Water's actual and forecast costs of purchasing water from the Sydney Desalination Plant. This allowed Sydney Water to pass through the additional costs it would incur if the Sydney Desalination Plant was operating.
- The additional bulk water purchase costs and capital costs[a] Sydney Water would incur if the NSW Government decided to expand the Sydney Desalination Plant.
- The cost of Water NSW pumping water from dams in the Shoalhaven system to supply Sydney Water. These costs were unpredictable, as pumping only incurred during periods of low water availability. Therefore, we established a methodology where the cost pass-through is equal to the actual volumes of water pumped from the Shoalhaven system multiplied by a benchmark energy price published by the Australian Energy Market Operator.

We also accepted Sydney Water's proposal for a drought cost pass-through. This allowed Sydney Water to recover its additional expenditure from managing the impacts of drought on its business.

All of these costs met the cost pass-through principles outlined in (

Figure 5.1). In particular, they would have a material impact on Sydney Water's business, the trigger events were clear, and we could scrutinise the efficiency of the forecast costs (or the methodology for calculating those forecasts costs) before including cost pass-throughs in the price determination.

a. The cost pass-through covered a portion of the capital costs Sydney Water would incur in expanding its water distribution network to accommodate additional flows if the Sydney Desalination Plant was expanded. Remaining capital costs would be added to the water RAB and recovered from customers in future determination periods.

Source: IPART, *Review of prices for Sydney Water from 1 July 2020*, Final Report, June 2020.

Figure 5.1 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.

5.1.2 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

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, as adjusted for any applicable financial incentives arrangements discussed in **Chapter 6**). 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.

Case study 2 provides an example of a true up we have used in recent reviews (see **Box 5.2**).

Box 5.2 Case study: Cost of debt true-up

Cost of debt true-up

Our WACC methodology uses a trailing average cost of debt, which allows business to better manage their refinancing risk. However, one consequence is that the WACC changes every year (i.e. as new tranches of debt are introduced to the trailing averages and the oldest tranches drop out). This creates a risk of unfunded debt costs over the determination period.

To manage this revenue risk, businesses typically request a true-up of the annual WACC adjustments. We then decide at each price review whether to:

- update prices annually to reflect the updates in the WACC, or
- use a regulatory true-up at the next determination period, which we would pass through to prices at the beginning of the next determination period.

These options are equivalent in present value terms to customers and businesses.

Targeted reviews and letters of comfort

The 3Cs framework supports a shift where the revenue forecasts we set is an envelope of expenditure to promote customer outcomes, rather than an allowance for specific projects. Our 3Cs framework encourages businesses' decisions to be guided by customers, a business should have comfort from its customers that they support the new spending.

In the past a business may have been 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.

Depending on the situation, we can:

- review the need for investment
- conduct a high-level review of the proposed expenditure
- provide either a letter of comfort (but noting that the Tribunal will make a final decision at the next price review based on the information available at the time) 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 3Cs 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.

Businesses can also request a partial replacement of the determination if changes in costs are restricted to specific services (rather than costs that affect all services). We consider this effectively addresses the business's key request to have a mechanism to pass-through material 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 from 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.

Case study 3 responds to queries by businesses about whether a partial re-opener could be used to adjust prices if a price review is postponed.

Box 5.3 Case study: Adjusting prices if reviews are postponed

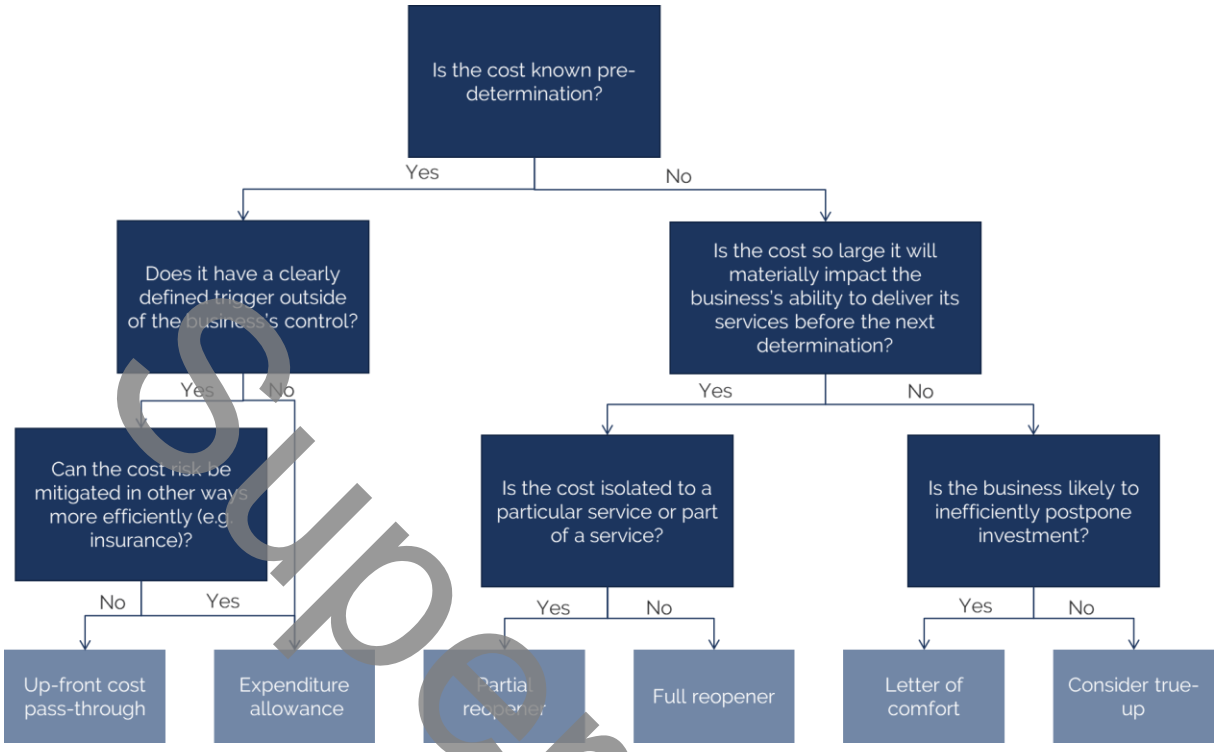
We accepted a request from Sydney Water, Hunter Water and WaterNSW to postpone their scheduled 2024 price reviews for one year. This provided the businesses with more time to prepare pricing proposals under the 3Cs framework. It also meant prices would be held constant in nominal terms from 1 July 2024 to 30 June 2025 (i.e. there would be no adjustment by CPI during that period). There was a provision to this effect in the existing price determinations.

Some businesses queried whether a partial re-opener could be used to adjust prices by CPI where a price review is postponed. In our view, it would be preferrable for businesses to take a more proactive approach on this issue where possible, rather than seeking a partial re-opener. That is, when preparing their pricing proposals, they could propose we include inter-period price movements in their price determinations. They could also propose long-term price paths, where they are underpinned with long-term investment planning and supported by customer engagement (see **Chapter 4** for further information).

Under our 3Cs framework, we are open to engaging with businesses to develop more flexible price determinations. This could allow water prices to be more responsive to unforeseen circumstances where it supports long-term customer outcomes.

If businesses wish to propose a custom price path to take effect after a determination has reached the end of its term, this should be considered in full in the price review process and account for all factors that affect prices (not only CPI). Businesses would need to engage and gain customer support for their proposal. We would expect the business proposal to explain why the price path is reasonable, how the price path promotes customer value, and what adjustment are being requested.

Figure 5.2 What tools are available to manage changing revenue needs?



Case study 4 provides an example of how businesses could use our 3Cs framework to manage their revenue risks.

Box 5.4 Case study: Using the 3Cs framework to manage revenue risks

In this hypothetical example, a business is concerned that a regulatory change could take place during the determination period, leading to an increase in its operating and capital costs from those factored into prices (or revenues). It proposes a cost pass-through for this risk be included in its price determination.

Our starting point is that, in a competitive market, no business can automatically pass onto customers all unexpected cost increases. They need to look carefully at how they minimise the impact on customers,

Allowing businesses to automatically pass on the full amount of unexpected cost increases is risky. It takes away the incentive for them to do what they can to avoid the increase and minimise its impact on customers. These incentives are important to the long-term interests of customers.

We would likely review the pricing proposal to understand how the cost pass-through shares revenue risk in a way which promotes the long-term interests of the business's customers. This may involve us considering how it attempts to retain incentives to:

Box 5.4 Case study: Using the 3Cs framework to manage revenue risks

- undertake long-term planning to mitigate risks, and
- seek out ways to minimise their impacts on customers.

In previous price reviews, we have decided to not include cost pass-throughs for regulatory changes. A key concern was that businesses may be able to actively influence the trigger event and/or the resulting costs of regulatory changes. We found that it was preferrable for the business to retain some of the risk, so it had an incentive to advocate for the most efficient solution.

If an unexpected event like a regulatory change does have a large negative impact on a business's financial position, it may be more appropriate for it to request an early price review (i.e. a full or partial re-opener). In this case, the business would need to demonstrate that these unforeseen cost changes materially impact its capacity to carry out its services.

5.2 Additional ways to manage changing revenue needs

In this section we outline the specific circumstances where we consider the following tools and adjustments that could be used to appropriately reflect the outcomes of competitive markets:

1. accelerated depreciation
2. annuities
3. escrow accounts
4. modest changes to asset lives.

The 3Cs framework provides the 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 (see Appendix A). We consider 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.

5.3 Managing revenue risks and financial incentive arrangements

Under the 3Cs framework, we have introduced 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 mechanisms include expenditure incentive schemes for operating expenditure (an operating expenditure benefits sharing scheme or 'EBSS') and capital expenditure (a capital expenditure sharing scheme or 'CESS'). **Chapter 6** discusses the financial incentive arrangements in more detail.

Businesses requested additional guidance on how the EBSS and CESS would factor in cost pass-throughs, re-openers or true-ups. Our view is that:

- If a **cost pass-through** is triggered, the expenditure allowance used in the EBSS and CESS calculations would be adjusted for that pre-determined cost pass-through amount.
- If the price determination is **fully** or **partially re-opened**, the expenditure allowance used in the EBSS and CESS calculations would be adjusted for any additional costs permitted through the re-opener process.

  In each case, we would compare the business's actual costs with the revised expenditure allowance (i.e. as adjusted by either a cost pass-through or re-opener), rather than the initial expenditure allowance in the price determination.
- If we include a **true-up** for operating expenditure not reflected in the previous opex allowance (e.g. cost of debt true-up, energy costs true-up) in the new opex allowance, this new opex allowance is used in the EBSS calculations for that determination period.

This issue is discussed in further detail in section 6.3.5.

5.4 Supporting information

Where a business proposes a revenue risk management tool in its pricing proposal, we would expect this to be supported with information about how the tool aligns with the 3Cs framework.

> The business would demonstrate how the tool is designed to address the risk of changing revenue needs, while also promoting the long-term interests of customers and maintaining an incentive for it to seek out efficiencies.

As part of this supporting information, we expect the business to clearly specify:

- The proposed mechanism to adjust prices, and how the price adjustment would work (including the proposed process and/or formula to be used).
- Where the tool is a cost-pass through, how it satisfies each principle in **Figure 5.1**.

Chapter 6

Using financial incentives to drive performance

06

Our 3Cs framework includes 3 financial incentive schemes to reward businesses for improvements on their past performance: the outcome delivery incentives (ODIs) scheme, the expenditure benefits sharing scheme (EBSS), and the capital expenditure sharing scheme (CESS). Incentive schemes reward businesses that outperform their forecasts for operating expenditure (opex), capital expenditure (capex), and/or service delivery, encouraging businesses to continuously improve customer value over the medium to long term.

Businesses can include the incentives package in their pricing proposal. The rewards and penalties under the schemes are calculated at the end of the determination period based on performance during the period, with adjustments made to revenue allowances in the following determination period. Incentive payments can be adjusted to account for changes in forecasts due to cost pass-throughs or other revenue risk management tools (as explained in **Chapter 5**).

The following sections explain in detail how the financial incentive schemes operate within our 3Cs framework. A spreadsheet model is available on the IPART website here.

6.1 When are these schemes to be applied?

The incentive schemes are an important part of the water regulatory framework. The EBSS and CESS ensure the fair sharing of the risks associated with under and over expenditure between businesses and consumers, while ODIs promote service outcomes that deliver customer value.

The incentive schemes add complexity to the regulatory framework and require water businesses to have a good understanding of their future expenditure needs. In addition, for the incentives to be effective, the water businesses will also need appropriate systems and processes to effectively control expenditures.

Each water business should consider whether it would like to be subjected to the financial incentive schemes as part of its next determination proposal.

In considering this, each water business should consider the various design elements that have been put in place to limit the financial risk and uncertainty associated with implementing the schemes during the first determination period. These have been put in place to facilitate introducing the incentive schemes, while businesses develop both an understanding of the incentives they create, as well as the systems and processes required to respond effectively to the incentives.

Once the incentive schemes have been implemented for a water business, there is an expectation that they will continue for subsequent determination periods. There may be circumstances where the schemes may need to be removed or amended which will be explored with the business at the time.

All businesses submitting a pricing proposal to IPART can decide whether or not to include financial incentives, irrespective of the grade of their self-assessment. However, we expect that the incentive schemes will be applied in the initial determination period by businesses with self-assessed Advanced or Leading regulatory proposals. Generally, for a proposal to be assessed as Advanced or Leading, the business will need to demonstrate strong commitment to customer value improvement, confidence in efficient expenditure forecasts, and capacity to manage risks. Effective use of financial incentives requires these same capabilities from a business, while simultaneously serving as a powerful tool to improve on them.

An Advanced or Leading business deciding not to implement the incentive schemes as part of its proposal (without a compelling reason for their exclusion) could signal lower confidence in its efficient expenditure forecasts or ability to deliver customer outcomes. In this case, it is likely that we will conduct a targeted expenditure review in determining appropriate revenue requirements for the determination period. This is discussed in more detail in section 2.2.4). We expect that Standard proposals would need to make a strong case for the inclusion of incentive schemes. Businesses self-assessing their proposal as Standard would need to provide us with confidence that expenditure proposals reflect efficient costs, and that their internal systems and processes have a strong cost efficiency perspective and are able to respond effectively to the incentive schemes.

We intend to review the operation of the incentive schemes after the first round of implementation and will consult on any proposed improvements to the schemes.

6.2 The schemes work together to provide a package of incentives

A key design feature of the schemes is that they work together to provide a suite of incentives to promote customer value. Businesses that decide to introduce financial incentives with their proposal must include all 3 schemes. We consider that when the 3 schemes are applied together, they work to create a balance by encouraging businesses to fully consider the offsetting outcomes in the other schemes. This will provide the best outcomes and consumer protections, minimising the opportunity to pursue incentive scheme payments under just one scheme.

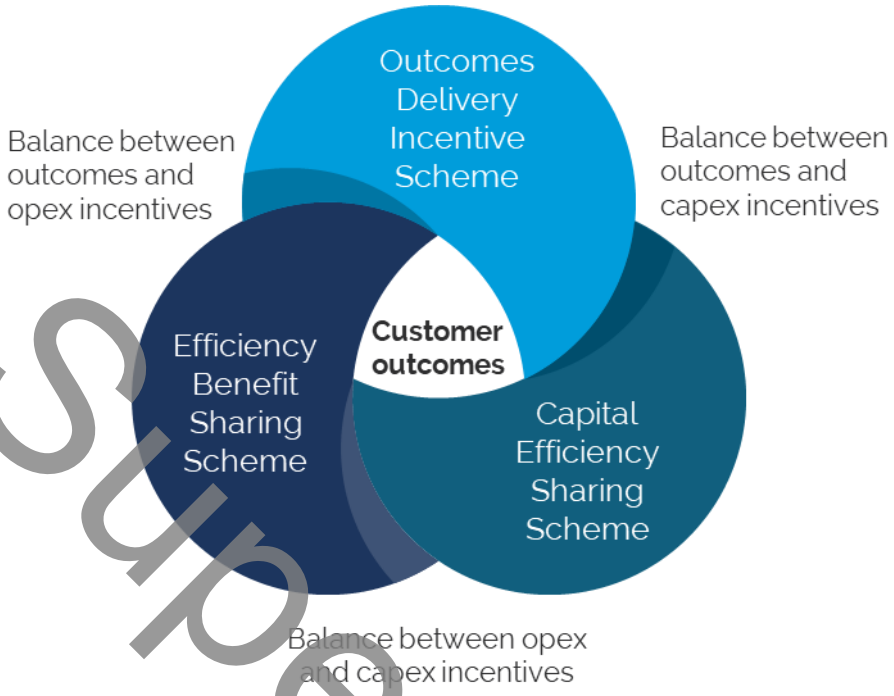
For example, consider a business that seeks to maximise financial rewards by under investing in the business, by delaying replacement or other capital expenditure that would be considered necessary to maintain service outcomes. While this approach would result in a financial reward through the CESS, we would expect that over time the business will likely suffer worsening service performance outcomes over time.

In this example, any financial benefit of reducing capital expenditure will be offset by penalties through the ODI because of poorer performance outcomes over time. It follows that by providing a package of incentives, it minimises the potential for a water business to undertake unwarranted cost savings.

Similarly, by having both opex and capex efficiency schemes, there is little financial reward, and so incentive, for businesses to shift expenditure between operating and capital expenditure, unless this delivers an overall efficiency benefit.

Figure 6.1 demonstrates how the 3 schemes work together.

Figure 6.1 The 3 financial incentive schemes work together



Businesses that access financial incentives will be subjected to all 3 schemes. Rewards and penalties will be calculated under each scheme, but net payments will be calculated globally and applied to the NRR for the following determination period.

6.3 Common features of the 3 financial incentive schemes

Broadly, each financial incentive scheme calculates:

1. The 'gain' or 'loss' for that expenditure or outcome delivery category, based on the difference between actual and forecast values.
2. The share that should be retained by the business (20%)
3. To what extent the business has already received a gain or loss within the determination period.
4. The difference between (2) and (3), which is then retained by the business in the following determination period.

6.3.1 Applying a consistent 20% share with a net present value approach

The 3 incentive schemes allow the business to retain a 20% share, in Net Present Value (NPV) terms, of improvements in outcome delivery targets and/or cost efficiency.

The sharing ratio of 20% limits the exposure that businesses face to over expenditure in both opex and capex. In setting the ratio at 20%, we considered our role in protecting the interests of consumers and balanced this with the need to provide incentives for the water businesses on financial rewards and penalties.

Practically, the 20% sharing ratio has the effect of sharing both risks and rewards in a fixed ratio with consumers. For example, and as explained in detail below, if a water business's opex exceeds expectations, then the business incurs 20% of the additional cost, with the remaining 80% being borne by consumers. Symmetrically, 20% of cost efficiency savings are kept by the business with the remaining cost efficiency being shared directly with consumers.

This approach contrasts to the sharing of efficiency gains or expenditure overruns under the previous regulatory framework. Previously, 100% of any operating expenditure overruns would be borne by the business.

On balance, IPART believes that a 20% sharing ratio provides an appropriate balance of expenditure risk sharing between consumers and the water businesses.

For the EBSS and ODIs, efficiency gains (or losses) in each year of the determination period are valued in perpetuity; the total efficiency gain (or loss) for a determination period is then calculated as the sum of the present values of these gains. With this NPV approach, temporary fluctuations net out, in present value terms, to reveal genuine long-term efficiency gains over time.

In determining the long-term benefits of any incremental over (under) performance, IPART uses the prevailing real post tax WACC to discount future benefits.

6.3.2 Gains and losses passed through to customers at the end of each determination period

All payments are paid out at the end of each determination period, rather than at the end of each year within the determination period. Said another way, the incentive schemes do not change the revenue requirements within the determination period that it is implemented. For the first determination period that the schemes apply, there will be no difference in cash flows or revenues compared to the business's existing determination period.

This is because, the financial adjustments resulting from the application of the incentives schemes will be applied in the subsequent determination period, based on outcomes during the former determination period.

This design approach will also ensure that the rewards and penalties resulting from the incentives schemes can be applied in a manner that smooths revenue implications over the next determination period. This will allow the business to manage any cashflow implications that might arise, while minimising the year-on-year change to customer prices.

We lag payments by a year, meaning that at each review, each scheme will cover the gains or losses from the final year of the preceding determination period up to and including the penultimate year of the current period (which is the last year of known expenditure). The expenditure or service quality in the final year of a determination period is a forecast which means that it would not be appropriate to use for incentive payments. In other words, the final year of the current determination period is included in incentive payments for the following determination period.

The calculated incentive payments are then reflected in a constant adjustment to revenue in the following 5-year determination period. The total reward or penalty amount is converted into a real annuity, and each instalment is added to (or subtracted from) the revenue requirement for each year of the following period.

6.3.3 The business proposes a cap on the revenue adjustment across the 3 schemes

The size of the overall revenue adjustment associated with all the financial incentive schemes will be capped at a fixed amount. This has the practical effect of limiting the amount by which the incentive schemes will affect the revenues of the business and the impact on consumers.

The total cap on incentive payments applies globally across the 3 schemes. That is, if there is a cap equivalent to 1% of the revenue requirement for the determination period, an individual scheme could have a gain or loss greater than 1% as long as the total payment or loss across the 3 schemes is within the cap.

At each price review, IPART will determine the specific cap on the revenue adjustment across the 3 schemes. As a default, the limit for the combined incentive payment would be 1% of the revenue requirement over the determination period. Businesses may propose we adopt a cap that is different from this default. In determining the cap, we will take into account the specific circumstances of the business, and the anticipated risks involved with implementation of the financial incentive schemes.

If the business reaches the cap within the determination period, it will still be rewarded for additional efficiencies throughout the period. That is, it would still retain any share of additional efficiencies (or costs) based on standard building block incentives.

Water businesses may propose to cap the revenue adjustment for individual incentive schemes. However, there would need to be a compelling justification for capping the revenue adjustment from a subset of the incentive schemes, given IPART's intention for the incentives to operate as a package to provide appropriate incentives to promote customer value.

6.3.4 Water businesses can choose to exclude certain capital expenditure from the CESS

All regulatory frameworks rely on the ability for the business to reliably forecast future capital expenditure needs. This is to avoid rewards or penalties inherent in the framework from being driven by unanticipated changes in capital expenditures, due to unanticipated and unavoidable circumstances.

The financial incentive schemes also rely on businesses being capable of forecasting future capital expenditures with a reasonable degree of reliability.

To assist water businesses with implementing the incentive schemes in its first determination period, water businesses can propose to exclude certain capital expenditure categories from the application of the CESS.

The water businesses will need to propose what capital expenditure categories are to be excluded from the operation of the CESS, and satisfy IPART that:

- There is a strong likelihood that actual capital expenditure for the specified category will differ materially from forecast.
- The business is putting in place steps to improve its capacity to forecast the category of capital expenditure for the next determination period.
- Any anticipated penalty arising from the CESS would have a material impact on the financial outcomes of the business.

While we are open to proposals from a business to exclude a cost or project from the CESS, our default position is not to exclude costs. We expect it is unlikely for a project to be sufficiently certain to include a cost allowance (i.e., a cost sufficiently certain to ask customers to pay for it), but sufficiently uncertain that providing a symmetric incentive for the business to deliver it more efficiently is not appropriate.

To the extent that a default cap on the size of the revenue adjustment is in place (discussed above), then we would expect that there will be a reduced case for excluding capital expenditure categories. Ultimately, the balance between the various design elements to manage risks is a matter for each business to consider and will be subject to our review and approval.

Critical to accepting capital expenditure exclusions is a plan for the water businesses to improve forecasting capabilities for the proposed excluded capital expenditure categories. This reflects the desirability of removing any capital expenditure categories from being excluded in subsequent determination periods.

6.3.5 Exclusions to forecast costs for uncertain and unforeseen expenditure by exception

If we agree to a cost pass-through (for uncertain costs at the beginning of the determination period) or an ex-post true-up (for unforeseen costs that arise within the determination period), our strong preference is to assess and include a revenue allowance for these costs before they are incurred by the business. This preserves the incentive for the business to efficiently incur expenditure (and avoids IPART reviewing the efficiency of expenditure after it has been incurred).

If a revenue adjustment applies within the period, our financial incentive schemes would apply to the adjusted forecast cost. In general, the steps to calculate the adjusted forecast expenditure allowance are:

1. Set the base opex or capex allowance in the price review.
2. Establish the forecast step change in cost, for relevant years of the determination period, before the costs are incurred
3. If the expenditure is triggered, increase the forecast allowance by the **forecast** efficient costs of the step change
4. At the end of the period, calculate the EBSS or CESS payments on the revised allowance (for the period that it applies).

In the case of a cost pass-through, revenues/prices would also increase by the forecast efficient costs of the step change within the determination period. For an ex-post true-up, the present value of the increase in forecast efficient costs would instead be recovered from customer tariffs in the following period.

Alternatively, there may be cases where IPART needs to assess the efficiency of a step change in costs at the end of the period. For example, if there is a large, uncertain capital project which may happen well into the future, reliable cost forecasts may not be available at the beginning of the period. In this case, when calculating the EBSS or CESS payments at the end of the period, we would adjust forecast costs by the actual efficient costs of the step change. We would:

1. Set the base opex or capex allowance in the price review
2. Establish the actual efficient step change in cost, for relevant years of the determination period, at the end of the regulatory review
3. Revise the forecast opex or capex allowance by the **actual** efficient costs of the step change.
4. Calculate the EBSS or CESS on the revised opex or capex allowance (for the period that it applies).
5. Separately to the incentive schemes, adjust revenue/prices (in present value terms) for the actual efficient costs.

The first 4 steps effectively exclude the step change in costs from the EBSS or CESS. This approach requires IPART to assess efficient costs after they have been incurred, which is not our preference.

6.4 Operating expenditure benefits sharing scheme (EBSS)

Our EBSS allows for temporary and permanent opex reductions or increases to be shared with customers, regardless of when they occur during a regulatory cycle (see **Box 6.1**).

Box 6.1 Efficiency benefit sharing scheme – overview

Aim: To promote continuous improvement in opex.

Description: The EBSS provides financial incentives to water businesses to achieve opex savings over the medium to long term. Businesses are rewarded (or penalised) for opex savings (over expenditure) compared to expectations in each year. Businesses receive a benefit (or penalty) based on a share of the cost savings (or overruns).

Key features:

- Incremental gains / losses are measured each year, with the NPV of all gains / losses shared between businesses and customers.
- Adjustments can be made in the penultimate year of a determination period to better align opex forecasts for the base year of the following determination period
- 20% of the gains / losses are shared, with revenues adjusted during the subsequent determination period.

Businesses retain efficiency savings where they incrementally improve opex over the year before. Specifically, the 'gain' or 'loss' is calculated in 2 steps:

- The difference between actual and forecast opex (established with the base-trend-step approach for opex allowances) is calculated in each year.
- The change in that difference is the annual incremental gain or loss used to calculate the EBSS.

The incremental gain across each year of the determination period is used to value the efficiency gains or losses in perpetuity and is retained by the business using the 20% sharing rate.

Practically, this involves:

- Calculating the value of the permanent efficiency gain/loss made by the business under a NPV approach, where a gain/loss in operating expenditure is treated as enduring.
- Applying the scheme from the final year of the preceding determination period (of the period in which the EBSS applies) up to and including the penultimate year of the current determination period.

Under a NPV approach, fluctuations in operating expenditure 'net out' to reveal genuine long-term efficiency gains over time. The present value approach also has regard to the explicit benefits or costs the water business has already incurred.

We may make one-off adjustments to base year operating expenditure to reflect non-recurrent gains or losses which are used as the baseline operating expenditure forecast for the next determination period. This might arise, for example, due to increases in operating expenditure to meet new statutory or operating licence obligations.

The practical steps involved in applying the EBSS are:

- Step 1: Calculate the incremental operating expenditure efficiency gains/losses in each year of the determination period
- Step 2: Calculate the present value of efficiency gains/losses over the determination period
- Step 3: Adjust for within determination period financing benefits
- Step 4: Adjust revenue requirements for the subsequent determination period.

Step 1: Calculate the incremental efficiency gains/losses in each year of the determination period

For the first year of the new incentive framework, the incremental gain/loss in the first year cannot be determined as there is no previous year incremental gain/loss. Instead, the gain/loss in this year is simply the difference between forecast and actual opex.

The formula for determining incremental gains in the first year of the scheme is given by:

$$E_1 = (F_1 - A_1^*)$$

where:

E_1 is the incremental efficiency gain in the first year the scheme applies

F_1 is forecast opex in the first year the scheme applies

A_1^* is actual opex in the first year the scheme applies.

In the second and all subsequent years up to the penultimate year of the determination period, the incremental gains/losses are the difference between actual and forecast operating expenditure in that year, minus the difference between forecast and actual in the preceding year.

$$E_{i,r} = \left(F_{i,r} - A_{i,r}^*\right) - (F_{\mathrm{i-1,r}} - A_{\mathrm{i-1,r}}^*)$$

where:

$F_{i,r}$ is forecast expenditure in year i of determination period r

$A_{i,r}^*$ is actual expenditure in year i of determination period r

$F_{i-1,r}$ is forecast expenditure in year $i-1$ of determination period n

$A_{i-1,r}^*$ actual expenditure in year $i-1$ of determination period n

The formula for efficiency gains in the final period is identical to the methodology above, except for the inclusion of an adjustment factor to allow for the businesses to manually correct base year operating expenditure for forecasting the following determination period.

$$E_{T,r} = \left(F_{T,r} - A_{T,r}^*\right) - \left(F_{T-1,r} - A_{T-1,r}^*\right) + \text{Adjustment factor for non-recurrent base year opex}$$

where:

$Adjustment\ factor$ is the IPART approved adjustment factor as described below.

Adjustments for temporary expenditure in the base year

If a water business experiences material temporary opex changes in the penultimate year of the determination period (i.e., the base year for the next determination period) the businesses may propose to (or we may) apply an adjustment factor to better align opex forecasts for the following determination period. In this case, an adjustment factor is applied to calculations in the penultimate, final and first years of the determination period.

The adjustments can be positive or negative and are removed from efficiency gain calculations.

Efficiency gains in the first year of the subsequent determination period are also adjusted to account for incremental gains made in the final year of the preceding determination period plus any adjustment factor to opex forecasts in the next determination period.

Step 2: Calculate the present value of incremental gains and losses

The second step involves calculating the NPV of the incremental operating expenditure efficiency gains/losses over the entire determination period. This value represents the total efficiency gains or losses to be shared with consumers.

The formula to determine the value of a permanent change to operating expenditure is first:

$$Total\ efficiency\ gain_{i,r} = \frac{Incremental\ efficiency\ gain_{i,r}}{WACC_r} \times (1 + WACC_r)^{0.5} + \sum_{a=i}^{n} Incremental\ efficiency\ gain_{i,r} \times DF_{a,r}$$

and then:

$$Total\ efficiency\ gain_r = \sum_{i=1}^{n} Total\ efficiency\ gain_{i,r}$$

where:

r is the current determination period

n is the length of the current determination period in years

i is a year within the current determination period

$\text{Total efficiency gain}_r$ is the NPV in perpetuity of the incremental permanent change to operating expenditure for the determination period r

$\text{Total efficiency gain}_{i,r}$ is the NPV in perpetuity of the incremental permanent change to operating expenditure for year i of the determination period r adjusted for the assumed mid-year timing of cash flows

$\text{Incremental efficiency gain}_{i,r}$ is the incremental operating expenditure efficiency gain in year i of the determination period r

$DF_{i,r}$ is the mid-year discount factor in year i of the determination period r

$WACC_r$ is the post-tax WACC for the regulated water business over the determination period r.

While fluctuations in opex net out over time, the financing reward associated with the timing of opex is retained by the business at a 20% sharing rate.

Step 3: Adjust for within period financing benefits

If the business underspends (overspends) its opex allowance within a determination period, it incurs financing benefits (costs) because it has outperformed its forecast opex allowance. Therefore, total opex efficiency gains/losses are adjusted to reflect benefits/costs which the business received during the determination period.

IPART assumes that opex gains/losses are incurred in the middle of the year and subsequently adopts a mid-year discount rate.

$$Net\ financing\ benefit = \sum_{a=\mathrm{i}}^{n} \frac{(F_i - A_i)}{(1 + WACC_r)^{\mathrm{a}-n-0.5}}$$

where:

n is the length of the current determination period in years

i is a year within the current determination period

F_i is the operating expenditure allowance for year i

A_i is the actual operating expenditure for year i, and

$WACC$ is the mid-year post-tax WACC for the regulated water business in determination period r.

The net financing benefit is the sum of financing benefits incurred across the determination period weighted by the appropriate mid-year discount rate.

Step 4: Adjust next period revenue requirements

The incentive payments are made as a constant adjustment to the revenue requirement used to determine maximum prices in the following determination period. The adjustment reflects the NPV of the incentive mechanism payments at the end of the previous determination period. This is calculated through the following steps:

- first, calculate the efficiency gain (loss) to be retained by the business by multiplying the calculated total efficiency gain over the determination period by the sharing ratio (i.e. 20%)
- second, subtract the within period financing benefits (losses) that the business has already incurred during the determination period from the total efficiency gain
- the resultant amount is the total EBSS incentive amount to be paid to the business
- finally, convert the EBSS incentive amount to a real annuity to smooth its impact on the revenue requirement for the subsequent determination period.

EBSS worked example with spreadsheet

Our spreadsheet provides a template for all 3 incentive schemes and shows how to calculate the overall payments to be received/borne by a business. The spreadsheet includes options for all the adjustments mentioned above (cost pass-throughs, penultimate year adjustments, capex deferral). It also automatically applies a 1% global cap when calculating overall incentive payments.

The image in the next page shows how the calculation steps outlined above for the EBSS are applied in our template, by connecting each equation with the relevant cell.

Incremental gains in the first year $E_1 = (F_1 - A_1^*)$

$E_{i,r} = (F_{i,r} - A_{i,r}^*) - (F_{i-1,r} - A_{i-1,r}^*)$ Incremental gains from second to penultimate year

F

A

		Determination period 1				
FY ending 30 June		2026	2027	2028	2029	2030
Financial year		2025-26	2026-27	2027-28	2028-29	2029-30
Year of regulatory period		1	2	3	4	5
Base opex allowance	$ million	100.00	100.00	100.00	100.00	100.00
Cost pass-through adjustment	$ million	0.00	0.00	0.00	0.00	0.00
Ex-post allowed opex	$ million	100.00	100.00	100.00	100.00	100.00
Actual opex	$ million	100.00	100.00	90.00	90.00	90.00
Underspend	$ million	0.00	0.00	10.00	10.00	10.00
Incremental efficiency gain	$ million	0.00	0.00	10.00	0.00	0.00
Discount rate (Real vanilla WACC)	%	4.0%	4.0%	4.0%	4.0%	4.0%
Discount factor (mid-year)	index	1.19	1.15	1.10	1.06	1.02
Financing benefit	$ million	0.00	0.00	11.03	10.61	10.20
Previous reg period year 5 benefit	$ million	-	-	-	-	-
Year 1 benefit	$ million	0.00	0.00	0.00	0.00	0.00
Year 2 benefit	$ million	-	0.00	0.00	0.00	0.00
Year 3 benefit	$ million	-	-	11.03	10.61	10.20
Year 4 benefit	$ million	-	-	-	0.00	0.00
Perpetuity value in year of efficiency gain	$ million	0.00	0.00	254.95	0.00	na
Total efficiency gain (NPV end of year 5)	$ million	0.00	0.00	286.79	0.00	na
check = 0		-	-	-	-	
Base year adjustment	$ million	na	na	na		

Incremental gains in final year

$E_{T,r} = (F_{T,r} - A_{T,r}^*) - (F_{T-1,r} - A_{T-1,r}^*)$

+ Adjustment factor for non-recurrent base year opex

EBSS calculation (post-adjustment)

NPV total efficiency gain	$ million	286.79
Relevant sharing ratio		20.0%
Consumer share	$ million	229.43
Business share	$ million	57.36
Total business financing benefit	$ million	31.83
NPV of EBSS payments (post-adjustment)	$ million	**25.52**
NPV of EBSS payments at 30 June 2030, $2024-25	$ million	**25.52**

$$Total\ efficiency\ gain_{i,r} = \frac{Incremental\ efficiency\ gain_{i,r}}{WACC_r} \times (1 + WACC_r)^{0.5} + \sum_{a=i}^{n} Incremental\ efficiency\ gain_{i,r} \times DF_{a,r}$$

$$Net\ financing\ benefit = \sum_{a=i}^{n} \frac{(F_i - A_i)}{(1 + WACC_r)^{a-n-0.5}}$$

6.5 Capital expenditure sharing scheme (CESS)

Under our CESS, gains and losses are calculated based on the difference between forecast and actual capex. The business ultimately retains a 20% share of the net present value of an over- or underspend, regardless of when in the determination period the underspend is made (see **Box** 6.2).

Box 6.2 Capital efficiency sharing scheme – overview

Aim: To promote continuous improvement in capital expenditure.

Description: The CESS provides financial incentives to water businesses to achieve capital expenditure savings over the medium to long term. Businesses are rewarded (or penalised) for capital expenditure savings (over expenditure) compared to expectations in each year. Businesses receive a benefit (or penalty) based on a share of the cost savings (or over runs).

Key features:

- Water businesses can propose expenditure categories to be excluded from the scheme, with IPART approving the proposal based on criteria (see section 6.3.4).
- Capital efficiencies or overruns are calculated each year by comparing actual to forecast capital expenditure.
- The NPV of those efficiencies and overruns are shared between customers and the business.
- The benefits / penalties result in adjustments to the revenue requirement for the next determination period.

To account for the possibility that businesses may inappropriately defer capital expenditure into subsequent determination periods, where a project is deferred and cost forecasts materially increase on a NPV basis, an adjustment will be made to the incentive payments to exclude the value associated with the forecast increase in capital expenditure. This adjustment will provide a disincentive to defer capital expenditure to the next determination period to make a financial gain in the current determination period.

The practical steps involved in applying the CESS are:

- Step 1: Calculate efficiency gains and losses
- Step 2: Estimate the capital expenditure efficiency gains / losses over the determination period
- Step 3: Adjust for within determination period financing benefits already received by the business
- Step 4: Adjust for the deferral of capital expenditure
- Step 5: Adjust revenue requirements for the subsequent determination period.

Step 1: Calculate efficiency gains and losses in each year of the determination period

Efficiency savings/costs are calculated as the difference between actual and forecast capex:

$$E_{y_i} = F_{y_i} - A^*_{y_i}$$

where:

E_{y_i} is the capex efficiency gain/loss in year i

F_{y_i} is the forecast capex allowance in year i

$A^*_{y_i}$ is actual capex in year i

Capex efficiency savings/costs are regarded as one-off cost savings and are not calculated as a permanent reduction.

Step 2: Estimate the present value of capital expenditure efficiency gains/losses over the determination period

The NPV is calculated using the water businesses' WACC for the subsequent determination period.

Under the CESS, the present value of an efficiency gain is calculated as the sum of variations between actual and forecast capital expenditure, weighted by a discount factor to reflect the time value of money associated with a saving at each point in time.

$$PV\ capital\ efficiency = \sum_{i=1}^{p} \frac{(F_i - A_i)}{(1 + WACC_r)^{i-p-0.5}}$$

where:

p is the length of the incentive calculation period

i is a year within the current incentive calculation period

F_i is the capital expenditure allowance for year i

A_i is the actual capital expenditure for year i

$WACC$ is the mid-year post tax WACC that is applied during the determination period.

Step 3: Adjust for within determination period financing benefits

If a water business underspends (overspends) its capital expenditure allowance across a determination period, it will incur financing benefits (costs) associated with the timing of capital expenditure. Therefore, total capital expenditure efficiency gains are adjusted to reflect financing benefits that are assumed to be received as a mid-year cashflow.

In the first year of the underspend the business only recovers the proportion of the return of capital expenditure incurred in that year as specified in the building block model (which is 50%). In following years, the business will retain a full year of benefit calculated as the underspend multiplied by the allowed rate of return.

$$Financing\ benefit_i = 50\% \times \frac{WACC_r}{(1+WACC_r)^{0.5}} \times (F_i - A_i) + \sum_{a=i+1}^{n} \frac{WACC_r \times (F_i - A_i)}{(1+WACC_r)^{0.5}}$$

$$Total\ financing\ benefit = \sum_{i=1}^{n} Financing\ benefit_i$$

where:

n is the length of the current determination period in years

i is a year within the current determination period

F_i is the capital expenditure allowance for year i

A_i is the actual capital expenditure for year i

WACC is the real rate of return in the current determination period.

The net financing benefit in each year of the determination periods is then brought forward to the end of the determination period using a mid-year present value discounting factor.

The net financing benefit is added to total efficiency payments and shared with the business at a rate of 20% provided no additional adjustments are made for the deferral of capital expenditure.

Step 4: Adjust for the deferral of capital expenditure

Capex incentive mechanisms encourage businesses to efficiently defer capex. However, in some circumstances the deferment may be into subsequent determination periods. To account for this, the capex incentive mechanism provides an adjustment for the deferral of capex.

The deferment adjustment operates by adding deferred capex into the subsequent period, which is then included in NPV terms into the calculation of the present value of the efficiency gain or loss. Consequently, the efficiency gain from deferring capex is equal to the time value of money rather than the value of avoiding the expenditure.

Adjustments for deferred capex are made if:

- the amount of the deferred capex in the current determination period is material
- the amount of the estimated underspend in capex in the current determination period is material, and
- the total approved forecast capex in the next determination period is materially higher than would have been the case if the capex was not deferred in the current determination period.

Under certain circumstances, the deferment of capital expenditure may result in financing benefits for the business at the expense of consumers (even after accounting for the sharing of efficiency savings).

Water businesses can apply to exclude exceptionally large capital expenditure projects from the incentive mechanism where deferment is unlikely to be in consumer interests despite financing or efficiency gain benefits. For example, directives to address a major supply event may need to be excluded from the incentive mechanism to avoid complications surrounding optimal timing and the impact on incentive payments.

Step 5: Adjust revenue requirements for the subsequent determination period

The incentive payments are made as a constant adjustment to the revenue requirement used to determine maximum prices in the following determination period. The adjustment reflects the NPV of the incentive mechanism payments at the end of the previous determination period.

The CESS annual incentive payment is calculated by:

- first, multiplying the present value of the capital efficiency over the determination period by the sharing ratio (i.e. 20%)
- second, subtracting the within period financing benefits (losses) that the business has already gained during the determination period to determine the CESS total incentive payment, and
- finally, calculating a real annuity to ensure the business's adjusted revenue requirement reflects the CESS total incentive payment.

CESS worked example with spreadsheet

The image in the next page shows how the calculation steps outlined above for the CESS are applied in our template, by connecting each equation with the relevant cell.

Efficiency gains in the first year $E_{y_i} = F_{y_i} - A^*_{y_i}$

$$Financing\ benefit_i = 50\% \times \frac{WACC_r}{(1+WACC_r)^{0.5}} \times (F_i - A_i) + \sum_{a=i+1}^{n} \frac{WACC_r \times (F_i - A_i)}{(1+WACC_r)^{0.5}}$$

Determination period 1

	Financial year		2025-26	2026-27	2027-28	2028-29	2029-30
	Year of Determination period		1	2	3	4	5
	Assumed proportion of capex earning a return on capital in year incurred	50.0%					
F	Base capex allowance	$ million	100.00	100.00	100.00	100.00	xx.xx
	Cost pass-through adjustment	$ million	0.00	0.00	0.00	0.00	0.00
	Ex post capex allowance	$ million	100.00	100.00	100.00	100.00	xx.xx
A	Actual capex	$ million	100.00	100.00	90.00	90.00	xx.xx
	Underspend	$ million	0.00	0.00	10.00	10.00	0.00
	Financing benefit	$ million	0.00	0.00	0.20	0.59	0.78
	Year 1 benefit	$ million	0.00	0.00	0.00	0.00	0.00
	Year 2 benefit	$ million	-	0.00	0.00	0.00	0.00
	Year 3 benefit	$ million	-	-	0.20	0.39	0.39
	Year 4 benefit	$ million	-	-	-	0.20	0.39
	Year 5 benefit	$ million	na	na	na	na	na
	Discount rate (Real vanilla WACC)	%	4.0%	4.0%	4.0%	4.0%	4.0%
	Discount factor (mid-year)	index	1.19	1.15	1.10	1.06	1.02
	PV capital efficiency	$ million	0.00	0.00	11.03	10.61	na
	NPV financing benefit	$ million	0.00	0.00	0.22	0.62	0.80

Deferrals to Determination period 2

Year	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35
Year of Determination period	5	1	2	3	4	5
Discount rate (Real Vanilla WACC)	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
Discount factor (mid year)	1.02	0.98	0.94	0.91	0.87	0.84
Increase in forecast capex in Determination period 2 attributable to capex deferred in Determination period 1	0.00	0.00	10.00	0.00	0.00	na
NPV of increase in forecast capex from deferred capex	0.00	0.00	9.43	0.00	0.00	na

CESS calculation (post-adjustment)

Total underspend adjusted for deferrals (NPV, excluding year 5)	$ million	12.21
Relevant sharing ratio	$ million	20%
Consumer share	$ million	9.77
Business share	$ million	2.44
Total business financing benefit (NPV)	$ million	1.64
NPV of CESS payments (post-adjustment)	$ million	**0.80**

$$PV\ capital\ efficiency = \sum_{i=1}^{p} \frac{(F_i - A_i)}{(1+WACC_r)^{i-p-0.5}}$$

6.6 Outcome delivery incentives (ODIs)

The ODI scheme ties financial rewards and penalties to the delivery of key customer outcomes that promote customer value (**Box 6.3**). 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 20% of the value it has delivered to customers from a change in performance.

Box 6.3 Outcome delivery incentive scheme – overview

Aim: To promote service level outcomes as agreed with customers.

Description: ODIs are identified and agreed through engagement between businesses and customers. A water business would propose metrics for each ODI, with it receiving incremental rewards or penalties in the subsequent determination period for incremental improvements or deteriorations in outcomes during the determination period.

Key features:

- Each business proposes ODIs that align with service outcomes derived through customer engagement.
- Improvements or deteriorations in performance are calculated incrementally each year such that resulting financial rewards or penalties are measured in the year when the performance change first occurred.
- The method for valuing benefits is to be proposed by the business and agreed by IPART.
- Business retains 20% of the value from incremental outcome improvements achieved over time.
- Businesses are penalised 20% of the value of worsening performance outcomes.

As an example, customers may be particularly concerned about water leakages causing disruptions in a particular area. Despite this, the business is meeting its licence requirements. Given the customer feedback, the business identifies the benefits and costs of addressing the problem, the associated performance metric outcome desired, and an associated incentive payment.

6.6.1 We review proposed ODIs via a set of principles

Each ODI is calculated based on the value that customers ascribe to a change in the level of performance for that outcome. Therefore, how customer value is measured is important to ensure that the ODI promotes genuine improvements in customer value. We ask each business to review proposed ODIs against the following principles.

- **Outcome performance needs to be readily measurable, influenced by expenditure, and create customer value**. The outcomes chosen should be those which the business commits to improve. Outcome performance should be predominantly within the business's control, in that changes in expenditure should lead to changes in the expected level of performance in the right direction, notwithstanding temporary fluctuations. There also needs to be a direct link between changes in the level of performance and customer value.
- **The baseline level for the outcome should be well-justified**. The starting baseline level for the outcome should be justified against the business's past performance, customer preferences and value, and/or operating licence standards. IPART considers this baseline level when deciding on the business's grading.
- **Methods used to estimate customer value should be reasonable and robust.** The business should demonstrate it has used suitable methods for estimating the benefit to customers of changes in performance. This is particularly important if the business is proposing out/under performance targets or if the baseline target is being used to substantiate an advanced or leading grading.

  The information on customers' preferences that is used to guide baselines and ODI payments needs to be unbiased, up-to-date and accurate. Methods to estimate customer value should consider, or weight, a range of appropriate estimates, and be verifiable. They will depend on the exact outcome that has been proposed, but could include academic studies, industry benchmarks, willingness to pay studies, or estimates of the 'opportunity cost' of a change in performance.

  In the absence of explicit measures of customer value, businesses should be able to demonstrate that customers are aware of the likely costs of achieving performance outcomes and are happy to accept the likely bill impact associated with that outcome.

  Customers should also be consulted on over/under performance payment rates for each new regulatory cycle based on the business's current performance.

- **ODIs should be succinct and not overlap.** The number of ODIs should be succinct and assigned to key outcomes. We strongly recommend fewer than 10.

  Businesses should outline how they have considered any spill-over impacts of higher performance for each outcome. However, if higher performance on one outcome could be met at the expense of lower performance on another, there is a case for including both outcomes. For example, an ODI for both reducing leakage and improving water pressure may be acceptable as there may be both positive and negative cross-over impacts from addressing either outcome.

The outcomes and ODIs do not replace operating licence conditions. The role of the operating licence is to set minimum protection for customers and ensure reliable services. ODIs and outcome targets aim to 'optimise' service levels, across the customer base, and allow businesses to reveal efficient levels of service provision, given customer preferences. Some operating licence conditions are more tenable for customer preferences than others. For example, drinking water quality standards which have health implications are less amenable to adjustments, but wastewater quality or reliability service levels may be informed by customer preferences.

6.6.2 Customer value drives how incremental gains and losses are calculated

As noted above, the value to customers for a change in performance drives the calculation of ODIs.

Once this value has been established, 20% of the 'gain' or 'loss' is then retained by the business. How customers value an increase or decrease in performance also determines how we calculate incremental gains and losses. If customers are affected by a change in outcome performance each year, then incremental gains and losses should be calculated as permanent gains or losses, similarly to the EBSS. In a sense, performance is 'recurrent', like operating costs. We expect most customer outcomes (e.g. leakage) to fall under this category. However, if a change in performance only affects customers in a single period, or small number of years, the ODI should be calculated as temporary gains or losses, similarly to the CESS. We expect fewer customer outcomes to fall under this category.

Finally, regardless of how within-period gains and losses are calculated, for ODIs no adjustment is needed to calculate the within period benefit/cost retained by the business. Instead, any costs (or cost savings) for higher (or lower) levels of performance are incurred (and valued) through the EBSS and CESS.

6.6.3 We can consider adjustments for year-to-year volatility

As noted above, we calculate payments, or return of revenue, every 5 years at the end of each determination period. This should smooth year-to-year volatility that may affect performance for a customer outcome in a particular year.

We are also open to calculating ODI payments based on a moving average of actual performance, relative to forecast performance. This would further smooth how gains or losses are shared between the business and its customers.

6.6.4 We can consider limits to payments for individual ODIs

While the total cap on incentive payments applies globally across the 3 financial incentive schemes, we may consider whether a limit on payments should apply for an individual ODI, on a case-by-case basis. For example, this may be appropriate where performance below a certain point would imply non-compliance with operating licence conditions, or it implies a negative value for leakage.

6.6.5 Practical application of an ODI – waterway health

To explain the practical application of an ODI, we have developed a waterway health outcome example. Importantly, this example is intended to be illustrative for the purposes of explaining the practical application of an ODI, and so should not be taken as an example that should be adopted by water businesses.

In this example, a water business has decided to reduce the number and impact of sewage overflows into waterways within its area of operations, beyond any requirements in its operating licence. The aim of this service outcome will have been identified through customer engagement and is supported by evidence about the value customers place on reducing the number of incidents to improve waterway health.

Under this ODI, the water business would measure the incremental reduction/increase in a metric related to sewerage overflow incidents. The ODI would reward the business for economically efficient investments that reduced the number and duration of sewerage overflow incidents each year.

The key steps in applying this example waterway health ODI are:

- Step 1: Determine the baseline forecast level of sewage overflow incidents based on the operating licence (or other regulatory requirements) over the determination period and discussions with customers
- Step 2: Estimate the incremental change in the number and impact of sewage overflow incidents over the determination period
- Step 3: Calculate the Net Present Value (NPV) of the change in outcomes based on the identified metric, and
- Step 4: Adjust revenue requirements in the next determination period.

Step 1: Determine the baseline forecast level of sewage overflow incidents over the determination period

The first step involves developing a metric and baseline forecast level of sewage overflow incidents over the determination period.

The definition of an incident would be based on a particular water quality definition, based on the length of time that water quality exceeded specified quality parameters for identified locations within the area of operations. This definition would be developed in consultation with customers.

The baseline forecast would be informed by past evidence for the metric and/or the water operating licence requirements, as well as expectations based on any planned investments or programs that might change the number and impact of sewage overflows over the determination period.

We would expect that this baseline level of any associated expenditure would be part of the business's engagement with customers and would reflect the relevant costs and benefits of the associated investments.

Step 2: Estimate the incremental change in overflow incidents over the determination period

The second step would involve estimating the incremental change in the number and impact of sewage overflow incidents over the determination period. In practice this would involve comparing the actual number of incidents with the forecast levels, in each year of the determination period.

Step 3: Calculate the NPV of the change in sewage overflow incidents

The next step calculates the value of the incremental change in the number of sewage overflow incidents over the determination period.

For this ODI, the value of changes in the number of incidents would need to be informed through consultation with consumers. Ideally it would reflect the value that consumers place on reducing the number of sewage overflow incidents. This would be converted to a value per reduced incident.

It follows that the NPV of the change in sewage overflow performance can be estimated by summing the incremental change in each year by the value of reducing each sewage overflow incident, divided by the weighted average cost of capital (WACC) in the current determination period, across each year of the determination period.

Algebraically:

$$NPV_r = \sum_{i=1}^{n-1} \frac{Incremental\ change\ in\ number\ of\ incidents_{i,r} \times value\ of\ reduction\ (\$/\text{incident})}{\times (1 + WACC_r)^{0.5}} \quad WACC_r$$

where:

r is the current determination period

n is the length of the determination period in years

i is a year within the current determination period

NPV_r is the value NPV in perpetuity of the incremental change in the number of sewage overflow incidents in determination period r

$Incremental\ change\ in\ number\ of\ incidents_{i,r}$ is the incremental change in the number of sewage overflow incidents in year i of determination period r

$WACC_r$ is the post-tax WACC for the regulated water business over the current determination period adjusted for the assumption that the mid-year timing of cash flows.

Step 4: Adjust revenue requirements in the next determination period

The final step involves calculating the business' share of the value of the change in sewage overflow incident performance (which would apply the 20% sharing ratio).

The business' share would be used to adjust revenue requirements for the subsequent determination period.

We expect the adjustment would be based on a real annuity to spread the impact on revenue requirements evenly over the next determination period.

6.7 Innovation funding

Our 3Cs framework balances the need to promote genuine innovation that leads to better customer outcomes, against the fact that water is an essential service that must be delivered reliably, sustainably, and cost effectively. The 3Cs framework supports innovation in many ways, which include:

- Business processes and engagement activities which uncover better ways of delivering services for customers are promoted in the framework, as are opportunities for providing differentiated services to customers, where the benefits outweigh the costs.
- Our grading process provides up-front financial rewards for Advanced and Leading proposals. This financial payment provides a buffer to support innovation and better ways of delivering services.
- Ex-post financial incentive schemes promote longer term trade-offs to deliver services more effectively and cost-effectively. By working as a package, the 3 schemes support long-term forward planning, since penalties and rewards for expenditure categories are balanced with performance in service delivery.
- Our revenue setting hierarchy manages uncertain and unforeseen costs, while encouraging efficient decision-making.
- Conducting ex-post expenditure reviews by exception addresses stranding risks.
- Setting 5-year determination periods as a default and encouraging early engagement, supports forward planning and provides confidence to the businesses about IPART's standard processes.

Nonetheless, we are open to consider separate avenues to fund innovation on a case-by-case basis if a business decides to include such request in its proposal.

Assess requests for separate innovation funding mechanisms on a case-by-case basis

We first assess proposed capital and operating expenditure for innovation against the 3Cs principles.

We also appreciate that the novelty of innovative ideas and the potentially long lead time before benefits are realised reduces the certainty of success.

We therefore assess proposals for separate innovation funding mechanisms on a case-by-case basis. The business case should contain a well-defined problem and justify why innovation funding is needed by showing that the proposal promotes customer value, efficient costs and credibility:

- **Customers.** Innovation funding should be clearly linked to one or more customer outcomes, and the proposed innovative activities should address an identified customer need. it could be the case that customers, or the business, have identified the customer need for innovation.

- **Costs.** Businesses should explain why the other elements of the framework are insufficient to support the innovation activities identified. In doing so, they should explain how its proposed funding model is expected to generate customer value, and how gains and losses will be shared between the business and its customers. For example, a business could ask for up front innovation funding, while proposing to achieve a higher ongoing efficiency target.
- **Credibility.** Funding projects through a separate innovation fund implies we are applying an alternative assessment to this stream of expenditure. Therefore, proposals should include:
  - Ring-fencing and governance arrangements to demonstrate that the funding receives appropriate management focus. This is because we prefer to avoid ex-post reviews of costs, particularly for innovation funding where it is difficult to assess whether innovation was efficient after the fact.
  - Clear support from the business's Board (or equivalent).
  - If necessary, a description of when the business would cease or reprioritise innovation funding (for example, if customer priorities or regulatory obligations materially change).
  - What steps the business has taken to promote competition for funding.

Chapter 7

Monitoring ongoing performance

07

After setting revenues, performance targets and incentives, we monitor ongoing performance through a range of tools to make sure businesses deliver on their commitments to customers. Specifically, we track business performance in terms of customer outcomes and expenditure. We also collaborate with other NSW regulators so that businesses promote customers' long-term interests by responding to all regulatory requirements efficiently. The approach described in this chapter will need to be implemented over time during reviews of regulated businesses' operating licenses, where IPART recommends licence conditions to the Government. IPART will consider this approach and alternatives on their merits during those reviews.

Monitoring outcome performance

We monitor performance to ensure businesses maintain a customer focus, improve their services and deliver on outcome commitments included in their proposals. Publishing progress on these commitments increases public visibility and leverages reputational incentives to deliver on promises.

Businesses are expected to notify customers on their progress

Each business is to publish annual updates on their progress against outcome commitments.

As part of their pricing proposal, we expect businesses to propose how they will communicate their annual progress against customer outcomes to customers. Businesses could consult us during its early engagement with IPART to seek our views when deciding on which form of communication the business intends to use.

The aim of annual progress updates is to maximise accessibility and visibility for customers. There are several ways of achieving this and we expect businesses to consult with customers about the most appropriate communication channels to best reach their customers. For example, publishing the outcomes on the business's website in a place that is difficult to find would be insufficient. Considering the channels that most businesses use to communicate with customers, publishing progress against customer outcomes with customer bills could be appropriate. This could change over time, however, if for example, uptake of phone apps by customers increases.

Performance results in an online dashboard

We will publish a user-friendly online performance dashboard that tracks businesses' progress against their outcome commitments. Public access to this information promotes greater accountability and allows businesses and customers to compare businesses.

The online dashboard will be designed to be easily accessible to all interested stakeholders. It will contain current and past information for all price-regulated businesses on:

- the grades that businesses received for current and past pricing proposals
- customer-informed outcome commitment targets and progress against achieving those targets in the current and past determination periods, with 'traffic lights' to signal progress
- trends for operating and capital expenditure, including deeper level information on several standardised cost categories. Progress against base-trend-step cost expectations we set for businesses are also published.

The dashboard can be accessed through our website once it has been established.

Annual licence audits

We collect annual performance information provided by the businesses on performance relating to water quality, system continuity and reliability, environmental performance and customer service. This information may be published on our online dashboard to ensure transparency and improve public confidence. This would provide additional incentives for businesses to perform to expectations and identify areas for improvement.

Public hearings

We facilitate public hearings so that customers can interact directly with businesses. These hearings are open to all stakeholders and allow them to understand progress against performance indicators and the implementation of current and long-term plans.

We expect businesses to present at a public hearing during each pricing and licensing review. They should present on their performance and progress against their strategies and provide details on their pricing proposals for the next determination period and longer term.

When a partial or full replacement of a determination takes place, we also hold public hearings to consult stakeholders on the changes that are being considered.

We will announce public hearings on our website and other appropriate channels.

Appendices

Appendix A

Modelling simplifications

A

We have simplified our approach to modelling in several ways, without compromising the overall integrity of the building-block framework. This appendix provides guidance on what businesses need to do to implement the changes.

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

Fewer RAB categories and a different approach to asset lives apply to only the urban retail water businesses, namely Sydney Water, Hunter Water, Central Coast Council and Essential Water.

A.1.1 The RAB is rolled forward in 2 asset categories per service

We will roll forward the RABs for corporate, water, wastewater and (where appropriate) stormwater services respectively in only 2 asset categories each, namely depreciating and non-depreciating assets. Accordingly, the redrafted Annual and Special Information Returns (AIR/SIRs) ask the businesses to provide capital expenditure, cash capital contributions and asset disposals in these categories. The updated models will reflect this change.

For a price review, we expect the businesses to propose the remaining economic lives of existing assets and expected economic lives of new assets for each of the depreciating asset categories. Each business may propose these asset lives based on a method of its choosing, with appropriate justification. For example, it may choose to weight asset lives by depreciation or by value. The former is more accurate over the short term but needs to be re-set at each review. We recommend weighting asset lives by depreciation unless there is a good reason to adopt a different approach.

The formula to calculate remaining asset lives weighted by depreciation is:

$$Remaining\ life\ =\ total\ asset\ value/total\ depreciation$$

The mechanics of the 2 calculation methods are shown in *Spreadsheet - Two ways to calculate average asset lives - simple example*,

The remainder of this section provides examples of how the business could calculate asset lives.

A.1.2 Calculating the remaining asset lives of existing assets

Below are 2 examples of ways the business could determine the appropriate total asset and depreciation values using asset lives weighted by depreciation. (But note that each of the methods could be adapted to propose asset lives weighted by value.)

Example method 1 – Using a register of fixed assets

The business could use a fixed asset register that reflects the value of its existing assets, with adjustments. The step-by-step example set out below is based on advice from Hunter Water and reflects the methodology it adopted for the 2020 review of prices.[3]

For each RAB (i.e., water, wastewater, stormwater and corporate):

1. Start with the gross replacement cost (GRC) of each asset.
2. Exclude assets not funded by the regulated business (e.g. assets free of charge, unregulated recycled water assets).
3. Index the assets so that they are all expressed in the same dollar values. Use a combination of periodic revaluations and annual CPI indexation (or just annual CPI indexation if your assets aren't periodically revalued).
4. Calculate the depreciated replacement cost (DRC) of each asset (i.e, the written down replacement cost). To do this, use the expected life of each asset and the date the asset entered the 'GRC register'. For example, if the asset has an expected life of 20 years and entered the register in 2010, by 2020 it would have a remaining life of 10 years and DRC would be 50% of GRC.
5. To ensure proportionate weighting between pre- and post- line-in-the sand (LIS) assets, apply the impairment ratio to pre-LIS assets. The impairment ratio is the LIS RAB value / DRC at LIS. (This is the ratio applied to pre-LIS asset disposals in our 2018 asset disposals policy, and is 42% for Sydney Water, Hunter Water and Central Coast Council).[4] (A)
6. For each asset, calculate the dollar value of annual depreciation (B).
7. Subject to materiality, if an asset has a remaining life of less than the determination period, spread the depreciation over the determination period. For example, if an asset will be fully depreciated by the end of year 3 of a 5-year determination period and has an opening value of $60, record its depreciation as $12 per year over 5 years rather than $20 over 3 years.
8. Sum the (adjusted) DRC values (A) and the deprecation amounts (B) for each asset.
9. Calculate the remaining life by dividing total (adjusted) DRC by the total depreciation (i.e remaining life = A/B).

If possible, starting with a fixed asset register based on the gross replacement cost and following the steps outlined above may be preferable to using the standard Fixed Asset Register (FAR). The FAR is used for statutory financial reporting purposes and may not be fit-for-purpose because it may not be adjusted to remove assets not paid for by the regulated business. Also, all assets may be uniformly impaired to reflect the total RAB value.

Example method 2 – Maintain a detailed RAB

The business could maintain its own multiple asset-category RABs. It could then use the total depreciation and total asset value for each RAB to propose an average remaining asset life for that RAB.

A.1.3 Expected lives of new assets

New depreciating assets (i.e. capital expenditure net of cash capital contributions) may comprise a variety of assets with very different asset lives and the mix of assets may vary substantially from year to year. To account for the changing asset mix the business may wish to propose, for each RAB, a different expected asset life for each year of the determination period.

A.2 Remove modelling requirement for discretionary expenditure

The water businesses will no longer be required to maintain separate RABs or calculate separate prices for discretionary projects under the 2020 discretionary framework. We expect the businesses to roll the discretionary RABs into the broader water, wastewater and stormwater RABs and include operating expenditure within the relevant operating expenditure category of water, wastewater and stormwater services

In practice, the 2020 discretionary expenditure framework applies to only Sydney Water and Hunter Water.

A.3 Apply the simplified asset disposals policy

From the start of the first determination period under our 3Cs framework we expect all the water businesses to calculate the value of asset disposals to be deducted from each RAB as follows:

$$Disposals\ deducted\ from\ RAB = 50\%\ x\ (total\ revenue\ from\ sales - selling\ costs - rehabililation\ costs - capital\ gains\ tax)$$

We may consider exceptions on a case-by-case basis if there are demonstrated reasons for doing so and subject to the materiality of the impact on the business' RAB, revenue requirement and prices.

The business is not required to adjust the RABs for routine write-offs and write-downs.

This approach replaces our 2018 policy on asset disposals for application to the water businesses.[5]

A.4 A standardised approach to working capital

We expect all the water businesses to calculate their working capital allowance as follows:

$$Working\ capital\ allowance\ =\ net\ working\ capital\ x\ nominal\ WACC$$

where

$$Net\ working\ capital\ =\ receivables - payables\ +\ inventory\ +\ prepayments$$

For all the water businesses, the 2018 policy on working capital[6] continues to apply but with 2 small changes to the way we calculate receivables. The changes simplify the process by standardising all the input parameters for receivables. Specifically, the changes mean that:

- Businesses that bill fixed charges in advance should set the number of days charged in advance to 50% of the number of days in the billing cycle. For example. If a billing cycle is 90 days, then set the number of days charges in advance to 45 days.
- All businesses should set the 'days of delay' before receiving payment to the number of days between invoice date (or issue date) and the due date as they appear on the bill of a standard customer.

The changes to our 2018 policy are summarised in the table below.

Table A.1 Summary of changes to our working capital policy

Item	2018 policy	2022 policy
Receivables	• Based on half the net number of days in the billing cycle for which services are billed in arrears. Where services are billed in arrears, **having regard to actual business practice** plus • Efficient 'days of delay' **between last day of billing cycle and receipt of payment,** having regard to actual business practice	• Based on half the net number of days in the billing cycle for which services are billed in arrears. Where services are billed in arrears, **set to half the number of days in the billing cycle.** plus • Efficient 'days of delay' **set to the number of days between invoice date (or issue date) and the due date** as they appear on the bill of a standard customer.
Payables	30 days operating expenditure plus capital expenditure minus cash capital contributions	No change
Inventory	Fixed real $ amount, having regard to actual business practice	No change
Prepayments	Fixed real $ amount, having regard to actual business practice	No change

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

Our policy is to apply a sharing ratio of 50:50 to the forecast profits from non-regulatory activities over the determination period (i.e. revenue net of incremental costs), But we allocate 100% of losses to shareholders.

We will allow for exceptions:

- on a case-by-case basis, subject to materiality and a very strong case
- 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 to be included in regulated costs and 100% of non-regulatory revenue are to be allocated to customers. The updated AIR/SIRs incorporate this change.

Forecast profits are defined as forecast revenue from the non-regulatory activity less the forecast incremental costs of that activity. We expect the businesses to calculate the incremental costs and profits to be shared with reference to the guidance provided below.

A.5.1 Revenues and incremental costs may depend on the type of activity

The scope of non-regulatory activities is expanding, and they are increasingly likely to involve significant operating and capital expenditure. For example, projects that meet environmental objectives or address climate change, such as waste-to-energy projects, may involve significant expenditure.

The incremental costs for non-regulatory activities could include the following items:

- incremental operating expenditure (net of operating grants or other contributions)
- an allocation of corporate overheads
- incremental income tax liabilities
- depreciation over the life of the asset
- interest payments
- incremental avoided costs, where these can be estimated with a reasonable degree of accuracy and without disproportionate regulatory burden (for example, avoided land tax for biodiversity offset schemes). These avoided costs must be removed from regulated costs.

Some non-regulatory activities may involve capital expenditure that creates a stand-alone asset. For projects such as this, the non-regulatory revenue accruing to the regulated business could be the amount the business would charge a third party, for example rental income from leasing land and a charge to cover any incremental operating costs.

A.5.2 Mitigating losses in the early years of a project

The purpose of our decision that shareholders bear 100% of losses is to protect customers from the risk of loss for activities over which they have no control and from which they do not directly benefit. However, we understand that some projects incur losses early on in their lifecycle and become profitable only in later years. Our intention is not to stifle innovation by making these projects unviable for the businesses.

To mitigate the impact of early losses, the business may combine the profits and losses from non-regulatory activities and share the net profits between customers and shareholders. We expect the businesses to allocate the proposed profits between customers in a way that fairly compensates the different customer groups. For example, we expect that Sydney Water and Hunter Water would allocate profits between water, wastewater and stormwater services.

Appendix B

Grading rubric

B

Table B.1 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 2-way communication with customers 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 would typically be 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[d] and regulatory obligations. • Set environmental outcomes that relate to the provision of regulated services, consistent with customer preferences, community views and waterway quality guidelines. • 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.	• 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.
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.	

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

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 B.2 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.
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[e] 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.		

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

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 – a balance of fixed and usage charges that takes into account the long run marginal cost (LRMC) of providing services.	• 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 – 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.	• 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) – 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 B.3 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.

Appendix C

The legislative framework

IPART is an independent regulator established by the *Independent Pricing and Regulatory Tribunal Act 1992* (IPART Act).[7] We make the people of NSW better off through independent decisions and advice. IPART's independence is underpinned by an Act of Parliament.[8]

IPART has 2 broad categories of functions:

1. Pricing functions – determining maximum prices and monitoring compliance with those prices
2. Licensing functions – providing advice to the Minister on licences, auditing compliance with licence conditions and enforcing compliance.

C.1 IPART's pricing functions

IPART has a standing reference to determine prices for various services

Section 11 of the IPART Act provides that the Tribunal is to "conduct investigations and make reports to the Minister" on "the determination of the pricing for a government monopoly service" supplied by certain specified government agencies.

A 'government monopoly service' is a service supplied by a government agency that has been declared as such by the regulations or the Minister.[9] The Minister has declared several services supplied by the major water utilities to be 'government monopoly services' including 'water supply services' and 'sewerage services'.[10]

Similarly, the *Water Industry Competition Act 2006* (WIC Act) allows the Minister to declare that a specified licensed retail supplier or network operator is a monopoly supplier in respect of services specified by the Minister.[11] Where this occurs, the Tribunal may determine prices for those services in the same way as for government monopoly services.[12] This is the mechanism by which the Tribunal regulates prices for Sydney Desalination Plant Pty Ltd.

IPART can fix the maximum price or set a methodology

In making a pricing determination for a service, the Tribunal has 2 broad options:[13]

- Option 1: fix the maximum price for the service
- Option 2: set a methodology for fixing the maximum price for the service[f]

IPART must consider certain factors when determining prices

When fixing a price or setting a methodology, IPART must have regard to certain specified matters (see **Box C.1**).[14] When setting a methodology, there is an additional list of matters that IPART *may* have regard to.[15]

[f] IPART Act, s 13A(1). Note: The Tribunal can also fix a maximum price for a part or parts of a service and set a methodology for fixing the maximum price the maximum price for any other part or parts of the service.

Box C.1 Matters to be considered by IPART under the IPART Act

In making determinations and recommendations under this Act, the Tribunal is to have regard to the following matters (in addition to any other matters the Tribunal considers relevant)—

a. the cost of providing the services concerned,
b. the protection of consumers from abuses of monopoly power in terms of prices, pricing policies and standard of services,
c. the appropriate rate of return on public sector assets, including appropriate payment of dividends to the Government for the benefit of the people of New South Wales,
d. the effect on general price inflation over the medium term,
e. the need for greater efficiency in the supply of services so as to reduce costs for the benefit of consumers and taxpayers,
f. the need to maintain ecologically sustainable development (within the meaning of section 6 of the *Protection of the Environment Administration Act 1991*) by appropriate pricing policies that take account of all the feasible options available to protect the environment,
g. the impact on pricing policies of borrowing, capital and dividend requirements of the government agency concerned and, in particular, the impact of any need to renew or increase relevant assets,
h. the impact on pricing policies of any arrangements that the government agency concerned has entered into for the exercise of its functions by some other person or body,
i. the need to promote competition in the supply of the services concerned,
j. considerations of demand management (including levels of demand) and least cost planning,
k. the social impact of the determinations and recommendations,
l. standards of quality, reliability and safety of the services concerned (whether those standards are specified by legislation, agreement or otherwise).

Source: IPART Act, s 15(1).

IPART may monitor compliance with pricing determinations

IPART has an ongoing monitoring role. IPART may monitor the performance of certain specified businesses for the purposes of establishing and reporting to the Minister on, the level of compliance by the business with an IPART pricing determination.[16]

C.2 IPART's licensing function

IPART makes recommendations to the Minister on licence conditions

Under the *Hunter Water Act 1991*, Sydney *Water Act 1994* and *Water NSW Act 2014*, IPART has the function of making recommendations to the Minister for or with respect to the imposition, amendment or cancellation of licence conditions.[17] It is the Governor, acting on the recommendation of the Minister, who grants these businesses an operating licence.

Similarly, IPART has the function under the WIC Act of reporting to the Minister on whether an application for a licence should be granted and the conditions (if any) to which a licence (if granted) should be subject.[18] In this case, it is the Minister who determines an application for a licence.

IPART audits compliance with licences

The operating licences for Hunter Water, Sydney Water and WaterNSW each provide for an operational audit to be conducted by IPART or an auditor appointed by IPART. This is typically done annually but may be conducted from time to time as occasion requires. IPART has the function of ensuring that the operational audit is prepared in accordance with the relevant operating licence.[19]

Similarly, IPART has the function of monitoring and reporting to the Minister on the compliance of licensees under the WIC Act with the conditions of their licence.[20] For operational schemes, IPART conducts annual (or biennial) operational audits.

IPART enforces compliance with licence conditions

Where a business contravenes a provision of its licence, IPART may:

- Take action to enforce the licence directly by, for example, imposing monetary penalties or requiring the licensee to take certain actions.[21]
- Provide advice to the Minister about penalties or remedial action required.[22] Generally speaking, the Minister may impose higher penalties for a contravention than IPART.

Appendix D

Glossary

Term	Definition
3Cs	The 3 pillars of our 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-Trend-Step approach (BTS)	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. 'Trend' refers to predictable changes in expenditure over time due to known factors such as demand growth or inflation. 'Step' refers to changes in expenditure caused by new requirements or new processes.
Building block model	IPART's standard method for calculating a business's required revenue. Costs are broken down into 5 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 determination 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 1 to 2 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 determination 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).
Incentive payments	The amount calculated through the application of an incentive scheme that is used to modify the revenue requirement in a subsequent determination period.
IPART Act	The *Independent Pricing and Regulatory Tribunal Act 1992,* which establishes IPART's regulatory role and functions in New South Wales.
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.

Term	Definition
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.
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.
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 determination 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.

Appendix E

Board attestation

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In accordance with the *Water Regulation Handbook*, [**date of handbook publication**], of the Independent Pricing and Regulatory Tribunal of New South Wales, the directors of [**name of water business**], having made such reasonable inquiries of management as we considered necessary (or having satisfied ourselves that we have no query), attest that, to the best of our knowledge and for the purpose of proposing prices for the Independent Pricing and Regulatory Tribunal's review of [**name of water business**]'s prices:

- The pricing proposal would best promote the long-term interests of its customers
- The pricing proposal:
  - Is the business's best customer value proposition and is consistent with our customer engagement strategy.
  - Would deliver services at the lowest sustainable cost and is consistent with our cost efficiency strategy.
- The information provided in the pricing proposal submitted on [**insert date**] is the best available information of the financial and operational affairs of [**insert business's name**] and has been checked in accordance with the Water Regulation Handbook; and
- The pricing proposal has been subject to a quality assurance check, which certifies the accuracy and consistency of all data, including confirmation of the following:
  - Information in the pricing proposal is consistent with the business's information return (AIR and SIR), the business's financial accounts, and reports against output measures, as relevant.
  - Figures in the business's pricing proposal are accurate and correctly sourced.
  - The pricing proposal includes proposed prices for all the business's regulated services.
- There are no circumstances of which we are aware that would render the information provided to be misleading or inaccurate.

Certified by the Chair of the Board (or equivalent):

(Name of Chair) Dated

[1] IPART, *Rural Water Cost Shares – Final Report*, February 2019.
[2] IPART, *Review of prices for the Water Administration Ministerial Corporation – Final Report*, September 2021; IPART, *Review of WaterNSW's rural bulk water prices – Final Report*, September 2021.
[3] Advision, *IPART Hunter Water Economic Life Report, 12 June 2020*.
[4] IPART, *Asset Disposals, Policy Paper (for application to water businesses), Final Report Policies,* February 2018.
[5] IPART, *Asset Disposals, Policy Paper (for application to water businesses), Final Report Policies,* February 2018.
[6] I IPART, *Asset Disposals, Policy Paper (for application to water businesses), Final Report Policies,* February 2018.PART, *Working Capital Allowance Policy Paper, Final Report Policies*, November 2018.
[7] IPART Act s 5.
[8] See, for example IPART Act s 7, Cf IPART Act s 13(1), 16A.
[9] IPART Act s 4(1).
[10] See, for example *Independent Pricing and Regulatory Tribunal (Water, Sewerage and Drainage Services) Order 1997*.
[11] *Water Industry Competition Act 2006* (NSW) ss 51, 52.
[12] *Water Industry Competition Act 2006* (NSW) s 52(2).
[13] IPART Act, s 13A(1)
[14] IPART Act s 15.
[15] IPART Act s 14A(2).
[16] IPART Act s 24AA.
[17] *Hunter Water Act 1991* (NSW) s 18A(2); *Sydney Water Act 1994* (NSW) s 28(2); *Water NSW Act 2014* (NSW) s 56(2).
[18] *Water Industry Competition Act 2006* (NSW) s 9(3).
[19] *Hunter Water Act 1991* (NSW) s 18C; *Sydney Water Act 1994* (NSW) s 31(1); *Water NSW Act 2014* (NSW) s 57(3).
[20] *Water Industry Competition Act 2006* (NSW) s 85(1).
[21] See *Hunter Water Act 1991* (NSW) s 17A; *Sydney Water Act 1994* (NSW) s 19A; *Water NSW Act 2014* (NSW) s 17; *Water Industry Competition Act 2006* (NSW) s 16(4).
[22] See *Hunter Water Act 1991* (NSW) s 18A(2)(c); *Sydney Water Act 1994* (NSW) s 28(1)(c); *Water NSW Act 2014* (NSW) s 56(2); *Water Industry Competition Act 2006* (NSW) s 16.

ISBN 978-1-76049-635-7