IPART Independent Pricing and Regulatory Tribunal | NSW

Encouraging innovation in the water sector

Discussion Paper

August 2021

Water »

Tribunal Members

The Tribunal members for this review are:

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Invitation for submissions

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

Submissions are due by Monday, 18 October 2021

We prefer to receive them electronically via our online submission form Lodge a submission.

You can also send comments by mail to:

Water Regulatory Review
Independent Pricing and Regulatory Tribunal
PO Box K35
Haymarket Post Shop, Sydney NSW 1240

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

We may choose not to publish a submission – for example, if it contains confidential or commercially sensitive information. If your submission contains information that you do not wish to be publicly disclosed, please indicate this clearly at the time of making the submission. However, it could be disclosed under the *Government Information (Public Access) Act 2009* (NSW) or the *Independent Pricing and Regulatory Tribunal Act 1992* (NSW), or where otherwise required by law.

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

The Independent Pricing and Regulatory Tribunal (IPART)

We make the people of NSW better off through independent decisions and advice. 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, past, present and emerging.

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

Contents

Our proposed approach to encourage innovation in the water sector

1	**Customers, costs and credibility**. Focus our regulatory approach around the '3Cs' of customer value, cost efficiency and credibility.
2	**Provide clear guidance**. Use 11 principles to outline our expectations for the customers, costs and credibility criteria, with a grading rubric showing how a business would meet the principles at a standard, advanced, or leading level.
3	**Encourage the best proposals from the business**. Allow the business to self-assess how well its proposal promotes customer value and cost efficiency, and justify that its proposal would be credibly delivered.
4	**Grade proposals**. IPART would grade proposals against customer value and cost efficiency at the 3 levels. Our grading would apply only if the proposal is credible.
5	**Reward high-quality proposals which promote customer value**. Provide a financial reward – a per cent of the revenue requirement – where we agree with the business that its proposal is advanced or leading.
6	**Tailor the design of the regulatory framework to our grading**, so every business delivers its commitments and improves over time.
7	**Promote customer outcomes**. Require all businesses to publish their annual performance against the customer outcomes that they have identified to promote the long-term interests of customers.
8	**Improve the incentive regime**. Expect advanced businesses, and require leading businesses, to opt-in to an improved incentive framework that applies to operating expenditure, capital expenditure, and key customer outcomes. A standard business would have a simpler framework with a limited range of incentive mechanisms.
9	**Focus the expenditure review**. Implement a range of improvements to the expenditure review process and focus the scope of our review – including any use of cost consultants – according to how well the proposal meets the '3Cs'.
10	**Focus on performance with a 6-year regulatory period**. Apply a '3-3-6' model, with a 6-year regulatory period and a mid-cycle health check.

1 Encouraging innovation in the water sector

IPART regulates for the long-term interests of consumers.

In competitive markets, businesses must innovate or perish. The water businesses we regulate include private businesses, state owned enterprises, government departments and councils. The businesses all receive a steady revenue stream with limited threat of market competition. The lack of competitive pressures, and the limited potential to gain (or lose) market share, blunts the market signal to innovate.

IPART's regulatory framework needs to promote the positive aspects of competition and provide regulated water businesses with the same incentives to innovate as competitive businesses. A well-designed regulatory framework empowers the business to put forward its 'best' proposal. A proposal that is customer-focused and identifies the key outcomes that promote the long-term interests of customers. The regulatory framework needs to include effective incentives so all regulated businesses are accountable for delivering its commitments and continually improving over time.

IPART makes decisions about water businesses' efficient revenue needs based on the water businesses' proposals. In doing so, we face 2 key (and related) 'information asymmetries'. Firstly, regulated water businesses have better information than us about their cost structure and their ability to make cost-saving efficiencies. Secondly, there is a 'hidden action' problem – it is often difficult for us to verify whether a regulated business's actions are actually in the long-term interests of customers, when monitoring is costly and precise measures of the business's efficiency are difficult to establish.

Price regulation is trying to replicate a competitive market where customers benefit from product and service innovation as well as pressures to keep prices in line with costs.

The traditional building block approach contains relatively weak incentives for the business to propose its true efficient costs to the regulator, or to pursue product and service innovation. It creates profit incentives that do not always align with the long-term interests of customers, and risks creating a culture of distrust between the regulator and water business.

To address these shortcomings, we propose a regulatory framework grounded on:

- Customer focus. Regulated businesses must identify and deliver services customers want at a price they can afford, in the short and long term.
- Cost efficiency. Regulated businesses must propose costs that are efficient, and deliver the services customers want at the lowest sustainable cost.
- Credibility. Regulated businesses must provide a credible commitment that their proposals can and will be delivered.

We consider 3 key reforms would encourage innovation:

1. **Motivating all businesses to submit proposals which focus on maximising value to customers.** At the start of the regulatory cycle, businesses are motivated to put their best foot forward through a grading system. The incentives attached to higher grades would encourage businesses to submit customer-focused, high quality proposals that aim to deliver in the long-term interests of customers.
2. **Tailoring the design of the regulatory framework and providing higher powered incentives to 'advanced' and 'leading' proposals.** All businesses would need to track their performance against a small number of key customer outcomes. Advanced and leading proposals would also have higher powered financial incentives for cost efficiency and improved customer outcomes, to support the grading process and motivate the business to seek continual improvements.
3. **Better targeting of regulatory effort and streamlining the regulatory review process.** Improved guidance from IPART, and the grading of proposals, would promote higher quality proposals supported by more robust information. Carefully designed incentive schemes would also improve IPART's confidence in businesses' expenditures over time. We could then focus our expenditure reviews to areas of key concern to ensure a more efficient investment of regulatory effort.

These reforms explicitly encourage and reward businesses whose proposals are in the long-term interest of customers, and who deliver on their proposed customer outcomes. Symmetrically, it shines a brighter light on the businesses which are not striving to deliver customer value. We hope this process creates a culture of goodwill where high-performing businesses and the regulator are not second-guessing one another.

This paper invites discussion from stakeholders on the key features of our proposed regulatory framework. It brings together some of the key elements from the first 2 discussion papers – how our framework would help lift performance in the water sector, and how it would promote a customer focus within the businesses. We seek feedback on how effective our proposed regime would be in encouraging the water businesses to innovate to deliver services that are in the long-term interests of customers, at the lowest sustainable price.

1.1 A '3Cs' framework to promote proposals in customers' interests

A focus on customers, costs and credibility – the 3Cs framework – would empower the business to 'put its best foot forward' to deliver pricing proposals that meet the long-term interests of customers.

It would set clear expectations, with 11 principles that the business would need to meet to demonstrate a credible commitment to deliver what customers want, at an efficient price. Each principle would be supported by a grading rubric containing concise guidance material about what a pricing proposal would look like at a standard, advanced, or leading level.

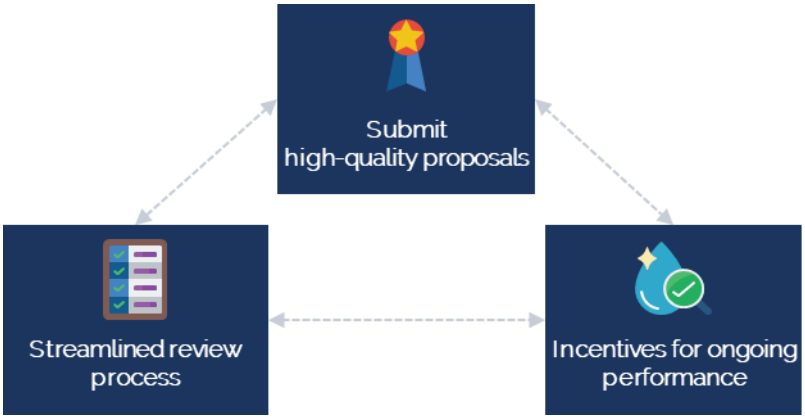
With expectations clear, businesses would first self-assess whether they meet the 3Cs at a standard, advanced, or leading level.

IPART would then grade proposals according to 11 principles, consistent with the 3Cs of customers, costs, and credibility. Our price review decisions would then be centred around our grading of the business's proposal.

Our grading would also inform the scope and focus of the regulatory process. Our confidence in proposed costs would inform the scope of a consultant's review of proposed expenditure, and potentially over time it would inform whether such a process is needed.

Then, we would verify the cost efficiency and customer focus of the business over time through a consistent incentive regime. These elements of the framework would work together to promote continuous improvement and innovation among the 7 water businesses whose prices we regulate (Figure 1.1).

Figure 1.1 Key reforms in the regulatory framework to encourage innovation



The grading regime would not simply be another 'bolt on' to the regulatory framework. It would provide financial and reputational incentives to reward businesses for the additional value they would actually deliver to customers. The grading would also be linked to a tiered regulatory framework, tailoring the design of incentives to the maturity, sophistication and innovation shown by the business. For example, advanced and leading proposals must demonstrate that the business (and its customers) would benefit from the business accessing incentive schemes by delivering dynamic improvements in service levels and cost efficiencies. Therefore, our proposed 3Cs framework is not about fitting businesses we regulate to a bell curve, or neatly into quartiles.

We would not expect all regulated businesses to strive to be advanced or leading in the short run. Rather, the complexity of the framework would be tailored to encourage each business to improve on its performance year on year, from its own starting point, towards the efficient frontier. But the framework is also designed to ensure all businesses – in particular, businesses rewarded for being advanced or leading – keep their promises to customers during the regulatory period, and that customers do not pay for 'glossy' proposals.

We designed the length of the determination period to reflect a more mature, customer- and outcomes-focused framework. We propose a 6-year regulatory cycle with a mid-point health check – the 3-3-6 model. The mid-point health check offers an opportunity for a business that is doing well – delivering its promises to customers and managing its costs – more time to develop its plans for the upcoming regulatory period. However, we would retain the option to reopen the determination at the mid-point if a business is not performing or if there is a large and unanticipated change in the operating environment.

We propose assessing the next round of pricing proposals against the 3Cs framework. We would start with the proposals from Sydney Water, Hunter Water, and Water NSW Greater Sydney, which are currently due to be submitted in July 2023, with new prices to take effect from 1 July 2024.

This discussion paper is structured as follows:

- Chapter 2, 'Encouraging good proposals', sets out our rationale for the proposed 3Cs assessment framework, the guiding principles for grading pricing proposals, and the financial incentives provided at different grades.
- Chapter 3, 'Using ex post incentives', discusses the design of a range of ex post financial incentives for cost efficiency and service performance, and how they would be applied in a tiered approach under the new regulatory framework.
- Chapter 4, 'Streamlining the expenditure review process', outlines a number of proposals to improve the expenditure review process. This includes more effective ways we could use information to set expenditures, how we use expenditure consultants, and ways to smooth regulatory efforts across a regulatory period.
- Chapter 5, 'Encouraging long-term planning – the 3-3-6 model', sets out how our proposed 6-year determination periods with a mid-period health check would work, and our proposed updates to our cost pass-through principles.
- Chapter 6, 'Funding innovation', sets out our views on the role of explicit funding for innovation as part of our framework.

1.2 We are seeking feedback

We seek stakeholder feedback on our proposed framework. This includes feedback on the overall approach, focused on the 11 key principles we propose.

The following chapters outline our proposals in more detail, where we ask some specific questions about the design of our framework. These questions are reproduced below.

General questions about our proposed approach

We seek comment from stakeholders

1. What are your overarching comments about our proposed approach?

2. Should separate funding for innovation be a part of our regulatory framework? If so, how would such a scheme be designed to promote a demonstrably better outcome for customers?

Specific questions about framework design

Throughout the body of the report, we have asked some specific questions about our proposed regulatory framework. These are reproduced below for convenience:

1. How effectively would our 11 principles promote a better regulatory process, and support our customer value, cost efficiency and credibility framework?
2. How effectively would our proposed grades, and grading rubric, motivate businesses to develop proposals that promote customers' long-term interests?
3. How should an incentive matrix be structured to ensure water businesses provide maximum customer value for least cost?
4. Should leading businesses receive financial incentives each time they achieve leading status? Should Sydney Water and Hunter Water receive financial incentives for achieving advanced status in the first round of reviews?
5. Do you support a tiered regulatory approach based on the grade we assign a water business? If so, how effectively would our proposed approach tailor the regulatory approach to the different businesses we regulate?
6. Do you support a tiered use of ex post incentives to advanced and leading businesses?
7. How effectively would our proposed use of ex post incentive schemes encourage cost reductions and improvements to service quality?
8. Given the new 3-3-6 model, should we make changes to the way pricing and licensing reviews align?
9. How effectively would the proposed refinements to our cost pass-through criteria promote the long-term interests of customers?

Have your say

Your input is critical to our review process.

We are seeking stakeholder views on the proposed reforms in this Discussion Paper by 18 October 2021.

Submit feedback »

1.3 This is the final discussion paper for our regulatory review

This Discussion Paper is the third and final of our review on how we regulate monopoly water businesses in NSW. We also released 2 discussion papers on lifting the performance of the sector and promoting a customer focus (Figure 1.2).

Figure 1.2 How can the way we regulate water businesses help

In June 2021, we held a full-day public workshop with stakeholders to discuss how we can embed high powered incentives into our regulatory framework to incentivise innovation, which informed this Discussion Paper. During the workshop we:

- Received feedback on the range of incentives presented in this paper, which, notwithstanding some of the limitations raised, were generally well received by stakeholders
- Heard reputational incentives can be more effective than financial rewards in lifting performance
- Heard from businesses about their innovation initiatives for new services, and the desire for dedicated innovation funds
- Saw support for customer and service performance incentive payments, which we believe could link better performance for mandatory services with delivering distinct, discretionary projects.

After collating stakeholder feedback on this Discussion Paper, we will outline our position on the topics covered in all 3 papers in the Draft Report, which is scheduled for November 2021. We will then hold a public hearing and release a Final Report in early 2022.

2 Encouraging good proposals

IPART regulates for the long-term interests of consumers. A regulatory framework that promotes high quality, customer-focused pricing proposals is essential to address the information asymmetries we face when regulating water businesses. It is therefore essential to promote customer value and encourage innovation. Our proposed regulatory framework would involve 3 new components to encourage good proposals by:

1. **Providing clearer guidance** to increase transparency, making it easier for water businesses to demonstrate their proposals are in the long-term interests of consumers.
2. **Grading proposals** to help make our decision-making process more transparent and promote continuous improvement. We hope to motivate the businesses to push themselves to meet the needs of customers within, and across, regulatory periods.
3. **Tiering water businesses** to further align the water businesses' incentives with the long-term interests of customers, through financial and reputational rewards and penalties for delivering better customer outcomes.

This chapter presents our proposals on these 3 points, in turn.

2.1 Clearer guidance would help water businesses target their proposals

We publish our current Guidelines for Water Agency Pricing Submissions on our website. This document provides water businesses with 50 pages of detail on what its pricing proposals should include. It includes only 2 overarching principles – that IPART aims to ensure prices reflect:

- the efficient costs of providing monopoly services, while meeting broader regulatory requirements
- customer preferences and willingness to pay.

The guidelines include further instructions to businesses, but these are primarily technical.

We would provide clearer guidance about the principles we would use to assess whether pricing proposals are in the long-term interests of customers. This would make our decision-making process easier to understand and our decisions more transparent. This outcome should improve the quality of pricing proposals and reduce the likelihood of surprises in our draft and final determinations for water businesses.

Our guidance would be based on the 3Cs of customers, costs and credibility discussed in Section 1.1. The shift in the underlying detail is minor, but the principles and guidance on how to meet our expectations is a significant shift in focus about how we would assess proposals. Our 3Cs aim to promote pricing proposals and regulatory decisions that encourage:

- Customer value – regulatory proposals more focused on identifying outcomes that provide the most value to customers, with customers being central to all decisions.

- Cost efficiency – creating greater opportunities for businesses to prove their costs are efficient over the lifecycle of assets. In short, we want to encourage each business to show why they should avoid an expenditure review.
- Credibility – requiring businesses to take greater accountability for delivering what customers want, at the lowest sustainable cost.

Box 1 outlines 11 proposed principles to support our 3Cs approach. Appendix B contains more detailed guidance about how a business would meet each principle at a standard, advanced or leading level.

Box 1 IPART's proposed 3Cs framework

We propose the following 11 principles to support our 3Cs approach to regulation.

Customer principles

1. **Customer centricity** – How well have you integrated customers' preferences into the planning and delivery of services, over the short and long term?
2. **Customer engagement** – Are you engaging customers on the right things, in the right way, to add value?
3. **Customer outcomes** – How well does your pricing proposal link customer preferences to proposed outcomes, service levels and projects?
4. **Community** – Are you meeting broader community and environmental objectives, while ensuring services are cost reflective and affordable today and in the future?
5. **Customer choice** – Are you providing opportunities to reflect customers' varied preferences for the tariffs and additional services they are willing to pay for?

Cost principles

6. **Confidence in costs** – How well does your proposal provide quantitative evidence that you will deliver the outcomes preferred by customers, at the lowest cost?
7. **Balance of 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?
8. **Commitment to improve costs** – 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?
9. **Equitable and efficient cost recovery** – Are your proposed tariffs efficient and equitable, and do they appropriately share risks between the business and your customers?

Credibility principles

10. **Deliverable** – Have you provided assurance and commitment that you will deliver your proposal?
11. **Introspective** – Does the proposal identify shortcomings and areas for future improvement?

Appendix B contains a grading rubric showing how a business would meet the principles at a standard, advanced, or leading level.

We seek comment from stakeholders

1. How effectively would our 11 principles promote a better regulatory process, and support our customer value, cost efficiency and credibility framework?

2.2 Self-assessment and grading have benefits

With clear principles and guidance provided by the regulator, we would first ask each business to self-assess the extent to which its proposal promotes customer value and cost efficiency and specify how it would be accountable for delivering it.

We would then grade water businesses proposals against the 3Cs framework. Our framework aims to guide businesses to focus on the long-term interests of customers in their proposals. Our grading would allow us to provide structured feedback to businesses on how well their proposal aligns with the long-term interests of customers. Grading has been implemented by Ofwat in the UK and the Essential Services Commission in Victoria (as outlined in IPART's second Discussion Paper for this review on promoting a customer focus).

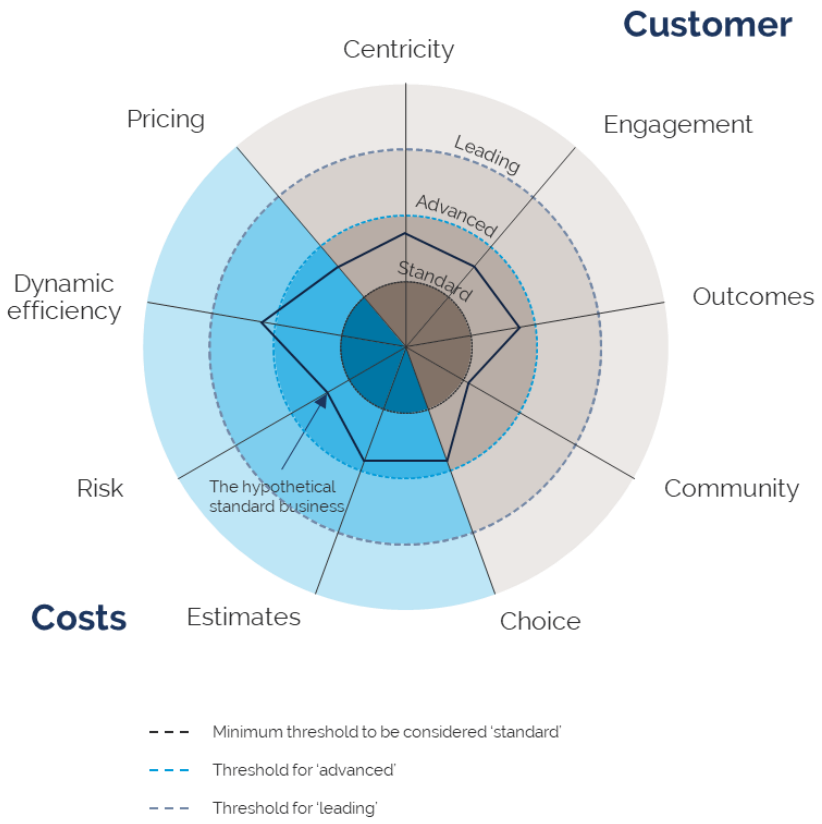
We propose 4 grades:

1. **Leading** – for businesses that are industry leaders in understanding their customers; committed to innovating to deliver services customers want and driving costs efficiencies
2. **Advanced** – for businesses that demonstrate very strong understanding of their customers, and are broadly at the cost efficiency frontier
3. **Standard** – for businesses that are developing a stronger understanding of their customers and have a credible path towards the cost efficiency frontier
4. **Sub-standard** – for unacceptable proposals.

We would assess proposals against our 3Cs framework to assign one of the 4 grades to a pricing proposal. To do this, we would assign a grading to how customer-focused and cost-efficient the proposal is, by assessing proposals against each of the detailed principles, and the guidance we have provided for each principle (see Appendix B). This grading would only apply if the proposal is deemed credible, which we would establish by assessing the proposal against our two principles for credibility.

Importantly, our overall grading would not be a simple weighted average of the 'score' for each of the 11 principles, because all the principles are an important part of a high quality proposal. For example, a proposal that is leading on costs, but standard on customers, is not necessarily advanced overall. Rather, as shown in Figure 2.1, our rating for each principle would highlight the key areas that informed our overall grading.

Figure 2.1 Graphical example of grading pricing proposals against our 3Cs framework



Grading has an important role in motivating businesses to make proposals in the long-term interests of customers through being customer oriented, low cost, and innovative. It achieves this outcome through reputational, financial, and administrative rewards (and penalties):

1. The reputational reward is the grade the business receives. This grade is tangible evidence that management and decision makers can use to show customers and shareholders how well they are running the business.
2. Financial incentives reward a business that proposes a more efficient price and performance package for its customers, effectively returning some of the additional value (or cost savings) to the business. This approach gives the business a financial incentive to disclose to IPART the possible cost savings it could achieve.
3. The administrative incentive is to provide clearer expectations to the businesses, and to encourage proposals that can be more readily accepted by IPART. This would focus the scope of IPART's reviews. We discuss the potential to streamline expenditure reviews over time in Chapter 4.

The combination of incentives should help businesses think about their operations with a greater focus on delivering the outcomes customers want at the lowest cost.

We seek comment from stakeholders

2. How effectively would our proposed grades, and grading rubric, motivate businesses to develop proposals that promote customers' long-term interests?

2.3 Rewards to share the benefits of leading and advanced proposals

The financial reward, or penalty the business would receive from our grading would depend on 3 factors:

1. the business's grade from its previous pricing proposal (our prior expectation)
2. the grading the business assigns itself (i.e. its self-assessment)
3. our grading of the pricing proposal.

In other words, it is not just the grade we assign to the current pricing proposal that is important. Financial incentives should be relative to the business's 'type':

1. If a business's previous pricing proposal was assessed as a standard proposal – the starting point for each business in the first round of the regime – it would receive a financial reward for making a step change in performance to an advanced level (Table 2.1).
2. If the business is already operating at an advanced level, it would be expected to submit a pricing proposal that meets this level (Table 2.2). In our view, a reward is earned the first time a business moves from a standard to an advanced business. A new expectation of performance is then set. If in future an advanced business's performance backslides, there is a symmetric consequence for underperformance, providing a strong incentive to maintain ongoing performance.
3. At a leading level, however, our prior expectation is that future proposals would be at an advanced level. This distinction reflects our view that leading businesses are actively shifting the cost efficiency frontier. A leading grading should be difficult to achieve, and difficult to sustain.

An alternative would be to reward businesses each time an advanced submission is provided. However, providing a series of rewards every time an advanced proposal is submitted implies an increasing divergence in the level of performance a between an advanced and standard business. This outcome seems implausible. Even if it were possible, it wouldn't be a satisfactory outcome of our regulatory framework.

The business's self-assessment also affects the financial reward from the grade we ascribe to it – a common feature of grading regimes. This feature is an important aspect (but not the only aspect) of ensuring the regime is 'incentive compatible'. That is, that only advanced (leading) businesses submit advanced (leading) proposals, and are assessed by IPART as such. In turn, businesses are encouraged to provide higher quality information to the regulator to support self-assessments. Submitting an advanced or leading proposal without the evidence to support such a grading would have a financial consequence.

We have therefore calibrated the pay-offs in Tables 2.1 and 2.2 to:

- encourage each business to submit the highest grading that they believe can be delivered, and
- reward businesses who 'truthfully' reveal the quality of their proposal.

We propose structuring the grading incentives as a percentage of the annual revenue requirement (ARR). This approach makes it clear we are not providing a higher return on investment (i.e. a higher weighted average cost of capital (WACC)) to businesses that are advanced or leading.

Rather, we propose that each step change in performance needs to deliver additional, tangible customer value that meets a minimum threshold of at least 5% per year.[a] All else being equal, the reward to the business for moving from a standard to an advanced proposal would be 1.25% of its ARR. The reward for moving from an advanced to a leading proposal would also be 1.25% of the ARR. This approach forms an important yardstick for each business to benchmark whether their proposal is delivering sufficient customer value. Indeed, we would expect leading proposals to quantify that the value target has been met (and ideally exceeded).

Revenue from the grading incentives would be apportioned when prices are set at the beginning of the regulatory period. This approach ensures the business is sufficiently motivated to propose a better pricing performance package as part of its pricing proposal, with the higher level of performance and efficiency verified through the 'ex post' incentive schemes discussed in Chapter 3.

Table 2.1 Incentive matrix for a standard business (% of annual revenue requirement)

	Business's self-assessment		
IPART's assessment	**Leading**	**Advanced**	**Standard**
Leading	2.5%	1.75%	n/a
Advanced	1%	1.25%	0.5%
Standard	-1%	-0.5%	0%

Table 2.2 Incentive matrix for an advanced or leading business (% of annual revenue requirement)

	Business's self-assessment		
IPART's assessment	**Leading**	**Advanced**	**Standard**
Leading	1.25%	0.5%	n/a
Advanced	-0.25%	0%	-0.5%
Standard	-2.25%	-1.75%	-1.25%

[a] In general, we envision customer value to be measured in terms of increased service performance and/or reduced costs, relative to the status quo.

The repeated game aspect of the regulatory framework could elevate the reputational effect of grading. If a business is motivated by achieving – and maintaining – a high rating, the risk of being downgraded due to undershooting on performance targets (such as cost savings or service delivery targets) would encourage ongoing performance. This incentive – combined with ex post incentives (Chapter 3) – should ensure advanced and leading businesses maintain their performance over time.

We anticipate Sydney Water and Hunter Water would work to achieve a grading of advanced in their next pricing proposals, at a minimum. We propose this higher starting point for these 2 businesses given their size, services delivered and sophistication (based on our analysis during, and the outcomes of, recent expenditure reviews).

Our incentive matrix focuses on standard, advanced and leading proposals. A sub-standard grading means a proposal does not meet our minimum expectations for it to promote the long-term interests of customers. In this case, we would – shortly after receiving the proposal – ask the business to resubmit their proposal to at least a standard level. Ascribing an additional revenue reduction to a sub-standard proposal might not be in the long-term interests of customers, because such a business may also be facing longer-term sustainability issues.

We seek comment from stakeholders

3. How should an incentive matrix be structured to ensure water businesses provide maximum customer value for least cost?

4. Should leading businesses receive financial incentives each time they achieve leading status? Should Sydney Water and Hunter Water receive financial incentives for achieving advanced status in the first round of reviews?

2.4 Regulation is tailored to the scale and sophistication of the business

The NSW water businesses we regulate are heterogeneous. They range from Sydney Water with over 2 million direct customers, to Essential Energy supplying around 10,000 households, and the Sydney Desalination Plant with one direct customer and indirectly supplying water to millions of people living and working in Sydney. We recognise these businesses have different customer bases and different levels of sophistication for economic regulation.

Our proposed grading approach is consistent across all water businesses. The grading is relative to how well they understand and incorporate customers' views into the business and how their costs and innovation compares with the efficiency frontier.

However, the efficiency frontier and difficulty of understanding customers views is relative to a business's scale. For example, to achieve an advanced grading, small water businesses such as Essential Energy would need to engage with and understand the preferences of fewer customers than a large water business. The efficiency frontier would factor in the economies of scale for large water businesses.

Similarly, we would tailor the regulatory complexity for different water businesses. The form of regulation would depend on our grading, which in turn would be influenced by the business's preferences for its form of regulation, and the business's scale and sophistication.

As a business increases its grade, it demonstrates a deeper understanding of customer needs and is increasingly efficient. As discussed above, these businesses would be rewarded with increased revenue, providing an incentive to offer least cost proposals that maximise customer value.

Advanced businesses would generally be expected to opt-in to ex post incentives that reward businesses for further decreasing costs or delivering services customers value. These schemes would operate symmetrically to both incentivise businesses to continuously improve and penalise businesses that do not deliver their low cost proposals. In this way, ex post incentives would also ensure the framework is incentive compatible, and customers do not pay for 'glossy' proposals that are ultimately not delivered.

Grading facilitates tiered regulation

Our current framework has resulted in a fairly rigid application of regulatory consistency.

The grading criteria allows us to target administrative incentives to allow greater flexibility, while applying a consistent methodology. These operate alongside reputation and financial incentives for businesses that can demonstrate they are operating in the best interests of customers. Our tiered approach would include:

1. **Less burdensome expenditure reviews.**

   The scope and focus of IPART's expenditure review process would be informed by our assessment of the water business's self-assessed grading. This does not necessarily imply that a 'standard' business automatically faces a fulsome expenditure review by cost consultants, and that a leading review faces a lower level of scrutiny. Indeed, a business that correctly self-assesses as a standard business, and carefully justifies what it is doing to meet that level, could have a targeted review. And a water businesses that achieves an advanced or leading grade may face more focused expenditure reviews to the areas where there is greatest uncertainty or where genuinely new ways of doing things have been proposed.

2. **A better balance of risk between the business and its customers.**

   We currently set maximum prices for water businesses, and we propose continuing this approach for 'standard' businesses. However, we would expect advanced or leading businesses to explore and propose the most appropriate form of price control, which could be a revenue cap or a weighted-average price cap. These businesses would need to demonstrate they understand what tariff structure provides the best balance of risk between customers and the business, particularly over the longer-term, while ensuring they are implementable and easy to audit.

3. **More flexible pricing arrangements**.

   At present, our regulatory framework allows most water businesses to offer unregulated pricing agreements to its large non-residential customers. Our framework will promote a broader use of customer choice pricing arrangements for leading and advanced businesses, as well as exploring unregulated add-ons and services for customers who are willing to pay for them. The leading and advanced businesses will need to demonstrate how they can ringfence unregulated costs and revenues.

Over time, leading and advanced businesses may propose additional forms of regulatory flexibility. But these may not be appropriate for all businesses, and therefore a tiered approach ensures that our approach is flexible enough to promote the long-term interests of customers.

We seek comment from stakeholders

5. Do you support a tiered regulatory approach based on the grade we assign a water business? If so, how effectively would our proposed approach tailor the regulatory approach to the different businesses we regulate?

3 Using ex post incentives

This chapter discusses how 'ex post' incentive schemes (ie, incentives that pay out after the business has acted) could be used to encourage best performance from businesses. Ex post incentive schemes are important for driving dynamic efficiency, ensuring customers are provided with services at the lowest sustainable price.

IPART currently uses ex post incentive schemes sparingly. In our 2016 pricing reviews, we introduced an efficiency carryover mechanism (ECM) for permanent reductions in operating expenditure.

This approach should encourage businesses to identify cost savings that are then passed on to customers after a set period. However, there is no equivalent scheme for reductions in capital expenditure, or any financial incentive to deliver efficient improvements in service levels year on year. In theory, the ECM could create an incentive to pursue operating expenditure reductions over other forms of improved service, even when this is not the most efficient action.

In practice, the ECM has rarely been used. Businesses have said it is too difficult to prove a reduction in operating expenditure is permanent, and because the scheme is run on an opt-in basis, they have chosen not to pursue it.

We plan to use ex post incentives more directly in our new regulatory framework. Our proposed approach would have 2 main changes:

1. The use of ex post incentive schemes would be tailored to the sophistication of the business (which, in turn, would be established by our grading regime).
2. Where applied, the schemes would be redesigned to create stronger, more balanced price–performance trade-offs for cost reductions and improvements to service quality.

We will develop more detailed guidance when we receive stakeholder feedback on the positions in this paper.

3.1 Ex post incentives would be tiered

In our current framework, all businesses are eligible to apply for the ECM, though few choose to. Our new approach proposes ex post incentives would depend on the status of a business's proposal:

1. Standard proposals would not have access to ex post incentive schemes (instead, we would rely on performance reporting and standard building block incentives).
2. Advanced proposals would access ex post incentive schemes as a default, but as discussed below, we would potentially apply discretion.
3. Leading proposals would access mandatory ex post incentive schemes.

In our view, a standard business may not benefit as much from ex post incentives schemes, which introduce additional complexity. Importantly, a business needs to demonstrate its understanding of, and the accountability provided by, the incentive regime. This understanding would help inform our grading.

The administrative costs associated with ex post incentives may outweigh the benefits for very small water businesses, such as Essential Energy. This would not stop Essential Energy and other small water businesses from benefiting from grading through ex ante incentive payments or from the reputational benefits of achieving an advanced rating.

We seek comment from stakeholders

6. Do you support a tiered use of ex post incentives to advanced and leading businesses?

3.2 We propose refining incentive schemes

For advanced and leading businesses, we propose to improve the design of ex post incentive schemes.

IPART currently uses an efficiency carryover mechanism (ECM) to encourage businesses to deliver operating expenditure savings.

Appendix A compares the key features of our ECM to a range of other incentive schemes used by other regulators, including the AER's Efficiency Benefits Savings Scheme (EBSS). As discussed below, four key features of IPART's current regime would be redesigned.

1. The ECM only applies to operating expenditure. Under our new framework, ex post incentive schemes would apply to operating expenditure, capital expenditure and key aspects of service performance.
2. The ECM is an 'opt-in' scheme. This creates an asymmetry, as there are no additional consequences for the business for increases in operating expenditure, but the business has access to an additional financial reward if it reduces its operating expenditure. We propose that, if the business has access to ex post incentive schemes, applying these schemes would be mandatory.
3. The ECM does not include temporary fluctuations in operating expenditure. Only permanent reductions in operating expenditure are retained by the business, which creates a difficulty in measuring and verifying permanent changes in efficiency. We propose that incentive schemes would apply to all years of expenditure or service performance in the regulatory period.
4. The ECM allows the business to retain permanent operating expenditure savings for the length of the regulatory period. However, changes in the length of the regulatory period and changes in the WACC affect the power of the ECM over time. Instead, we propose that the business would retain a fixed 20% share of the calculated gain or loss, each year, using an "NPV-approach". This approach would also consistently 'net' out the impact of temporary fluctuations in expenditure over time.

The sections below discuss these four changes, as well as some other aspects of our proposed use of ex post incentives. In making these refinements we also considered a number of design principles (Box 2).

Box 2 Principles for well-designed ex post incentives

Ultimately, we want businesses to act in the best long-term interests of customers. For incentive schemes to promote this outcome, they need to be:

1. Balanced and tailored to the individual business
2. Thought of as a complete package, and linked to other incentives. We plan to achieve this by linking ex post incentives to the grading regime (Chapter 2) – a key element of the tiered regulatory framework.

We consider a well-designed incentive scheme should meet the following principles:

1. Truthful revelation: Over time, the payments (or penalties) under the scheme should reflect genuine efficiency savings (and not, for example, the deferral of efficient expenditure into future periods).
2. Power: How effectively does the scheme enhance incentives to reveal efficiency, and place pressure on the business to pursue dynamic efficiency, relative to the base case of no incentive scheme?
3. Symmetry: The scheme needs to provide a symmetric financial reward or penalty relative to the base case of no incentive scheme.
4. Consistency: The scheme needs to be time consistent in equalising the incentive to reduce expenditure in every period.
5. Equalised incentives: For example, how well does the incentive scheme equalise the incentives to reduce operating and capital expenditure (and do these align with the incentive to increase or reduce service standards)?
6. Implementable: The scheme needs to balance simplicity against the risk of false precision.
7. Commitment: Can the regulator credibly commit to the scheme over time? Can it, for example, avoid the risk that short-term cost cutting leads to future expenditure increases that the regulator is forced to accept?

Ex post incentive schemes would promote balanced incentives

We would use a consistent set of ex post incentive schemes across operating expenditure, capital expenditure, and key aspects of service performance, to ensure consistent incentives. We propose advanced and leading businesses would have:

1. Expenditure incentive schemes (both an operating expenditure efficiency benefit sharing scheme (EBSS) and capital expenditure sharing scheme (CESS)).

   These schemes share traits with our current ECM, however they apply to both operating and capital expenditure. They are also not reserved for permanent savings, and are not applied on an opt-in basis. As outlined below, these schemes would be fairly similar in design to the Australian Energy Regulator's EBSS.

2. A service level incentive scheme, similar in design to Ofwat's outcome delivery incentives (ODIs).

   An ODI would tie financial rewards and penalties to the customer performance outcomes that businesses commit to in their pricing proposals. The performance targets would be informed by customers' preferences, including willingness to pay surveys. For advanced businesses, these estimates could take some time to establish, and therefore these service incentives could be for only a partial set of indicators in the short run. As discussed below, ODIs for service performance would need to operate consistently with operating licence requirements.

If we had service incentives without corresponding incentives to reduce costs, there is a risk a reputationally sensitive business would over-invest on performance. Likewise, implementing incentive schemes in a piecemeal fashion with inconsistent incentive rates (both the sharing rates, and the timing of payouts) creates distorted incentives.

We do not propose a total expenditure approach, or a total expenditure incentive scheme, as a default. In our view, applying such an approach for long-lived assets relies on the business and the regulator credibly committing to a long-term baseline of efficient expenditure, to avoid creating the risk of inefficient under-investment in the short term. Symmetric, balanced incentives for operating expenditure and capital expenditure should achieve similar results to a well-designed total expenditure scheme, without having such high information requirements. However, while we are yet to see a compelling case for totex, we are open to exploring it on a case-by-case basis.

We would also ensure that the price signals provided to advanced and leading businesses for better service performance do not create a conflict with existing operating licence conditions. As outlined in Appendix B, advanced and leading business would need to demonstrate customer willingness to pay for any targets that exceed minimum customer protection and Licence standards. In proposing targets for service outcomes, these businesses would also need to consider any protections for individual customers, so that any increases in efficiency from the incentive schemes do not come at the cost of a reduction in service to individual 'pockets' of customers.

Applying ex post incentive schemes would be mandatory

Under our proposed model, ex post incentive schemes would be agreed between the business and IPART each time the business submits a proposal. Unlike our current framework, once agreed to, schemes would be mandatory. That is, we would calculate the gain or loss under the scheme over the course of the regulatory period. This approach contrasts with our current ECM scheme, where it is up to the businesses whether or not to apply for an efficiency payment under the scheme at the end of the period (or, at least in theory, whether to apply for a penalty in the case of an expenditure over-run).

The schemes would not exclude temporary fluctuations in expenditure

Our proposed incentive schemes would apply to all years of expenditure or service performance in the regulatory period. This removes the difficulty in measuring and verifying permanent changes in efficiency we currently face under the ECM.

We would apply consistent sharing rates

We propose all mechanisms (EBSS, CESS, ODIs) would have a flat 20% sharing rate between the business and its customers, calculated using a 'NPV' approach. That is, the business would retain 20% of the calculated efficiency gain or loss in any given period, with the same sharing rate for advanced and leading proposals.

We consider a 20% sharing ratio is appropriate for 3 main reasons. It:

1. Balances the need to incentivise behavioural change without creating an incentive for the business to inefficiently underspend. Incentive schemes (particularly service incentive schemes) can never fully capture all factors that affect costs and performance. Therefore, if we set the incentive rates too high there is a risk that the business will prioritise financial conservatism over service performance
2. Ensures the schemes provide benefit to consumers. The schemes assume any benefits in a year will not result in higher future costs to customers. Under the ex post schemes, the business retains its share of the benefit of an efficiency gain first, before it is then passed through to the customer. But there is always the risk of regime changes, of structural changes in the industry, and that the business can – despite the best efforts of the regulator – propose higher future prices in such a way that undoes the efficiency challenge
3. Is broadly consistent with the current real rates of return. Under the existing building block framework, a permanent efficiency gain retained by the business for 6 years, at a 3.5% real WACC, results in a 19% sharing rate.

Calculation method

Broadly, incentive schemes can be designed in 2 ways:

1. The calculated gain or loss in a year can be retained for a fixed period of time by the business.
2. A share of the present value of the calculated gain or loss in a year is retained by the business.

The most important thing is internal consistency (i.e. that the same approach is chosen across all incentive schemes). We favour a 'present value' approach to calculating the payments under all schemes. That is, in any year, the present value of the gain or loss would first be calculated, before apportioning 20% of that gain to be retained by the business. For example:

1. Under an operating expenditure sharing scheme, any efficiency gain or loss in a year is assumed to be permanent, so the present value of that gain or loss would be calculated.
2. Under a capital expenditure sharing scheme, the gain or loss is assumed to be a one-off for that year, so 20% of the gain or loss within that year is retained by the business.

We favour a present value approach because:

1. The power of the scheme doesn't change over time as interest rates, or the length of the regulatory period, changes.
2. This approach addresses any 'edge' cases where the business may be able to 'game' incentive schemes.

Caps on scheme payments

We propose limiting the size of the incentive payment under each incentive scheme. If the business outperforms above the cap, standard building block incentives would apply for the remainder of the pricing period. Or in the case of service standard outperformance, there would be the reputational benefit from the annual performance reporting in a performance dashboard and in customer bills.

As a default, we would limit the incentive payment to 1% of the annual revenue requirement over the regulatory period. This figure equates to an outperformance equivalent of an additional 5% value to the customer. But we would also ask advanced and leading businesses to propose how much revenue they risk in the incentive schemes as part of demonstrating their commitment and confidence in costs.[b]

Timing of payments

We propose all payments, or return of revenue, be paid out at the end of each regulatory period, rather than at the end of each year within the regulatory period. This approach preserves the behavioural incentives between each scheme, and is administratively simple. For example, allowing payments for higher levels of service performance to flow through at the end of each year, but delaying payments for operating/capital expenditure efficiencies could create an incentive for the business to inefficiently prioritise service quality improvements.

As with ex post mechanisms in our current regulatory framework, such as the efficiency carryover mechanism (ECM), the Tribunal would retain discretion to depart from its proposed approach if it considers it appropriate and reasonable in the circumstances. However, consistent with the Tribunal's historical regulatory practice, a departure from a previously stated approach would be unlikely to occur except in exceptional circumstances.

We seek comment from stakeholders

7. How effectively would our proposed use of ex post incentive schemes encourage cost reductions and improvements to service quality?

[b] That is, they should propose caps and collars for the incentive mechanisms.

4 Streamlining the expenditure review process

Expenditure levels are the basis for prices. Setting expenditure at an inefficient level can lead to higher prices for customers or service levels falling to below an acceptable level. In making a price determination, IPART must consider the "cost of providing the services" and the "need for greater efficiency in the supply of services".[1]

An asymmetry of information naturally exists between a regulator and regulated entity. The expenditure review attempts to verify the efficiency of the business's proposed costs (and therefore, what customers pay), and is central to our framework.

Through this review, stakeholders have argued the current expenditure review process is burdensome and creates barriers to innovation.[c] Our current approach, while detailed, has become heavy handed and lacks the strong incentives for businesses to show their true efficient costs and seek further efficiencies.

The incentives in this paper encourage businesses to challenge themselves to find cost efficiencies while managing service levels in the best interests of customers, and to submit proposals based on high quality research and planning. Our goal is to collect the information we require to have a high level of confidence in the efficiency of cost proposals, and to rely less on detailed bottom-up expenditure reviews.

We propose improvements to our expenditure review process in the short term and over the longer term to:

1. collect more robust information to allow us to quickly assess the efficiency of cost proposals
2. focus the scope of work of cost consultants based on the concerns we identify in pricing proposals.

Some of these changes will take time to implement. But we need to make changes now to allow for potential improvements in the future, such as fast tracking proposals, or to engage expenditure consultants by exception. Figure 4.1 shows our phased approach to making changes to the process.

[c] See for instance: Hunter Water submission to IPART Position Paper, October 2020, pp 19-20; Water NSW submission to IPART Position Paper, October 2020, pp 27-28; Central Coast Council submission to IPART Position Paper, October 2020, pp 11-12, and comments made at the public workshops (not published)

Figure 4.1 Evolution of the expenditure review process

Improve the quality of information IPART has at the beginning of a price review

Implement data strategy to develop credible estimates for baseline opex and capex

Develop benchmarking models

4.1 Our proposed changes

We propose:

1. reviewing the quality of a business's systems and processes before a pricing review, and testing how well they are implemented at the pricing review
2. improving the collection of operating and capital expenditure information and aligning information to the Victorian Essential Services Commission's (ESC's) model
3. establishing an efficient baseline of expenditure:
   - we would move to a base–step–trend approach to assess operating expenditure
   - we would ask businesses to develop predictive models of longer-term capital expenditure needs, particularly for renewals and growth capital expenditure
   - over time, we would develop better top-down benchmarking models
4. conducting ex post capital expenditure reviews by exception
5. asking consultants to recommend a range for the efficient expenditure allowance
6. requiring businesses to provide an explicit list of productivity improvements found and forecast, and to nominate an ongoing efficiency factor.

We address these proposals in the sections below.

4.2 The review process would be split

Knowing a business has effective systems and processes, and expenditure governance, that guide and promote good decisions, increases the confidence of the regulator in the efficiency of expenditure proposals.

Currently, our consultants review a business's systems and processes, strategic long-term planning, and then operating and capital expenditure items. This review takes place after we receive the proposal and is completed over a few months.

We propose splitting this process into 2 reviews, with:

1. A review of underlying systems and processes taking place during the determination period. We expect this review would take place around 2 years prior to the proposal being due under a 6-year regulatory model.

2. A more detailed review of proposed expenditure after a proposal is submitted. This review would also test implementation of the decision-making processes.

This 2-stage approach smooths the regulatory burden over the determination period and can allow the business to address and implement recommendations in their proposal. Businesses with high quality processes that are duly implemented can expect narrower systems and processes reviews in future. We would engage one consultant to undertake both stages of the review to smooth the process for businesses.

The scope of the review would be informed by the findings of cost consultants in recent reviews, but we would generally expect to focus on capital and asset management and planning.

4.3 Aligning information requests with the Victorian Essential Services Commission's (ESC's) categories promotes comparison

Currently, different businesses provide IPART with different breakdowns of their operating and capital expenditure. We have historically allowed this to reflect the business's internal data collection, and because we were not comparing across businesses (in NSW or elsewhere).

However, we now see value for us, and the businesses, to be able compare the different cost categories to other business. Comparisons allow us to quickly identify where a business's costs may be high, and where efforts are best spent by the business and our expenditure consultants to scrutinise costs and alternative options and implement productivity improvements.

The ESC has standard expenditure categories that it applies to all 17 water businesses it regulates (Box 3). It also publishes the business's proposal every review. As a first step, we should align our data collection with the ESC's cost categories. Doing so would allow an immediate comparison within NSW and with Victorian water businesses, and help identify areas for improved performance in baseline expenditure and trends.

Box 3 The Victorian ESC's expenditure categories

Broadly, the Essential Services Commission (ESC) splits operating expenditure by 'activity' for each service – water, wastewater, stormwater and recycled water:

Controllable operating expenditure

- operations and maintenance
- treatment
- customer service and billing
- guaranteed service level payments
- corporate
- other controllable operating expenditure

Non-controllable operating expenditure

- external bulk water charges (excluding temporary purchases)
- external temporary water purchases
- licence fees
- environment contribution
- other non-controllable operating expenditure.

The operating expenditure categories are divided into the 'activities' of labour, plant and materials, contractors, electricity, greenhouse gas offsets, chemicals, vehicle fleet running costs, and IT.

For capital expenditure, the ESC requires a business to outline all the projects in its forecast capital plan, and to categorise these according to:

1. service (water, wastewater, stormwater, recycled water, bulk water)
2. cost driver (renewals, growth, improvements and compliance)
3. asset category (headworks, network, treatment, and corporate).

This disaggregation is not dissimilar to IPART's current data collection. The advantage of the ESC's approach is that all the data are in a single table.

Source: Essential Services Commission, *Template – Generic Template for Water Businesses to Submit Regulatory Accounts*, November 2009, available to download from here.

We expect businesses to already be collecting the majority, if not all, of the data. But businesses would likely need to adjust their internal data collection to facilitate the changed reporting. We would work with businesses to understand the timing requirements to amend reporting.

4.4 We propose moving to a base–step–trend approach to set expenditure

Our current expenditure reviews look at a wide range of programs and projects.

We consider more targeted expenditure reviews can save costs for both IPART and businesses, while also increasing effectiveness. Benefits of better targeted reviews include the following:

1. Streamlining – IPART, businesses and consultants can spend less time preparing for, scoping and responding to expenditure reviews.
2. Direction – Capability can be built to quickly focus the scope of reviews.
3. Comparative advantage – By having IPART staff complete statistical work in-house, our consultants can focus on their areas of expertise (e.g. cost estimates for major capital projects).

4. Effective performance reporting – A better understanding of what matters to performance can lead to a more effective performance reporting regime.
5. Cost savings – Minimising or avoiding costly expenditure reviews allows IPART to focus its regulatory efforts on the priorities that best promote the long-term interests of customers.

Base–step–trend is a common approach taken by regulators

The base–step–trend approach to setting operating expenditure is applied by the Australian Energy Regulator (AER)[2] and the ESC.[3] Forecast operating expenditure is built up from 3 components:

1. **Base** – the efficient recurring expenditure required each year, typically based on the most recently available 'full year' of actual expenditure
2. **Step** – changes that are typically the result of new requirements or new ways of doing things, so past expenditure or trends cannot predict this change in expenditure.
3. **Trend** – the predictable (and efficient) change in recurring expenditure over time due to input price changes, population/demand growth and improvements in productivity

A base–step–trend approach is not a major departure from our consultants' current practice but doing it well would require changes to our data collection.

Ensuring the correct base level of expenditure is particularly important. Initially we would still need cost consultants to review whether the base costs are efficient. But over time we will have additional data and tools to help verify base costs (i.e. the repeated game aspect of price regulation will help to verify base costs). This would entail:

1. Examining how the forecast costs for the base year in the previous pricing review compared with the actual base expenditure in the current pricing review.
2. Using the ex post financial incentives within the existing regulatory framework, for advanced and leading businesses. As these schemes expose the business to a larger financial gain, or loss, from any over-spends or under-spends in forecast and actual operating expenditure, they encourage the business to reveal its efficient base costs.

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

Capital expenditure categories can help build predictive forecasting

Capital expenditure is more difficult to forecast, because it is lumpier over time. It is therefore difficult to assess whether a large step-change in capital expenditure is efficient.

We need to establish a way to:

1. Separate the categories of capital expenditure that are predictable – even over the course of multiple regulatory periods – from large investments that are lumpy or one-off in nature (for example, the construction of a desalination plant).
2. Develop tailored approaches for the 2 categories, to established whether proposed expenditure is efficient.

Categorising capital expenditure based on cost drivers is important. This process is helpful to identify and separate 'predictable' business-as-usual capital expenditure from 'lumpy' capital expenditure.

Historically, we have requested capital expenditure be split into 5 discrete cost drivers – existing mandatory standards, new mandatory standards, growth, government programs, business efficiency programs and discretionary services. We have heard informally this breakdown does not reflect internal business processes.

We propose working with businesses to better characterise capital expenditure, aiming to build benchmarking or predictive forecasting for recurring or replacement expenditure. For example, it may be possible to benchmark the costs of greenfield growth expenditure.

The ESC's breakdown of capital expenditure into replacement, growth and other capital expenditure is a good starting point for this task.

We could establish a benchmarking working group

We regulate a small number of heterogeneous water businesses. Benchmarking our regulated businesses will always be limited by the lack of a suitable comparators.

Hence, we are exploring options for cross-jurisdictional benchmarking. We could develop a working group of regulators and any interested departments to explore:

1. developing consistent and robust benchmarking methodologies
2. identifying data requirements (fit for purpose, complete and consistent across time and location)
3. leveraging a wider pool of expertise and experience
4. efficient allocation and sharing of the workload.

4.5 Review of ex post capital expenditure would be by exception

Capital expenditure is recovered from customer prices over time. To do so, capital expenditure is added to a regulatory asset base (RAB). When we set prices, we include the forecast capital expenditure but actual capital expenditure can vary greatly from forecasts for a number of reasons. We therefore review actual expenditure and amend the RAB to ensure only efficient expenditure is recovered through future prices. This is known as an ex post review of capital expenditure.

The risk of ex post reduction to the businesses' actual capital expenditure is significant, because it can leave major expenditure items unfunded. Theoretically, this approach provides a strong incentive for the businesses not to overspend allowances during a determination period. However, this approach works only if we can identify and make adjustments for 'true' inefficiency.

In practice, we rarely make significant cuts in ex post capital expenditure reviews for several reasons:

1. The businesses are usually capable of explaining why the expenditure was efficient at the time. Put another way, it is difficult for consultants to prove that costs were inefficient, given the asymmetries of information.
2. We understand the consequences of cutting past expenditure are more risky than future expenditure, given the business has no opportunity to retrospectively change its decisions and be more efficient.
3. It introduces an added degree of regulatory uncertainty and risk. If ex post adjustments became commonplace, businesses might be reluctant to make necessary investments or might seek a higher WACC.

Retaining the discretion to review historical capital expenditure has significant benefits. But we propose targeting how we apply that discretion, to conduct ex post expenditure reviews only when:

1. the business significantly overspends its allowed capital expenditure
2. assets are repeatedly deferred and re-proposed, and the business spends that allowance in other ways (particularly if there are incentives to encourage capital expenditure efficiency)
3. evidence of underperformance exists, such as service targets or mandatory requirements not being met.

We expect a more targeted approach will enhance the incentives for the business to constrain spending. The reward is lower costs in the regulatory review and greater certainty their expenditure will be rolled into the RAB. It also means we can be more targeted when we need to review historical capital expenditure.

4.6 Consultants would provide a range of efficient expenditure

We currently expect expenditure consultants to recommend 'exact' adjustments to the business's proposed expenditure levels that are the sum of a series of bottom-up adjustments to individual programs or projects. For the most part, this is an established approach to expenditure review consultancies across regulators.

The business's pricing proposals should identify what customers want, at an efficient price, and promise that it will be delivered. And we want the expenditure review process, including the recommendations provided by consultants, to:

1. test the strength of this commitment
2. encourage the businesses to put their best proposal forward and not withhold any costs
3. invite a positive response from the business that creates value for customers, within the review period and on an ongoing basis.

Within that context, we consider the current approach exacerbates incentives for the business (and the consultant) to behave strategically, to the detriment of customers.

In future we propose asking cost consultants to provide IPART with a view on a range for the overall efficient level of expenditure. IPART would then decide on the efficient expenditure allowance.

This range recommended by consultants would still largely be informed by a series of adjustments to individual projects of programs. In turn, the individual adjustments could be a mixture of exact adjustments, or be in the form of a range, depending on the circumstances.

The consultant would also provide clear advice to IPART on the factors that would inform how it should reach a decision within that range. The factors that could influence where a decision would fall along the range are:

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

At the project or program level, we would expect many adjustments to be exact. For example, if the business makes a mistake on a particular cost input, then the consultant should recommend correcting the input. However, some adjustments would be a range if the conditions above are met.

There a number of benefits to this approach

Having the consultants recommend a range of efficient expenditure acknowledges that businesses' proposals are multi-dimensional – a balance of cost, performance, and risk. It creates an avenue to address uncertainty in project scope and costs:

1. We would not necessarily refuse cost claims. Rather, we may want the business to demonstrate a stronger performance commitment based on the proposed expenditure.
2. There may be situations where the 'bottom' of the consultant's recommended expenditure adjustment reflects a 'risk averse' position, and the 'top' represents a 'risk neutral' position. The range itself provides us with better information to make decisions.

This approach would allow for more constructive dialogue between the business and Tribunal during the expenditure review process. For example, businesses could offer a higher level of performance for a given expenditure proposal, or vice versa, if that performance is supported by customer preferences.

Where IPART uses the advice of consultants as an input to its decisions, it would be explicit to all stakeholders that IPART does not simply accept the estimates put forward by the consultant. Indeed, we would expect to often deviate from the 'midpoint' advice of the consultants, based on all the information and analysis provided to IPART.

Under our current approach, while IPART can, and does, make decisions that are different to the advice provided by our consultants, large departures from the consultant's advice are infrequent. This is for a few reasons, not least of which that the recommendations of the consultants have been thoroughly tested before they reach their final recommendations.

However, if IPART made frequent, and large, deviations from cost consultants' 'point' estimates, this could call into light the credibility of the consultants. Furthermore, this expectation then creates an incentive for the business to predict how a consultant will view its proposal to attempt to 'backsolve' the expenditure allowance it wants based on how it anticipates the consultants will act.

We want each business's proposal to reflect its honest assessment of efficient costs. In support of this outcome, our proposal introduces two sources of uncertainty to discourage the business from attempting to anticipate the outcomes of the expenditure review. The first is that it introduces uncertainty about where consultant will land. The second source of uncertainty for the business is where the Tribunal decision will land relative to the consultant's range, and the factors that would influence its decision.

4.7 Other proposals to satisfy IPART that expenditure is efficient

Businesses should propose an ongoing efficiency factor

We commonly apply a 'continuing efficiency factor' to represent expected productivity improvements that businesses should seek to capture over the determination period. We have recently based this on the long-term (around 40 years) average of Australia's multi-factor productivity.[4]

We propose the businesses should nominate their own continuing efficiency challenge going forward. This approach would generally apply to all controllable expenditure and be additional to identified project or program efficiencies.

The size of the efficiency factor proposed would be a factor considered as part of our grading system (Chapter 2), both for expenditure and credibility. We would expect a challenging but plausible efficiency factor that realistically reflects expected productivity improvements. In future the ability to meet the proposed factor would inform our confidence in the efficiency (or otherwise) of expenditure.

Applying best practice procurement/contracting and/or decision-making practices would enhance a business's ability to capture productivity improvements.

Businesses should include a list of achieved and forecast efficiency improvements

We expect businesses to identify and incorporate efficiency improvements over a determination period. Our current guidelines request that businesses:

1. Describe current and forecast efficiency programs and the potential for efficiency gains, and how these are included in expenditure forecasts.
2. Identify and explain trends in forecast expenditure, which may include productivity improvements or changes to service standards.[5]

We intend to reframe this approach to require a discrete list of efficiency gains made and forecast. This relatively simple change would emphasise finding true efficiencies and help stakeholders scrutinise the efficiencies gained. Where appropriate, it may also inform performance measures that test the business's ability to identify realistic improvements in order to deliver its performance commitments.

In preparing its list of improvements, we would expect the business to show why it is a genuine productivity improvement. For example, it would need to demonstrate where any offsetting savings for increased expenditure have been made, or to demonstrate an increase in performance or customer satisfaction is greater than the project cost.

5 Encouraging long-term planning – the 3-3-6 model

A key goal of this review is to find ways to promote better long-term planning through our regulatory framework. Feedback from water businesses suggests the 4-year determination period we typically set is too short and can detract from long-term planning.

Under our current framework, businesses propose the determination period. IPART then makes a decision, considering a range of factors including:

- our confidence in the business's forecasts
- the risk of structural changes in the industry
- the need for price flexibility and incentives to increase efficiency
- the need for regulatory certainty and financial stability
- timing of other relevant reviews
- stakeholder views.

Most commonly we set a 4-year determination, though it is sometimes shorter (or longer, in the case of the Sydney Desalination Plant (SDP)).

We propose moving to 6-year determinations as a default, with a mid-point health check after 3 years. We recognise this change has a number of implications for other elements of the framework, including how we use cost pass-throughs (a longer determination will mean businesses change how they manage risk). This chapter outlines our proposed model, as well as proposed changes to our cost pass-through framework.

5.1 We are proposing a new 3-3-6 model

We are seeking feedback on a new model – the 3-3-6 model. We would move from a 4-year determination to a 6-year determination period, with a formal 'health check' at the 3-year mark.

The mid-cycle health check could take 2 paths:

1. If the business is on track and performing well, it presents to IPART about its performance over the current determination period and planning for the next period.
2. If the business is not delivering, the business (or IPART) can request a targeted reset of the determination.

When the business is on track

If the business is on track and performing well, it presents to IPART about its performance and planning. It would show how it is delivering on its initial proposal, and how it is continuing to engage with customers in the lead up to the next proposal.

The health check is designed to be high level. We do not want it to become resource intensive (or become its own mini-review). We could nominate some key points for businesses preparing their presentations, including:

1. Aim of the health check – an opportunity for IPART and the business to engage halfway through the determination to discuss business performance and planning for the next period.
2. Content to be covered – the business should report on its performance against key criteria (e.g. revenue, delivery of key projects, compliance with licence targets etc.).
3. Presentation length – we propose a short slide deck and a maximum of a half day meeting, rather than a long report with data requests and numerous follow up appointments.

The materials the business provides during this health check would be made public as a default (subject to commercial in confidence claims, etc.), which should help to keep the businesses accountable to customers, as well as ensure the materials are suitably strategic in nature.

We suggest a business's board or equivalent would be best placed to engage with IPART in the health check. This could be an opportunity to promote board engagement with the regulatory process, and to keep the board accountable for the performance of the business.

If a business is facing challenges

If the business is facing challenges beyond its control, the business (or IPART) could request a targeted reset of the determination. We would reopen the determination and reset expenditure or prices as required.

A reopener could be initiated by the business or by IPART. If IPART agreed a reopener is warranted, the 12 months following the health check would be dedicated to reviewing the determination. In this case, the 3-3-6 model becomes more like a 4-2-6 model.

This option should be used only when absolutely necessary. We would require a strong case from the business why a reopener is needed. We seek feedback on our initial criteria for a reopener:

1. impacting services – current prices are (or will) affect the business's ability to provide services to customers, or
2. cost reflectivity – prices are no longer cost reflective.

Any reopening of the determination would still have to meet all the formal requirements under the *Independent Pricing and Regulatory Tribunal Act 1992* (IPART Act) because it would, in substance, be a new investigation and determination. While IPART could focus on certain elements of the framework in the new review, it would need to consider all other elements of the determination and determine that they remain appropriate.

5.2 The 3-3-6 model encourages long-term planning

The 3-3-6 model draws on process and reputational incentives to encourage better long-term planning. In the most obvious sense, it encourages long-term planning because it sets prices for longer, and businesses need to develop forecasts for a longer period to generate their proposals.

The mid-point health check also encourages better planning. A business that has not planned well and is not delivering after 3 years faces the risk of going through another review process (a burdensome task). Only businesses that have strong long-term plans in place will be confident they can pass the health check and earn the resourcing benefits that come from a less frequent price reset. Further, reputational incentives mean businesses will not want to be seen to need the regulator to step in and reset prices because the business is underperforming.

The 3-3-6 model also incentivises better proposals. In the past we have used a set of principles and allowed businesses to propose the determination length. But we can end up in a circular argument where we set shorter periods because we do not have confidence in businesses' cost estimates. Short periods then make it difficult for businesses to plan for the long term, making their cost estimates even more short term. This outcome means we set a short period next time. By contrast, a 6-year default determination creates an incentive for the business to deliver a well-evidenced, credible plan.

We are confident the 3-3-6 model addresses the 2 main risks of increasing determination length:

1. Longer determinations can mean less oversight from the regulator. If we review business every 6 years instead of every 4 years, we may not identify problems as quickly, and customers could end up paying too much for services in the interim. With the addition of the mid-point health check, we will have more oversight than under the current model.
2. Longer determinations can mean bigger changes in customer bills when prices are reset, because the landscape has changed more over the longer period. The 3-3-6 model puts the onus on businesses to manage this bill risk through good long-term planning/modelling. We have also reduced a large source of volatility in customer bills under our 2018 WACC method, because the cost of debt is now calculated using a trailing average approach.

5.3 A 6-year model would change how pricing and licensing reviews fit together

In general, operating licences can only be renewed for a period of up to 5 years. Moving to 6-year pricing determinations could create a disconnect between when pricing reviews and operating licence reviews take place.

Stakeholders have proposed that licence reviews shift to be more targeted, with specific items reviewed on a 'by exception' basis. This would mean that, rather than conducting a fulsome review of every element of the licence each time it is reviewed, we focus on revising the elements that are not working well. If we accept this approach, this would reduce the overlap between the two reviews.

We consider that the benefits of the 3-3-6 model outweigh the specific ordering of the two processes, provided that important performance standards are considered when setting prices.

We seek comment from stakeholders

8. Given the new 3-3-6 model, should we make changes to the way pricing and licensing reviews align?

5.4 We are updating our cost pass-through guidelines

Cost pass-throughs allow businesses to charge customers for specific events, over and above their base water prices. They should be used only when in the long-term interests of customers. But when there is a high degree of uncertainty about whether a significant event will eventuate in a determination period, it can be more efficient for customers to only pay if, and when, the event materialises, rather than pay the expected costs upfront.

There are events where agreeing to pass-through the efficient costs, when the event is triggered, could save customers money over time and/or provide a more cost reflective price signal (for example, the efficient costs of responding to drought).

As part of moving to a 3-3-6 model, we recognise businesses will adjust their approach to risk management, which may require a more careful application of cost pass-throughs. Therefore, we re-examined our current cost pass-through criteria, and are proposing some small changes.

IPART's current framework is comparable to that of the AER, ESC and Essential Services Commission of South Australia, with a few key differences. The main difference is that IPART's framework (and the IPART Act) requires any potential cost pass-through to be included in the determination (ahead of time), and that the costs to be recovered are known.

In designing our cost pass-through criteria, we need to balance the need to let only efficient costs be passed to customers, with keeping the framework accessible to businesses. Broadly, there are 4 categories of events where a business might ask for a pass-through:

1. An unforeseen event where the business has no way of estimating its impact ahead of time (e.g. a government tax change).
2. An event with a known outcome/obligation for the business, but costs would be difficult to estimate until details of the change were finalised (e.g. introduction of the new Greater Sydney Water Strategy, a change to the EPA's requirements).
3. An event where the business is able to model the impact with a reasonable degree of accuracy (e.g. the impact of an SDP expansion of Sydney Water's distribution network).
4. A known event where costs are clear (e.g. the costs to Sydney Water if SDP is operational).

Under our current framework there is some ambiguity as to which categories can be passed through. Arguably, only category 4 costs can be included. Other regulators have systems that allow businesses to (in some cases) recover costs in categories 1–3.

We do not think allowing costs from categories 1 or 2 to be passed through to customers is appropriate. Allowing costs that are so unknown to be passed through unconditionally would create poor incentives for the businesses – they are assured of cost recovery regardless of their actions. Customers risk paying too high a price for an event that is vastly different to what was expected when the pass-through was allowed. However, we do propose updating our guidelines to make it clearer under what circumstances we would look to allow some costs for category 3 to be passed through to customers.

The new guidelines, and the reason for making changes, are outlined below:

01 There is a trigger event (to activate the cost pass-through), which can be clearly defined and identified in the price determination.

We have not changed this guideline.

During a pricing period, there are both unforeseen events that increase costs, and others which lead to lower costs. Allowing a business to recover the additional costs of unknown costs creates poor incentives, moving towards a cost-of-service model, and creating the risk that customers are only exposed to the upside risk from higher costs.

02 The forecast efficient 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.

We added the word 'forecast', because it may be unrealistic even for leading businesses to accurately estimate costs for a future, uncertain, event. We would expect forecast costs to be conservative estimates. Making this change allows for category 3 costs to be passed-though.

Our cost pass-through framework would not extend to contingent projects where a forecast of the efficient costs cannot credibly be established and included as part of the pass-through. In our WaterNSW Greater Sydney Final Report, we outlined the options to manage the risk of a contingent project that arises during the regulatory period.

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) or a genuine financial viability threat to the business.

We added the second sentence to provide more clarity around what the 'materiality' should relate to. We consider the test should address an event that represents a material risk to customers in the long term. The cost pass-through expenditure must respond to an event that, if left unaddressed, would carry a material risk to customers

04 The regulated business demonstrates that a cost pass-through is the most efficient and equitable way to deal with the event.

We have changed this guideline (which previously stated the business cannot influence the likelihood of the event) to recognise almost all events are within some level of control of the business over a long enough time period. For example, a pass-through for an expansion to the SDP could be avoided by Sydney Water if it made different investment decisions over a sufficiently long period.

The key factors are whether the business can show it has tried to avoid this cost, whether it has considered other ways of dealing with the issue (e.g. insuring itself against the event), and concluded a pass-through is the most efficient and equitable solution for customers if the event does eventuate.

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.

This principle aims to ensure a pass-through does not take away the business's incentive to innovate and reduce costs. But some pass-through events are asymmetric by their nature – for example, the risk of drought or recovering the costs of new capital investments undertaken by third parties.

The key principle is that we would pass through the forecast efficient costs, not just the business's actual costs.

06 It is clear that the cost pass-through will result in customer prices that better reflect the efficient cost of service.

This guideline is largely unchanged, except for adding a reference to customers to ensure businesses keep customers front of mind when planning/requesting pass-throughs.

We seek comment from stakeholders

9. How effectively would the proposed refinements to our cost pass-through criteria promote the long-term interests of customers?

6 Funding innovation

In a competitive market, firms must innovate or perish. This market signal is blunted for regulated businesses, who receive steady regulated revenues for 'business as usual' but incur increased risks/costs for doing things differently. Regulatory returns are capped and market share is largely fixed.

We heard from stakeholders, through submissions and at the workshop, that some explicit funding in the form of an innovation fund would increase water businesses' appetite to take on more risk to invest in innovative ideas.

An innovation fund provides a pool of revenue the business can access for funding innovation projects. The cost of the fund is recouped from customer bills, usually within a regulatory period.

Regulated businesses have expressed the view that their innovation as a share of expenditure is inefficiently low, and that a modest – and explicit – allocation of funding for innovation would:

1. Provide revenue certainty for businesses to undertake projects that are higher risk (and that benefit the community and customers). It could address an underinvestment in projects that are socially desirable but not financially viable for the business, particularly when it is hard to demonstrate concrete benefits within a single regulatory period.
2. Provide dedicated funding that could motivate the business to invest greater effort into nurturing a culture of innovation.

6.1 Innovation funds pose challenges

We are committed to promoting efficient expenditure on research and development and other forms of genuine innovation, provided they are in the long-term interests of customers. And we do not disagree with the businesses' submissions that the share of funding they allocate to innovation may be inefficiently low. Indeed, the quantum of funding – for example, the 0.1% of operating expenditure allocated by the AER to explicit innovation funding (Box 4) – is not a barrier for IPART in considering the merits of innovation funding.

While the quantum of funding would be small, customers are absorbing the risk of potentially failed projects under an innovation fund. In our view, innovation funds pose some subtle but important challenges.

First, a hidden action problem exists and this is difficult to verify using an ex post review. While it is easy to observe whether the business has spent the money it has been allocated to innovation, it would be more difficult to assess whether the innovation funds were expended efficiently ex post. As stakeholders have rightly pointed out, including Sydney Water in its submission to our first discussion paper, it is not inefficient for some innovations to fail, and it is impossible to predict this ex ante.

This situation creates a moral hazard risk, because it is not clear a commensurate investment in effort has accompanied the innovation funding. The potentially long lag until benefits are realised makes it even more challenging to establish the value of the innovation investment. We are not sure de-risking regulated businesses through the innovation fund would encourage greater innovation or discipline in ensuring project success. By contrast, the building block framework creates a discipline for the businesses to propose projects and costs on the basis of minimising lifecycle costs, or it will be disallowed.

Second, funding projects through a separate innovation fund implies we are applying an alternative assessment to this stream of expenditure. The water businesses have consistently told us one of the issues with IPART's discretionary expenditure framework is the lack of a clear distinction between mandatory and discretionary expenditure. We consider this logic also applies to innovation funding. While there are different types of innovation, there will always be a grey area between true research and development, and business-as-usual efficiency improvements.

Third, other regulators have created competition for innovation funding. But the smaller number of businesses we regulate creates additional barriers to a competitive model where water businesses bid from a central pool to recreate a 'synthetic' competitive market for innovation, which occurs under Ofwat's innovation competition (Box 4).

However, there may be scope to offer innovation funding as an option for businesses that are graded highly, where they demonstrate sufficient maturity in business operations to be able to use innovation funds to promote the long-term interests of customers.

We would need to be convinced upfront that there would be appropriate management attention to the innovative projects, because it is difficult to assess the quality of innovation ex post given they will sometimes fail. The onus would be on the business to put forward a compelling case about how it would address the 'moral hazard' aspects of innovation funding to ensure it is allocated efficiently and receives appropriate management attention. There should also be strong rationale and evidence of long-term customer value at the outset, demonstrating that the expected value to customers is high (accounting for the likelihood of success and failure).

We also consider there is value in observing and learning from the outcomes from other regulators' innovation funds.

Box 4 Innovation funds are a recent addition to the regulatory toolbox

Other regulators have introduced innovation funds recently, with the UK water regulator (Ofwat) and the Australian Energy Regulator (AER) having introduced innovation funding in early 2021.[a]

The AER's innovation fund - the Demand Management Innovation Allowance Mechanism (DMIAM) – was introduced to incentivise utilities to undertake projects and programs that are not fully proven in their demand management capability. However, these projects have the potential to result in significant long-term benefits to consumers in reducing network investments.[b]

The DMIAM was released in May 2021 and is available to electricity transmission network service providers for research and development projects related to demand management. It makes available 0.1% of annual building block revenue requirement for each service provider per regulatory period. Service providers are encouraged to provide evidence of independent endorsement of the demand management project to back their proposal. Service providers also have the flexibility to combine their innovation allowances, or carry them across regulatory periods, to fund larger projects.[c]

Ofwat's innovation fund commenced in early 2021, and was designed to encourage utilities to develop the right culture and mechanisms to facilitate effective innovation and collaboration – areas identified as key barriers to innovation.[d] The £200 million innovation fund is offered through 'innovation competitions' with core features including:

1. entrants submitting project tenders to bid from the central pool of funding, through 2 main channels of funding:
   - £40 million through the Water Breakthrough Challenge, which provides entrants with an opportunity to win up to £10 million
   - £2 million Innovation in Water Challenge, which provides entrants with an opportunity to win up to £250,000[e]
2. allowing the costs to be recouped from customer bills (over 2020–2025) – estimated to be, on average, £1.50/year/customer[f]
3. encouraging collaboration and third party involvement in bids, with a requirement that proposals demonstrate third party involvement throughout the supply chain.[g]

a. Ofwat, Innovation funding and competition: decision on design and implementation, 2020; and AER, Demand management innovation allowance mechanism, Explanatory Statement, 2021.
b. AER, Demand management innovation allowance mechanism, Explanatory Statement, 2021.
c. AER, Demand management innovation allowance mechanism, Explanatory Statement, 2021.
d. Ofwat, Time to act, now: driving transformational innovation in the sector, 2019.
e. Ofwat, Water innovation competitions, 2021, accessed July 2021.
f. Ofwat, Ofwat's emerging strategy: Driving transformational innovation in the sector, 2019.
g. Ofwat, Innovation in Water Challenge Entrant Handbook, version 1

Appendices

A Types of ex post incentives

We outline 5 incentive schemes (3 financial, 2 service) and compare their relative merits in this Appendix.

A.1 Incentive schemes for expenditure reductions

Operating expenditure efficiency benefit sharing scheme

The Australian Energy Regulator (AER) has an operating expenditure (opex) efficiency benefit sharing scheme (EBSS). Under the scheme, any changes in opex efficiency (reductions or increases) are kept by the business for a period of time equal to the length of the regulatory period, regardless of stage of the regulatory cycle. This approach addresses the problem of an increasingly weak incentive to make savings under a basic building block framework throughout the regulatory period, and addresses a businesses incentive to artificially increase expenditure in the base year.

This scheme works as follows:

1. Each year, the difference between allowed expenditure and actual expenditure is calculated (the gain or loss).
2. Then, the change in the gain or loss, year to year, is calculated.

It is the change in the gain or loss year to year that is retained by the business for the length of the regulatory period, rather than difference between actual and allowed opex. This approach places pressure on the business to sustain and continue to drive further efficiencies.

At the next price reset, the gains and losses to be carried forward into the following period are accumulated and added to (or subtracted from) the allowed expenditure.

The problem with an EBSS is that it introduces an incentive to bring costs forward within the regulatory period to 'game' the scheme. A business could, theoretically, deliberately overspend its allowance in the early years of the period and then underspend in the later years. The overall spend over the period would be in line with the allowance. But by bringing forward costs, the change between the years is a significant decrease in opex, which is rewarded in the following period.

However, this may not be a realistic concern. While a business may have some limited scope to shift opex between 2 consecutive years, it seems unlikely it is possible to shift operating costs between non-consecutive years. Further, this risk can be minimised by adopting a base-step-trend approach for assessing operating expenditure; using the second last year of a regulatory period as the base for the next period. Artificially increasing spending up front and then lowering it late in the period would result in a lower baseline going forward.

Opex efficiency carryover mechanism

IPART currently uses an opex efficiency carryover mechanism (ECM) to encourage businesses to deliver opex savings.

Like an EBSS, the ECM allows the business to retain (certain) opex savings for the length of the regulatory period. It is also based on the annual change in the opex gain or loss (the change in actual versus allowed expenditure).

But there are 2 key differences between an ECM and an EBSS:

1. The ECM does not pass through year to year fluctuations in opex. Only permanent reductions in opex are retained by the business for the 4-year period.
2. The ECM operates on an opt-in basis.

This approach removes the incentive to delay implementing 'permanent' cost savings and reduces (but does not completely remove) the incentive to bring forward costs in the regulatory period, that are seen under the EBSS.

However, the ECM approach has drawbacks:

1. Asymmetry – there are no additional consequences for increases in opex, but the business has access to an additional financial reward if it reduces its opex. For example, a business which overspent its opex allowance in the final year of the determination period would only bear the cost increase for a single year, because it does not need to apply the ECM. Whereas a business that underspent over the earlier part of the regulatory period could trigger the ECM and retain the efficiency gain for a full regulatory period.
2. Measurement – it is difficult to distinguish between temporary and permanent opex savings over a 4-year regulatory period.
3. The ECM applies in a more limited set of circumstances, and therefore does not create the same pressure to increasingly outperform the opex allowance.

These drawbacks are interrelated. Although the ECM could be a mandatory scheme that would be applied at each price reset, the difficulty of verifying permanent opex savings over a 4-year period makes it more difficult to sustain the ECM as a mandatory scheme.

Capital expenditure sharing scheme

The EBSS only applies to operating expenditure savings. By itself, it creates an unequal incentive to pursue opex savings over capital expenditure (capex) savings.

Similarly, the incentive to reduce capex (e.g. by deferring investments) dissipates over the length of the regulatory period. However, the financial incentive is a little different, because the business retains only the return on assets (the weighted average cost of capital (WACC)), for the period it has deferred capex within a regulatory period. In addition, capex is lumpy – only a small proportion of capex could be classed as recurrent expenditure. This means the capital expenditure sharing scheme (CESS) is calculated based on the gain or loss in each year (the difference between allowed and actual capital expenditure), rather than the **change** in the gain or loss from the previous year as with the EBSS.

A CESS removes the incentive to delay implementing cost savings. It is symmetric, as it applies to capex under-spends and over-spends. It is also time consistent, in that there is no incentive to game the CESS carryover amount by shifting costs year to year within the regulatory period. The AER's CESS also acknowledges, and attempts to adjust for, deferred capex projects that have been re-proposed in the following period.

However:

1. The mechanism requires the regulator to be as confident about year 4 capex as year 1 capex (whereas, in reality, forecast quality generally deteriorates as the time horizon increases).
2. Given the long-lived nature of the assets – and the resource intensive nature of tracking individual capex projects – there still may be a residual incentive to defer capital expenditure projects. However, this need not be inefficient. If capex has been deferred for a sufficiently long period, the value of the deferral will be greater than or equal to the CESS payment to the business.
3. It requires careful consideration of the parameters. In the AER's CESS, the fixed sharing of savings between business and customers does not equalise the incentive to pursue operating and capital expenditure savings.

Total expenditure sharing schemes

A financial incentive scheme based on total expenditure (totex) would be similar to the CESS described above. Like the CESS, the business would retain a fixed proportion of any gain/loss between allowed and actual expenditure. There are 2 broad steps: setting up a totex allowance, and implementing the incentive scheme.

To set an initial totex allowance at the beginning of the regulatory period:

1. The level of total expenditure is based on a split of 'fast money' (opex) and 'slow money' (capex), which is agreed to as part of the review process. For example, the split of fast and slow money could be based on the historical split of operating and capital expenditure. The level of total expenditure would be based on a view of the efficient level of operating and capital expenditure as part of the expenditure review.
2. Fast money is paid out in full to the business in the year that it is incurred.
3. Slow money is added into a notional regulatory asset base (RAB). A return on, and a return of, capital is provided according to a capitalisation rate (in effect, a depreciation allowance based on a simple weighted average asset life).

Then, to calculate the gain or loss incurred by the business under the totex incentive scheme:

1. The difference in allowed totex and actual expenditure is calculated for each year of the regulatory period.
2. This difference is shared between the business and customers according to fixed (pre-determined) percentages. For example, 30% of the gain or loss might be retained by the business, and 70% by customers.

3. The share of the gain or loss in step 1 that is to be returned to customers is calculated. This step is required because customers have not yet benefited from expenditure reductions, or incurred the costs of any expenditure over-runs, over the preceding regulatory period.
4. The calculation in step 3 is returned to customers based on the initial split of fast money and slow money. In effect, the fast money adjustment is recovered via a cost pass-through in the following period, and the slow money adjustment is recovered via a RAB adjustment.

The advantage of totex is there is no longer a reason for the business to pursue one kind of efficiency over another – the returns from an opex saving are the same as from a capex saving. It also removes the incentive to delay implementing cost savings, does not create an incentive to shift the timing of expenditure reductions within an expenditure period, and is symmetric. Another benefit of totex is how it can be combined with service/customer incentive schemes, and potentially reduce the need for ex post reviews.

However, similar concerns around forecasting quality and deferrals hold as with a CESS. A totex approach also leads to a bigger disconnect between the RAB and actual asset base, which is an issue if deferrals can be made inefficiently.

In effect, totex is a hybrid of a building block regime that is based on lifecycle operating and capital expenditure costs, and one that is based on cashflows. The totex scheme provides an incentive for the business to reduce its total expenditure – the cash it spends – over the regulatory period.

Arguably, a totex scheme requires a strong 'commitment' by the regulator to a path of total expenditure. That is, a regulated business could reduce its total expenditure in the short term by reducing capex and increasing opex (e.g. deferring asset renewals through reactive maintenance). This strategy is feasible in the short term, but in the long term it could lead to a sharp upturn in capex.

The regulator should know this is a real risk, particularly given the management and board/equivalent of a firm are temporary. However, it may be difficult for the regulator to commit to the historical trend of total expenditure in such an event, given water and wastewater services are essential services provided by a monopolist.

Totex schemes have been used in the UK, by Ofwat and Ofgem, but to date have not been used in Australia.

A.2 Incentive schemes for service quality improvements

Outcome delivery incentives

The UK water regulator, Ofwat, introduced outcome delivery incentives (ODIs) to tie financial rewards and penalties to the performance outcomes that businesses commit to in their pricing proposals. The ODI payment rates can be assigned symmetrically or asymmetrically to specific performance outcomes (typically those of high value to customers and that the businesses have elicited reliable estimates of willingness to pay (WTP)). Our proposed shadow price for leakage (see Discussion Paper 1: Lifting performance) is an example of an ODI.

Businesses that deliver above target performance for customers can earn outperformance ODI payments that are recovered from customer bills (generally in the following regulatory period). Businesses that do not meet their commitment levels incur underperformance penalties that are returned to customers. The size of the payment rate depends on the level of performance (on a per unit basis), and a cap and collar around the size of rewards and penalties could be applied. A dead-band for performance outcomes could also be set if appropriate.

ODIs address the information gap on customer preferences by providing financial incentives for businesses to prioritise customer consultation and to deliver on the outcomes that they value. Businesses otherwise have little motivation to deliver above minimum standards set in licence requirements, and there is insufficient knowledge about customer value for better outcomes and services. Consequently, it can be argued businesses operate to achieve regulatory compliance rather than to deliver outcomes.

Ofwat reported that the introduction of ODIs for the 2014 regulatory period resulted in a greater focus on customer needs across the period.

For ODIs to work, they need information from the business's customers to allow performance payments for identified performance metrics, and assurance that the WTP estimates obtained are reliable. One key step is quality assurance of the customer consultation process, so the regulator can assess the reliability of the WTP values, and whether to allow ODIs to be set according to these estimates.

Depending on the service outcome, ODI payments could be set based on reliable estimates of the business's marginal costs. For example, the regulator could set an ODI for reducing leakage, based on the long run marginal cost of water times a sharing rate (if financial incentives schemes apply). We could also set default outcomes and the targets that apply to the business if the information in the business's customer consultation process is not reliable.

Service target performance incentive scheme and Customer service incentive scheme

The AER has a similar rewards framework under its service target performance incentive scheme (STPIS). The scheme provides networks with incentives for maintaining and improving network performance to the extent that customers are willing to pay for them. Under the STPIS, distributors are rewarded or penalised depending on whether they achieve the power supply reliability target.[6]

Importantly, performance is measured over a 5-year period, and changes in the 5-year rolling average are rewarded or penalised (rather than performance each year). This approach minimises the impact of standalone exogenous factors influencing performance. It also automatically reveals the efficient level of performance, rather than the regulator having to set it ex ante. The rate of reward is prescribed by the AER, which is set according to a sector-wide WTP survey – known as values of customer reliability. Under the STPIS, up to 5% of revenue is at risk, and events beyond the business's control are excluded.[7]

The AER separately prescribes a set of performance indicators specifically for customer engagement, under the customer service incentive scheme (CSIS). The CSIS creates an incentive for electricity distributors to maintain and improve customer services not covered by the STPIS, or other mechanisms, when desired by customers. The CSIS sets out targets for electricity distributors' customer service performance and requires them to report on progress against these targets. Businesses receive financial rewards and penalties depending on how they perform, with the CSIS funds used to fund customer service improvements.[8] These are principle based, and distributors can identify, in consultation with their customers, incentive designs that would meet those principles.

B Preliminary grading guidance

The three tables below are our proposed guidance that the business could use to self-assess the quality of pricing proposals. We would use this guidance to assign a standard, advanced, or leading grading to a business's proposal.

We expect a 'standard' utility to be working towards the efficiency frontier and meeting the minimum standards that we expect from pricing proposals.

An 'advanced' utility would be at the efficiency frontier, and continuing to improve its performance to deliver greater customer value. While we expect it to display some common traits as a 'standard' utility (in grey font), it should be performing at a higher level in most respects.

A 'leading' utility is credibly committing to push beyond the existing efficiency frontier to deliver a better combination of performance and costs. Our guidance for a leading proposal represents – at a minimum – what a leading business would need to deliver above that of an advanced business.

B.1 Guidance for customer principles

Principle	Standard	Advanced	Leading
1. Customer centricity How well have you integrated customers' preferences into the planning and delivery of services, over the short and long term?	• The business has a published customer engagement strategy/plan that: – is well structured and easy for customers to follow – articulates clear roles and responsibilities of customers, regulator(s) and business – shows how the business will initiate engagement, prioritise topics of discussion and consult with customers in the *pricing proposal* and for *major investments* • Behaves in a primarily *reactive* way to customer needs and tends to be pre-emptive in making investment decisions • Incorporates customer insights from its consultation into long-term plans and proposals that are aligned with the long-term interests of customers	• The business has a published customer engagement strategy/plan that: – is well structured and easy for customers to follow – articulates clear roles and responsibilities of customers, regulator(s) and business – shows how the business will gain insights from customers through a variety of methods as *standard practice*, including prioritising topics for customer engagement – is adjusted and refined *proactively* • Demonstrates *proactively* identifying and responding to customer needs is central to the business's investment decisions and strategic plans. • Systems in place for ongoing customer feedback. The insights and views from these processes are reflected in decisions and ongoing business improvements • Learns from and keeps up with peers and industry best practice consultation methods	In addition to what an advanced business would deliver: • A leading business's customer strategy/plan genuinely empowers customers to co-develop aspects of its proposed prices and service levels • Its proposal clearly evidences a continual improvement across the business, where it reflects on, and integrates, learnings from its consultation processes

Principle	Standard	Advanced	Leading
2. Customer engagement Are you engaging customers on the right things, in the right way, to add value?	Topics of consultation • Selects topics of consultation that matter to customers, but limited analysis of whether topics matter most to customers Methods of consultation • Consultation has reached a representative customer base and/or their advocates • Suitable consultation method/s have been chosen • Opportunities for customer 2-way communication exist • Scope of engagement is proportional to the level of expenditure and the impact of the project • Participants are informed of the impact of their consultation Consultation content • Uses plain language and tests understanding, and engages diverse language groups • Unbiased, clear explanation of the context and objectives • Information is accurate, objective, tells the whole story and is correctly targeted to the likely technical knowledge of the audience • Clear explanations of investment options, service levels, and uncertainties	Topics of consultation • Customers were involved in setting priorities that matter most for deeper consultation • Customers know their input can have a clear impact on the proposal. Methods of consultation • Consults with a representative sample of customers, explores creative methods to engage and communicate with diverse stakeholders, particularly vulnerable and difficult to reach customers • Identifies barriers to participation and finds innovative solutions to enable participation • Customers are consulted on how they prefer to be engaged • Engagement is an ongoing process and the business makes clear reflections and adjustments in response to feedback • Creates genuine opportunities for customers and community to contribute and debate • Participants understand how, and are confident that, their feedback will lead to better outcomes • Customers are able to co-design solutions, and understand how their preferences are incorporated • Responses are triangulated and tested against other information Consultation content • Uses plain language and tests understanding, and engages diverse language groups • Unbiased, clear explanation of the context and objectives. • Information is accurate, objective, tells the whole story and is correctly targeted to the likely technical knowledge of the audience • Clear explanation of options, with price differences and service quality trade-offs for different investment options	• A leading business will genuinely 'let go of the keys' when consulting with customers (and/or customer representatives) to develop solutions in customers' long-term interests • Its proposal shows how the business gains insights from customers through a variety of methods as standard practice, including a nuanced: – targeting of engagement to areas where the business recognises knowledge gaps – understanding of how to focus engagement to the groups most affected by consultation topics, particularly vulnerable and difficult-to-reach customers – discussion with other relevant parties where the business has a limited scope to promote better customer outcomes by itself.

Principle	Standard	Advanced	Leading
3. Customer outcomes How well does your pricing proposal link customer preferences to proposed outcomes, service levels and projects?	• Proposed outcomes have been influenced by customer engagement • Demonstrates the link between the proposed project expenditures and outcomes it will achieve	• Proposed outcomes are specific, measurable and reflect customer input • Demonstrates customer support for proposed prices, service levels and customer outcomes • An appropriate number of outcomes are proposed, that balance the need to be concise but also encapsulate customer preferences	• All important customer outcomes would be supported by Outcome Delivery Incentive (ODI) payment/penalty rates and targets • Where supported by customer willingness-to-pay, service targets would exceed both past performance and other suitable industry benchmarks by an ambitious but realistic margin
	• The business proposes service performance targets for customer outcomes: – targets are justified based on their past performance and against other suitable industry benchmarks – it meets minimum customer protection and licence standards	• The business proposes service targets that are stretching, that: – where supported by customers, exceed past performance or other comparable industry performance by a significant margin – show commitment to continuous improvement – include short-term and long-term targets that are internally consistent – demonstrate customer willingness to pay for any targets that exceed minimum customer protection and license standards	
	• Sets out how outcomes will be measured and monitored, and how customers will be informed about progress on key investments and matters that affect the community	• Sets out how outcomes will be measured and monitored, and how customers will be informed about progress on key investments and matters that affect the community • Proposes mechanisms to be held accountable for achieving the specified outcomes, including steps the business will take if it is not meeting targets • Where possible, proposes outcome delivery incentive (ODI) payment/penalty rates and targets for outcomes • In proposing targets for service outcomes, includes protections for individual customers, so that increases in efficiency do not come at the cost of a reduction in service to individual 'pockets' of customers.	

Principle	Standard	Advanced	Leading
4. Community Are you meeting broader community and environmental objectives, while ensuring services are cost reflective and affordable today and in the future?	• The business delivers community environmental objectives that fall within scope, consistent with customer preferences and community views • It proposes cost efficient expenditure to manage and adapt its business to the impacts of climate change • The proposal considers short-term bill pressures against long-term climate change and environmental pressures • The proposal meets all regulatory requirements, including environmental requirements, at least cost	• The business sets environmental targets and outcomes, within its remit, that have demonstrated customer willingness to pay • It proposes cost efficient expenditure, which is clearly scoped and defined, to manage and adapt its business to the impacts of climate change • The proposal maximises opportunities for promoting environmental outcomes, while ensuring bills are affordable • The proposal meets all regulatory requirements, including environmental requirements, at least cost. • The business effectively engages with state government and government environmental agencies to promote the long-term interests of customers (and the community they represent) in government policy and regulation areas that apply to the business • It works with other businesses, stakeholders and government to collaborate on common environmental targets and outcomes • It responds to environmental policies with efficient and proven approaches	• A leading business efficiently promotes environmental outcomes, and undertakes climate change adaptation, and appropriate mitigation actions, while ensuring bills are affordable • The proposal provides evidence of taking genuinely innovative approaches – in a national or global context – to achieve community objectives at lowest costs to society.
5. Customer choice Are you providing opportunities to reflect customers' varied preferences for the tariffs and additional services they are willing to pay for?	• The business engages with customers and customer representatives on price preferences, including fixed/variable tariff split • It proposes a postage stamp price and standardised service that reflects customers' preferences	• The business engages with a wide range of customers on a series of price options, including: – standard pricing options for all customers, including more cost reflective tariff options – standard add-on mass market tariff options • It offers standard add-on options (e.g. carbon offsets) • It has worked with government and developers in its growth planning to offer additional services and supply options to new developments	• A leading business offers customers innovative tariffs and products above licence obligations, where consistent with these customers' preferences. This includes opportunities for customer choice pricing for environmental products/services. • It offers bespoke arrangements with large businesses and/or Government reflecting their service needs and willingness to pay. This includes differentiated reliability, support and customer service.

B.2 Cost principles

Principle	Standard	Advanced	Leading
6. Confidence in costs How well does your proposal provide quantitative evidence that you will deliver the outcomes preferred by customers at the lowest cost?	• The business demonstrates its proposed expenditure meets outcomes and targets at the lowest cost • It identifies performance targets that are compliant with licence conditions, other regulatory requirements, and consistent with customer preferences • It proposes an operating expenditure base–step–trend profile that is consistent with past expenditure and clearly explains why it has proposed any 'step changes' or trends • It proposes capital expenditure that it can explain, identifying baselines for recurrent expenditure and justification for any changes it proposes over time • It justifies large capital expenditure with a clear scope and cost estimates that are supported by an options or cost–benefit analysis • The proposal considers operating and capital expenditure trade-offs when proposing expenditure levels	• The business demonstrates its proposed expenditure meets outcomes and targets at the lowest cost. • It explains its performance targets and the value that changes in performance would provide to customers. The business's targets are set through a customer focus lens and outcomes from its customer engagement • It proposes an operating expenditure base–step–trend profile with a base that is consistent with efficient industry benchmarks and has quantitative evidence to support any step change or trend • It proposes recurrent capital expenditure that is supported by evidence and modelling • It demonstrates confidence in costs for major projects and demonstrates a clear scope, provides robust options or cost–benefit analysis, and demonstrates customer support for the outcomes it will deliver or enhance • The proposal provides quantitative evidence that its balance of operating and capital expenditure minimises net life-cycle costs	• A leading business proposes operating and capital expenditure that is at or below industry benchmarks, supported by robust modelling, including how the business will achieve its targeted efficient expenditure. • Its proposed prices and service standards represent a step-change in performance that would deliver at least 5% additional value to its customer base over the regulatory period • In proposing a balance of operating and capital expenditure that minimises life-cycle costs, it takes into account the potential and likelihood for cost saving innovations

Principle	Standard	Advanced	Leading
7. Balance of 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?	• 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 • The business demonstrates an understanding of potential cost drivers, and explains how it would monitor these cost risks and reprioritise expenditures and asset management strategies as changes arise	• Investment and asset management decisions are made based on an analysis of risks and benefits to the customer and business in terms of long-term asset and service performance • The business demonstrates a strong understanding of how it will address the key risks the business faces in providing services to customers • It has the ability and strategies to respond to changes in circumstances and risks, and demonstrates how it will dynamically respond to changing circumstances throughout the review period • It has a resilience strategy to how it will deal with long-term risks, including climate change	• A leading business provides robust evidence that it has optimised the balance of risks and benefits to the customer and business in terms of long-term asset and service performance, utilising best practice, probabilistic investment decisions and asset management systems
8. Commitment to improve costs 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?	• Proposes expenditures that improve towards, or reach, the efficiency frontier by the final year of the determination • Proposal includes adopting innovations and business practices from other business's or relevant sectors • Current period expenditure achieves or nearly achieves existing cost efficiency targets • Proposal includes productivity targets, and an explanation of how the business will meet the target	• Proposes expenditures that are at the efficiency frontier, and continuously improve in line increases in productivity • Proposes to invest in innovation and clarifies how it will share the potential benefits with customers (and when it expects the benefits to begin to accrue) • Current period expenditure achieves the cost efficiency targets • Proposes productivity targets and would result in the business being among the most efficient across comparable businesses and industry benchmarks • Proposes financial and/or reputational incentives to increase accountability to meeting its cost and productivity targets	• Leading businesses are pushing the boundaries of the efficiency frontier by proposing efficiency targets which would lead to a significant step-change in cost efficiencies below historical costs and industry cost benchmarks.

Principle	Standard	Advanced	Leading
9. Equitable and efficient cost recovery Are your proposed tariffs efficient and equitable and do they appropriately share risks between the business and your customers?	• Proposes cost reflective maximum prices for customers, and: – provides modelling to justify tariffs over the next regulatory period – proposes a balance of fixed and usage charges, taking into account the long run marginal cost (LRMC) of production • Provides evidence to support a proposed depreciation rate (e.g. its fixed asset register) • Provides a robust justification for any cost pass-throughs, referring to IPART's principles. Explains why the business was unable to foresee and absorb the costs	• Proposes cost reflective service and usage prices, and: – provides reliable modelled estimates of LRMC to set usage prices – considers and models the impact of drought on the level and structure of prices – justifies the appropriate form of price control that promotes the long-term interests of customers • Provides *analysis* that shows its proposed prices over the next regulatory period balance efficiency and intergenerational equity • Provides a robust justification for any cost pass-throughs, referring to IPART's principles. Provides clear evidence why the business was unable to foresee and absorb the costs	• Provides robust and comprehensive modelling to support its proposed recovery of costs, including: – Catchment level LRMC estimates where appropriate, and uses this information to justify demand and supply side responses to delay augmentations or prioritise investments at particular parts of the network. – Longer-term pricing paths supported by reliable (but ambitious) long-term cost estimates.

B.3 Credibility principles

Credibility	Requirements (All levels)
10. Deliverable Have you provided assurance and commitment that you will deliver your proposal?	• 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 transparently 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
11. Introspective Does the proposal identify shortcomings and areas for future improvement?	• Demonstrates how experience and lessons from past regulatory period/s have been integrated into current and future/long-term strategies, where gaps remain, and how future plans will address these • Provides an honest reflection of its own performance and shortcomings, including a self-assessment on what grade it should be and why

[1] *Independent Pricing and Regulatory Tribunal Act 1992*, section 15.
[2] Australian Energy Regulator, *Better Regulation Expenditure Forecast Assessment Guideline for Electricity Distribution*, November 2013, p 25, available on the AER website here.
[3] Essential Services Commission 2018 Water Price review Guidance Paper, November 2016, p 31.
[4] IPART, Review of Prices for Hunter Water from 1 July 2020, June 2020, p 203.
[5] IPART, Guidelines for water agency pricing submissions, November 2020, pp 16, 19.
[6] AER, Final decision amendment to the Service Target Performance Incentive Scheme (STPIS), Establishing a new Distribution Reliability Measures Guide (DRMG), Explanatory Statement, 2018.
[7] AER, Values of customer reliability, 2020.
[8] AER, Explanatory Statement Customer Service Incentive Scheme, 2020.

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