WATER PRICING AND LICENSING

REGULATING WATER BUSINESSES

SPECIAL REVIEW

Position Paper

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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: https://www.ipart.nsw.gov.au/Home.

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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 30 October 2020.

We would prefer to receive them electronically via our online submission form <www.ipart.nsw.gov.au/Home/Consumer_Information/Lodge_a_submission>.

You can also send comments by mail to:

Regulatory Review – Water

Independent Pricing and Regulatory Tribunal
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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 <www.ipart.nsw.gov.au> 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.

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

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1. IPART's role in regulating monopoly water businesses

The Independent Pricing and Regulatory Tribunal (IPART) is NSW's economic regulator, established under the *Independent Pricing and Regulatory Tribunal Act 1992* (the IPART Act). We regulate a number of water businesses' prices, recommend to the Minister for Water the terms of water businesses' operating licences, and audit compliance against these licences.

About every four years, IPART sets the maximum prices that Sydney Water, Hunter Water, the Central Coast Council and Essential Water can charge their customers. IPART also regulates the bulk water charges that Water NSW and the Sydney Desalination Plant (SDP) can charge to their customers, and the Water Administration Ministerial Corporation's (or WAMC's) charges for water planning, management and regulation services.

Every four to five years, IPART also recommends the terms and conditions of the operating licences for Sydney Water, Hunter Water, Water NSW and SDP to the Minister for Water. We regulate the performance of these businesses by monitoring their compliance against their operating licences each year.

These water businesses are monopoly suppliers of essential services to millions of NSW households. IPART's regulatory framework aims to ensure the water businesses' services meet the needs of their customers and the community.

This review will identify improvements in how we regulate these 'monopoly' water businesses, to make the people of NSW better off. We are seeking feedback on the scope and timing of this review by 30 October 2020.

IPART also regulates privately owned water businesses under the *Water Industry Competition Act* (WICA). A WICA licence allows a privately-owned water business to provide water and wastewater services to customers. Our primary role to date has been to assess licence applications and monitor WICA licensees' compliance with the conditions of their licence.[1]

This review is not directly focused on the WICA framework. However, we will be mindful in this review that our approach to regulating the prices and performance of publicly owned water businesses allows public and privately owned water businesses to compete on a level playing field in the market to provide services to customers. We are also keen to identify ways to promote efficient new entry and competition in the supply of water services, for the long-term interests of all customers.

1 The exception is SDP, which is a WICA licensee and whose prices we regulate (as outlined above).

It is time to review our approach

Environmental events have highlighted that our water supply needs to be increasingly resilient and adaptable to climate change. Until recently, most of NSW faced severe drought, with dam levels falling at an unprecedented rate. While recent rain has taken the immediate pressure off many parts of the state, it has shown how variable our climate has become and the impact of this on essential services such as water.

Our framework needs to encourage the right level of forward planning by the water businesses to ensure supply resilience. It is important that our approach remains fit for purpose as the sector evolves and reflects changing Government and community expectations. It should encourage innovation and consideration of the full suite of water supply options, including water recycling, and promote the best supply solutions for the circumstances.

Better coordination between IPART, other regulators, the Department of Planning, Industry and Environment (DPIE), and the water businesses could likely deliver a more resilient and efficient water sector.

We also need to ensure that our approach is proportionate and sufficiently targeted, as our current process has become increasingly resource intensive for both water businesses and IPART. The businesses we regulate vary in size, capacity and operating environment. For example, Sydney Water has over two million customers, while Essential Water services fewer than 10,000 households and businesses. We need to ensure our regulatory approach is suitably tailored to each of the businesses we regulate.

Our approach also needs to promote accountability of the businesses to deliver good outcomes for customers and the community.

Other regulators are facing similar issues and we will look to build on the learnings and experiences of others.

In consultation with water businesses, government, consumer peak bodies and other stakeholders, we will seek to improve our regulatory processes, methodologies and the outcomes we achieve.

1.1 Outcomes we are seeking from this review

The changes we make in this review need to make the people of NSW better off – not just today, but also into the future. To reflect this goal, we identified four overarching outcomes from this review.

As shown in Figure 1.1, the changes we make to our framework should encourage the water businesses to: reflect their customers' preferences, promote resilient and adaptable water supply, protect the environment and health, and ensure prices remain affordable.

Figure 1.1 Overarching outcomes that benefit the community

Customer preferences

The businesses understand and embed customer preferences in their decisions and operate with customer interests at heart

Resilient and adaptable supply

The businesses undertake better long-term planning to build a water supply system that is resilient and adaptable to climate change, in line with NSW Government objectives and changing community expectations

Environment and Health

The businesses deliver safe and reliable services to customers, meet the community's environmental objectives and expectations to protect the health of our waterways, and optimally invest in water conservation, recycling and wastewater management

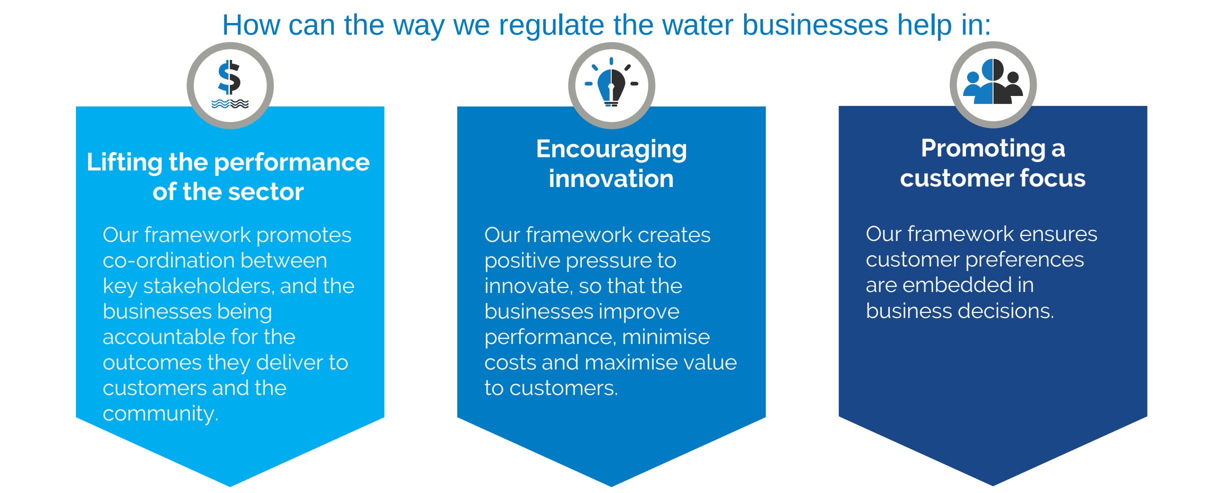
Affordable prices

The businesses innovate and strive to provide the best value to customers – ie, the services customers want at affordable prices

1.2 We identified three focus areas for this review

In this review, we will involve and engage stakeholders – including the water businesses, Government, other regulators and interested parties – to examine how we regulate the monopoly water businesses. We have identified three proposed focus areas, shown in Figure 1.2, and explained in Chapter 2 below.

Figure 1.2 Our proposed focus areas



That is, for this review, we propose to focus on how the way we regulate monopoly water businesses be improved to:

- **Lift the performance** of the water sector
- **Encourage innovation** to deliver greater value to customers, today and into the future, and
- **Promote a customer focus** in the businesses.

1.3 Our current framework and role

Our current regulatory framework has been developed over numerous reviews, with elements of the framework being introduced progressively over time. This section provides a brief overview of how we currently regulate the water businesses, with Box 1.1 highlighting how our relationship to other regulators and Government policy influences the decisions that we make. Chapter 3 outlines and evaluates our current approach in more detail.

Box 1.1 The broader regulatory landscape

Water regulation is complex and many players perform a range of roles and functions, which sometimes overlap.

The role of other regulators

There are other regulators and government bodies that play important roles in the water sector. The most relevant to this review are:

- The Department of Planning, Industry and Environment (DPIE) – engages with the water industry to establish an overarching water management and supply plan
- DPIE and the Natural Resources Access Regulator (NRAR) – who jointly regulate the extraction of water from the natural environment
- The Environment Protection Authority (EPA) – sets standards for wastewater discharges to the environment
- NSW Health – establishes drinking water standards.

The role of broader Government policy

Government policy also sets the long-term direction for water policy in NSW. Led by DPIE, the Government is developing a State Water Strategy, Regional Water Strategies for the state's regions, and the Greater Sydney Water Strategy (which will replace the 2017 Metropolitan Water Plan).

The role of the shareholder

The NSW Treasurer is a shareholder of the State Owned Corporations (SOCs), including Sydney Water, Hunter Water, Water NSW and Essential Energy (which includes Essential Water). At a high level, the shareholder is responsible for monitoring the performance of the SOCs and receives dividend payments from them. It is critical that the shareholder plays an active role in setting the business's risk appetite and ensuring they deliver their services effectively and remain financially strong.

An active shareholder should complement economic regulation by driving the regulated businesses to respond to the incentives created by economic regulation to innovate and be more efficient.

The role of the business

The businesses are responsible for delivering their services to customers, while meeting the environmental, health and service standards set by regulators. For example, the businesses need to provide safe and reliable water and wastewater services, protect the environment in doing so, and provide assistance to vulnerable customers. Equally, they need to deliver the investments that promote the long-term resilience of the system, and ensure they can deliver their services not just today but also tomorrow and into the future. The businesses also need to engage with their customers so that they understand what their customers want and deliver accordingly.

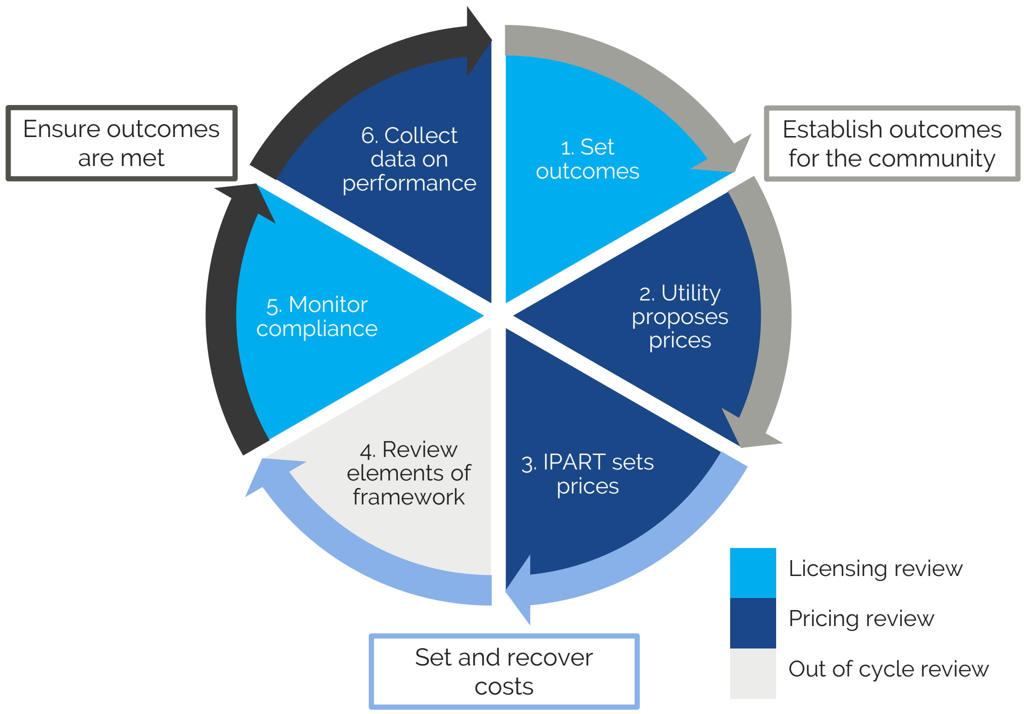
IPART has two main roles in regulating NSW's water businesses.

1. To determine the prices that customers pay for monopoly services.
2. To recommend the terms of the businesses' operating licences and ensure performance by monitoring their compliance with these licences.

We are mindful that our role primarily exists because these water businesses are generally monopolies who supply essential services. In undertaking our roles, we therefore try to mimic the outcomes of a competitive market. In a competitive market, firms continually strive to be as efficient as possible and innovate to deliver the services customers want at the prices they are willing to pay, to maintain or increase their market share.

Figure 1.3 illustrates IPART's current process to set prices, and recommend licence conditions.

Figure 1.3 IPART's current water regulation model



Under our current approach, as part of a licensing review, we work with stakeholders to recommend the performance standards that businesses must meet in their operating licences.

After this review, the water businesses then propose what expenditure they need to meet or exceed the standards in their operating licences as well as those imposed by other regulators (eg, the EPA).

In order to set water prices, we review the business's proposal and decide the revenue they need to efficiently meet these outcomes, and the prices that should be paid by customers to recover these costs. Then, in between pricing reviews, we review elements of our framework – for example, our method for setting the Weighted Average Cost of Capital (WACC) – which we apply in future pricing reviews.

Throughout the licensing and pricing processes, we engage with other regulators, such as the EPA, to understand the businesses' other regulatory requirements and the implications of these for our decisions.

To ensure that the business delivers an appropriate level of service to its customers and the community, we then monitor its compliance with licence conditions annually. We also collect data to track the business's expenditures against its original pricing proposal, to inform our next price review.

We currently establish licence conditions before we set prices. In this review, we will consider whether there is scope to better integrate our regulation of prices and performance. This could include, for example, looking at whether IPART should review licence conditions and prices at the same time, or other ways to enhance linkages and optimise the balance between prices and performance.

1.4 We are seeking feedback on our focus areas and review process

The following chapters outline our proposed focus areas for this review (Chapter 2), evaluate our current approach (Chapter 3), and set out our proposed process and timing for the review (Chapter 4).

We are seeking feedback on the scope and timing of the review by 30 October 2020.

We are particularly keen to receive feedback on our three proposed focus areas for the review, and the questions outlined below.

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2. Key objectives of the review

We have identified three focus areas for this review. We are seeking feedback on whether these are the right focus areas, and whether there are other areas stakeholders feel should be considered.

In establishing these focus areas, we asked ourselves what an effectively functioning water market would look like. We asked Cambridge Economic Policy Associates (CEPA) to research how businesses and regulators in other jurisdictions regulate monopoly businesses. We then conducted preliminary consultation with each of the water businesses we regulate, key Government stakeholders, and regulators in other jurisdictions. We also reviewed our focus areas to check that they are consistent with the principal objectives of the State Owned Corporations (SOCs) we regulate.[2]

2.1 Proposed focus areas

We propose three focus areas for this review.

Lifting the performance of the sector

Our framework promotes coordination between IPART, Government, other regulators and the businesses to deliver a resilient and efficient water sector. It also promotes the businesses being accountable for the outcomes they deliver to customers and the community.

Encouraging innovation

Our framework creates positive pressure for the businesses to improve performance, minimise costs and maximise value to customers, both now and in the future. Investments should address the risks of climate change, enable improved environmental performance, and deliver affordable services to customers.

Promoting a customer focus

Our framework and processes ensure that the long-term interests of customers are embedded in all major decisions of the regulated businesses. Customers are engaged in a meaningful way, and objectively consulted in language they understand.

2 See, eg, *Sydney Water Act 1994*, s 21; *Water NSW Act 2014*, s 6; *Hunter Water Act 1991*, s 4A; *State Owned Corporations Act 1989*, s 20E.

We would like to know what you think of these proposed focus areas.

IPART seeks comment

1 Are the focus areas we have identified the most important? Are there other important issues we should focus on?

2.2 Lifting the performance of the sector

Our current framework

We aim to set prices to provide the water businesses with sufficient revenue to efficiently provide their services and comply with the requirements of other regulators, such as the EPA. Our framework also seeks to encourage good long-term decision making and resilience to adapt to the pressures of climate change, population growth and other factors that can impact on the supply and demand for water services.

We are part of a wider policy and regulatory framework that determines the performance of the water sector (see Box 1.1). Through this review, we will look for opportunities to improve communication and coordination with other regulators and their processes to enhance the overall performance of the sector.

We will also seek to ensure that the businesses are accountable for the outcomes they deliver to customers and the community.

Accounting for Government policy and other regulatory requirements

When setting the revenue the business needs, we consider a range of factors, including:

- The NSW Government's plans for the sector. For example, when setting Sydney Water's prices we consider the Metropolitan Water Plan, which is the Government's current long-term water plan for Sydney. It outlines the mix of supply augmentation and demand management measures required to ensure that Greater Sydney's water needs are met now and into the future. DPIE is currently updating the plan with a new Greater Sydney Water Strategy.
- Requirements of the business's operating licences and of other regulators, such as NSW Health and the EPA. These regulatory obligations are subject to periodic review by each respective regulator, which can mean that the costs businesses incur to comply with these obligations change over time – as can performance outcomes.

- Any Government directions issued to IPART. The Government can issue directions to SOCs to complete projects in the public interest, which may not be in the shareholders' interest,[3] and then direct IPART to include the SOC's efficient costs of complying with these directions in the prices we set.[4] For example, IPART has been directed to include the costs of Sydney Water's Rosehill (Camelia) Recycled Water Project in Sydney Water's prices to its water customers.

Once we have this more complete picture, we can establish the revenue the business needs to efficiently meet these requirements. From this, we set the maximum prices that the business can charge its customers to recover its revenue needs.

Holding the businesses to account

The regulated business should be responsible, and held accountable, for delivering outcomes to their customers and the community – consistent with their licence conditions, regulatory requirements and the preferences of their customers.

Related to this, the business should be responsible and accountable for appropriately managing cost and revenue risks, and our framework seeks to strike an appropriate allocation of risk between the regulated businesses and their customers. Over time, we have introduced mechanisms to manage the cost and revenue risks that these businesses face, and price structures that assign volume risk between the business and customers (the proportions of revenue collected through fixed and usage charges). This includes, for example, end of period true-ups and cost pass-throughs in some circumstances. These mechanisms also increase the overall complexity of the regulatory framework.

Clearly, risks should be shared between the business and their customers, but finding the correct balance is a challenge. We need to strike the right balance, with the underlying principles that risk should be assigned to the party best able to manage it, and benefit to the business from reduced risk should be shared with its customers.

The distribution of risk is important given the incentives it can create. If a business faces no risk (and instead this risk is passed through to its customers), it will face no incentive to mitigate or manage this risk. This is a key consideration underlying our current cost pass-through criteria (see Box 2.1). Businesses operating in a competitive market need to manage, adapt and respond to risk, as they might not be able to pass on these risks to their customers.

3 Under Section 20P of the SOC Act.
4 Such directions to IPART are issued under S16A of the IPART Act.

Box 2.1 IPART's current criteria for a cost pass-through mechanism

A cost pass-through mechanism should only be applied in situations where:

1. There is a trigger event (to activate the cost pass-through), which can be clearly defined and identified in the price determination.
2. The resulting 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.[a]
3. The resulting cost is assessed to exceed a materiality threshold.
4. The regulated business cannot influence the likelihood of the trigger event or the resulting cost.
5. The mechanism is symmetric in that it applies equally to both cost increases and cost decreases (in cases where the risk can result in both cost increases and cost decreases).
6. It is clear that the cost pass-through will result in prices that better reflect the efficient cost of service.

a The costs to be passed through must be specified in the price determination.

As part of recommending licence conditions, and setting prices, we also make decisions on the types of information we require the businesses to provide to IPART on an ongoing basis between reviews. This helps IPART and other stakeholders to monitor performance, and to determine whether the business is effectively delivering its services to customers.

What could be improved?

We have identified some initial ideas to promote better coordination between IPART, other regulators, Government stakeholders and the regulated businesses; and to ensure the businesses are accountable for the pricing and service outcomes they deliver to customers and the community.

We are seeking feedback on these ideas, as well as any other ideas stakeholders have.

Strengthen communication and coordination with other regulators

We would like to identify ways to strengthen coordination and communication between IPART and other key regulators, before and during a pricing review. This would help to avoid 'regulatory silos', ensure businesses are not subject to conflicting objectives from different regulators, and help us in our review of the business's pricing proposal. It would also likely lift the overall performance of the water sector.

Strengthening coordination and communication is important to enable IPART to understand the relationship between the business's pricing proposal and the regulatory requirements, expectations and plans of the EPA, NSW Health and DPIE. It could:

- Ensure that a business's proposal adequately addresses the regulatory requirements of all regulators

- Provide comfort that IPART's decisions reflect the efficient costs of meeting these requirements
- Inform other regulators of the costs and pricing implications of their regulatory decisions.

One way to achieve this could be to replicate what has been done in the UK. In the UK, the Department for Environment, Food and Rural Affairs assembled a list of priorities and objectives to guide Ofwat in its decisions when regulating water businesses.[5] Ofwat then responded with a methodology paper showing how these priorities would be included in pricing determinations going forwards.[6]

Another idea is a formal Regulators Working Group. Representatives from each of the regulators would meet regularly through the review process to discuss issues that arise, and agree on key priorities for the sector in a more holistic way.

We also think there may be opportunities to work more closely with the EPA specifically – eg, to better align our respective reviews. We would be pleased to work with the EPA to innovate in this space.

Engage the board

To strengthen the accountability of the water businesses for their prices and performance, a simple place to start is with the board of each business. This could occur by requiring board sign-off of each business's pricing proposal and a board presentation to IPART on submission of the pricing proposal. This would ensure the board fully understands and supports the proposal. We could also adopt the same approach for licence reviews.

Provide more flexibility to set prices

Pricing is another area that we think warrants re-examining. Currently, IPART sets maximum prices, in each year, to allow businesses to recover their efficient costs. The benefits of this approach are that it is relatively simple, and that:

- Prices are cost-reflective, which promotes efficient investment and consumption decisions. For example, we set the water usage price to reflect the long-term efficient costs of supplying water. We currently set the water usage price based on the Long-Run Marginal Cost (LRMC) of supplying water, with an uplift to Sydney Water and Hunter Water's prices when dam storages are low to reflect the additional costs of supplying water in drought and to encourage greater conservation when water is most scarce.
- The risk that the business's actual water sales are different to forecasts are shared between customers and the business (subject to the balance of fixed and usage charges and the application of true-up mechanisms such as a 'demand volatility adjustment mechanism').

5 See the report at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/661803/sps-ofwat-2017.pdf

6 See the response at: https://www.ofwat.gov.uk/wp-content/uploads/2017/12/UK-Govt-priorities-FM.pdf

- Prices are set in advance over the determination period, minimising the risk of bill shock to customers.

However, there are other options. For example, we could consider a revenue cap or weighted average price cap. Box 2.2 sets out some of the advantages and challenges associated with such approaches. Rather than IPART setting maximum prices in every year, under a revenue cap we could set the level of revenue the business can recover over the determination period. Then the business would set its own prices to recover that revenue. This could remove any incentive – perceived or real – for the business to 'sell more water' regardless of climatic conditions.

Under either of these approaches, prices would still be subject to pricing principles. For example, prices would still need to be cost reflective, and water usage prices would need to be set with reference to the LRMC of providing water. A key part of our current approach is ensuring that prices encourage efficient investment and consumption decisions, and we will ensure that we do not lose this. In addition, we would need to consider the risks of price volatility for customers, for example, by imposing side-constraints, so that price changes remain within a pre-set band for all customer groups.

Provide better incentives for the business to conserve water

Our framework could also do more to support efficient investment in water conservation and leakage reduction. At a minimum, the business should face the same financial incentive to reduce leakage and conserve water as the customer faces when they pay the water usage price on the water they consume. This incentive could be established for the business by creating a 'shadow price' for water leakage. For example, if the business reduces its leakage below an agreed target (whether static or dynamic), then we could provide additional revenue at the next period equal to the value of water saved, and vice versa. This essentially makes the business the 'customer' for leaked water, meaning they must pay the same usage price that the customer pays for this lost water. This could promote a (broadly) equivalent price signal for demand and supply activities that promote water conservation and would encourage the business to better manage leakage.

Track the outcomes of the pricing reviews

In our recent pricing reviews for Sydney Water and Hunter Water, we observed that some of the information we historically collected on 'output measures' was not helping IPART monitor how effectively the businesses performed against its pricing proposal. We set output measures as a means of determining whether the business delivers on the capital expenditure plans they outline in their pricing proposals. However, many of the output measures were focused on the 'inputs' used to deliver capital assets, rather than being focused on the outcomes of the business's investments, or even the delivery of key projects.

Particularly for future pricing reviews, this review provides an opportunity for IPART and the businesses to think carefully about what information needs to be shared to give a level of comfort that the business is effectively delivering on its proposed outcomes and meeting customer expectations.

Box 2.2 Prices can be set in a number of ways

We currently set maximum prices that businesses can charge for their services. However, there are other ways to set prices, including:

Revenue cap: This approach is based on the overall revenue for the regulated period. Under a revenue cap:

- Total revenue is locked in over the regulatory period at the cap
- The business then adjusts individual prices as it sees fit subject to meeting the cap
- Prices change annually to ensure revenue recovery at the cap, with a 1-year lag to reflect that actual sales are not known until the end of the year.
- Because revenue is locked in, any additional profit for the business only reflects cost savings implemented by the business.

The advantages of a revenue cap include a strong incentive to reduce costs and to use demand side management to reduce costs. However, we would have to think through some potential challenges as well. For instance, that average prices would be adjusted each year, which creates the risk of price volatility for customers. This could be addressed by introducing side-constraints.

Weighted average price cap: This approach is based on the average price level and allows for the types and levels of tariffs to specific customers to vary during the regulatory period. Under a weighted average price cap:

- The regulator caps average price increases at the start of the regulatory period, based on forecasts of water sales and customer numbers.
- The business is able to adjust individual prices above or below the average increase, with changes in demand above the forecast resulting in higher revenue recovery and changes in demand below the forecast resulting in lower revenue recovery.

Under this approach, revenue above the cap is kept by the business and revenue below the cap is lost by the business. The key advantage of this approach is an incentive for the business to set prices that respond to changes to demand within each pricing period. However, like with a revenue cap, we would need to consider how to manage price volatility. In addition, under this approach, selling more water than forecast increases the business's total revenue, which could reduce the incentive to use demand side management to conserve water.

Encourage the business to offer a higher level of service to customers who opt-in

Our framework could also encourage the business to offer a higher level of service to customers on an 'opt-in' basis. This could work similarly to airlines, which offer customers the option to carbon offset their fares for an additional charge. For instance, customers could choose to pay a charge for the business to increase its environmental performance across the network, for example, to 'offset' the wastewater nutrients of an average household that enter waterways. The business could have a central list of environmental priorities, and complete the projects based on the number of customers who elect to provide funding.

Increased coordination between pricing and licensing reviews

Currently, we generally recommend licence standards one to two years before we set prices. However, the level of service (or standards) that a customer wants a business to deliver is a function of the price the business will charge to deliver the service. This suggests there may be a benefit to running both processes in parallel, or looking at other ways to enhance understanding of the relationship and optimal balance between price and service levels.

However, there would also be costs of concurrent reviews of licence conditions and prices, potentially adding regulatory costs or burden to the regulated businesses. Further, the licence conditions we recommend may not be adopted by government, which creates a risk our prices are not then cost reflective.

We are keen to explore the benefits and costs of different approaches to enhance integration and outcomes of our licensing and pricing functions.

Other regulatory approaches

Other regulators have redesigned elements of their frameworks to increase the accountability of businesses to their customers. Our consultant, CEPA, provided case studies covering the water and energy sectors from a range of jurisdictions.[7]

In Victoria, the ESC introduced its 'PREMO' model, in part, to boost accountability of the businesses to customers.[8] PREMO links the business's return on equity to the outcomes it delivers for customers in five key areas (performance, risk, engagement, management and outcomes/service standards).

Several regulators have begun using revenue caps, including the AER, Ofwat and Ofgem, primarily to eliminate incentives to sell more water (or electricity). Each of these regulators has retained some control over prices (for instance, putting limits on how much bills can change period to period). While there is little documentation of how effective the change has been, it is perhaps telling that none of the regulators have switched back from a revenue cap to direct price setting.

7 The jurisdictions included the:
- Essential Services Commission (ESC) in Victoria – water.
- Essential Services Commission of South Australia (ESCOSA) – water.
- Ofwat, England and Wales – water.
- Water Industry Commission for Scotland (WICS) – water.
- Australian Energy Regulator (AER) and the Australian Energy Market Commission (AEMC) – energy.
- Ofgem, Great Britain – energy.
- Ontario Energy Board (OEB) – energy.

8 CEPA, *Economic regulation of water utilities – research,* Report prepared for IPART, 30 June 2020.

As discussed earlier, in the UK the Government and Ofwat increased their levels of collaboration through a list of strategic priorities. The Department for Environment, Food and Rural Affairs assembled a list of priorities and objectives for Ofwat at the beginning of the review period. Ofwat responded with a methodology paper showing how these priorities would be included in pricing determinations going forwards.

Recently, the South Australian regulator (ESCOSA) has also had some success with a Regulators Working Group. The group operates during a pricing review, so that all regulators are aware of what the business is proposing. ESCOSA said that the group is useful as it forces all the regulators to consider how the outcomes they set affect customers. For instance, drinking water standards create additional costs, and lifting environmental standards would generally lead to additional expenditure.

IPART seeks comment

2 What mechanisms can we put in place to ensure the water businesses are accountable for the prices, services and outcomes they deliver to their customers and the community?

3 How can we better coordinate with other stakeholders (including the Government's strategic water plans and the requirements of other regulators) to help lift the performance of the water sector?

2.3 Encouraging innovation

Our current framework

Our framework aims to replicate, to the extent possible, the positive effects of competition, bearing in mind that the businesses we regulate are natural monopolies.

Firstly, our framework seeks to replicate the rewards and pressures that a competitive market provides to encourage and drive businesses toward efficient, affordable and cost reflective prices to customers. To do this, our building block framework:

- Involves independent scrutiny of the business's costs during each pricing review, with consultants who assess the efficiency and prudency of the proposed expenditure.
- Establishes a level of revenue that an 'efficient benchmark business' would require to deliver the services provided by the business. We use a range of information including market data or benchmarks where possible, for example, in setting the Weighted Average Cost of Capital (WACC).
- Provides a financial incentive to motivate the regulated business to seek out and deliver efficiencies to reduce its costs. This is in the form of greater returns to the business if it can deliver its services at lower cost than we have allowed for when setting prices. Customers then ultimately share in these efficiencies when we use actual expenditure to inform the cost allowances at future price determinations.

Secondly, businesses operating in a well-functioning competitive market seek to cater for future demand and population growth, as well as meet the changing needs of customers. Considering this:

- In reviewing a business's expenditure proposal we review its processes, and long-term strategy and planning, against industry best practice.
- We recently developed a discretionary expenditure framework to encourage higher levels of performance that are consistent with customers' preferences. This framework allows the business to recover its efficient cost of achieving an outcome above that required by regulation, provided it provides sufficient evidence of its customers' willingness to pay. Our pricing framework does not currently provide explicit financial rewards for better performance.
- We have also begun to collect quarterly data on how customers of Sydney Water and Hunter Water rate their water business. We can use this to compare the performance of NSW water businesses against water businesses in Victoria.

An important part of encouraging efficiency and innovation is to provide a market-based rate of return on investment. In our framework, this rate of return is referred to as the WACC. As outlined below, we are proposing a separate, stand-alone review of the WACC.

What could be improved?

We will explore the right mix of incentives that could encourage businesses to innovate in the pursuit of efficiency improvements, and to promote better long-term outcomes for customers.

How can our framework best replicate the dynamism of a competitive market?

In general, the businesses we regulate are large, vertically integrated, monopolies. While this review is focused on how we regulate the water businesses as monopoly providers, there may be scope within this review to encourage competition and contestability and require businesses to genuinely consider all options, including market testing.

In this review, we will examine whether our building block framework remains the most appropriate method to set costs and prices. We will test the strengths and weaknesses of our current approach with stakeholders at workshops during this review.

Our current approach relies largely on financial incentives to motivate businesses to innovate and reduce costs over time. However, financial incentives are not the only method that regulators use to encourage innovation among monopoly businesses. For example, the businesses are also likely to respond to reputational incentives. We have recently made a move in this direction by incorporating Sydney Water and Hunter Water into the customer satisfaction survey of Victorian water businesses. We could consider whether we can extend this concept and draw on data from other jurisdictions to allow more 'competition by comparison' for the businesses we regulate, and use this to drive innovation and enhance performance.

As outlined above, we have designed our discretionary expenditure framework to allow the businesses to recover costs to exceed minimum service standards where there is evidence of customer support. We are keen to test whether this framework provides a strong enough incentive for businesses to optimise their performance, innovate and deliver the services customers want at the prices they are willing to pay. Further, our discretionary framework currently assesses whether customers' would be willing to pay for a specific project or program. However, all projects have an opportunity cost. There is a risk in the current framework that the business focuses on a specific project, without thinking about how the cost-benefit of this project compares to other projects that it could undertake, which it may not have consulted with customers on.

We are also looking for ways to encourage the businesses to engage in robust long-term planning. We will consider the mix of financial and non-financial incentives to ensure a resilient water system in the face of climate change. Our framework should encourage businesses to invest efficiently in recycled water and integrated water cycle management, as well as look for other innovative supply solutions.

What information should we review and use in the expenditure review process?

We rely on a range of information when reviewing a business's proposed expenditure to derive what we consider to be the level of expenditure that an efficient benchmark business would need to deliver services to customers. This includes assessing a sample of the business's specific projects and processes, to compare the business to the benchmark. This creates the perception that IPART has 'allowed' or 'disallowed' individual projects.

A 'bottom-up' expenditure review can become heavy handed and time consuming. It can also focus undue attention on individual projects or programs. This may mean that the businesses may focus on projects which it thinks are the most likely to be "approved" by IPART. It can also mean that the business, IPART and other stakeholders can be focused on debating the merits of adjustments to the allowance for an individual project or program, rather than the aggregate, business-wide allowance (or funding envelope).

A bottom-up approach can also suffer from information asymmetry between the business and IPART and generate incentives for inflated cost proposals, in that if the business knows IPART will routinely trim costs its proposal may be proportionately inflated.

To address these issues, we could consider:

- Incentives for the businesses to submit ambitious pricing proposals – ie, proposals that reflect efficient and innovative cost and service proposals.
- Whether our process could focus more on justifying step-changes in proposed expenditure and performance, particularly where the business's historical costs can be demonstrated to be efficient. This could shift our expenditure review to a more 'top-down' approach. It might help emphasise that the revenue requirement is set to allow the businesses to prioritise expenditure as they see fit and deliver their services within a set funding 'envelope' – subject to standards in their operating licences and other regulatory requirements.

This approach could also discourage overly risk averse behaviour and support decisions that benefit customers. However, it may involve greater scrutiny of the business's historical expenditure.

- Whether the balance of industry data we use to review expenditure is appropriate. For example, in what additional areas could IPART credibly rely on industry benchmarks to establish efficient costs? However, we do understand that benchmarking is a challenge in NSW due to market structure, and there may be costs that are not easily comparable across businesses.
- We currently deal with some 'generic' issues that apply across the businesses (such as WACC parameters) outside of the pricing review process. We could review a broader range of issues, which affect all businesses, between pricing review periods, to allow more focus on important aspects of the business's expenditure during the pricing review.

While the appetite for innovation is influenced by the regulatory framework, the broader context of government policy and the direction taken by the business's board and its shareholder also have a large impact on the actual performance of the business.

Other regulatory approaches

CEPA's research showed that other regulatory jurisdictions use a suite of incentive mechanisms including financial, process and reputational incentives to promote the delivery of good business plans and efficient expenditure proposals from the businesses they regulate.

Regulators have also explored ways to introduce competition into parts of the market to drive efficiency and innovation.

Examples of business plan incentives:

- Explicit **monetary rewards** for delivering good business plans – Ofgem, Ofwat, ESC
- Publicising companies that have provided good business plans and undertaken robust customer engagement – **reputational reward** – Ofwat, ESC
- Proportionate (or risk-based) reviews as a reward to companies that have submitted high quality proposals – **process reward** – ESC, Ofwat, WICS and OEB
- Expedited reviews for parts of company business plans that have been agreed with their customer forum – **process and reputational rewards** – ESCOSA, AER.

Examples of expenditure review incentives for operating and capital expenditure:

- A total expenditure, or 'totex' incentive mechanism/assessment approach to equalise the incentive to deliver a cost saving for capital or operating expenditure – Ofgem, Ofwat[9]

[9] For more information about the totex framework, please see: Frontier Economics (2017), Total expenditure frameworks: A report prepared for the Australian Energy Market Commission

- Separate incentive mechanisms to deliver operating and capital expenditure savings within the regulatory period – AER. However, these mechanisms are set so that the business effectively retains about 30% of the value of any cost savings for either operating or capital expenditure.
- A cap on financial over/under performance that the water business retains/bears – WICS. That is, if Scottish Water's financial over-performance is below a cap, it can choose either to retain all of these gains, or share these with customers. Beyond the cap, Scottish Water needs to discuss with its customers and the Scottish Government how the outperformance should be shared. This approach applies symmetrically if its financial performance is lower-than-expected.

Two other broad approaches, albeit still in their infancy, are being considered by regulators:

- Explicit funding – for projects that would not otherwise occur under the price controls. Funds are awarded based on a 'competition' for innovation, and assessed by the regulator and an independent panel – Ofgem, Ofwat
- Regulatory/innovation 'sandboxes' by OEB, AER are comprised of two major elements to:
  - Provide a coordinated way of receiving advice about regulatory issues related to launching innovative products
  - Waive or change rules temporarily considered to be a barrier to innovation.

Examples of approaches to encourage contestability in the provision of some activities or services in the energy sector include:

- In Victoria, the Australian Energy Market Operator (AEMO) can choose to competitively procure 'contestable augmentations' to the transmission network. If a non-regulated entity wins the tender, then a long-term revenue stream is created to pay for the project.
- The AEMC's Power of Choice review resulted in a rule change that opened metering services to competition in 2017.

IPART seeks comments on the following

4. Should we use a broader range of incentives to encourage innovation? If so, what would these be? For example, can we inspire 'competition by comparison'?
5. Does our discretionary expenditure framework create the right incentives for the business to pursue (and deliver) service outcomes above mandatory levels?
6. What changes should we make to our review of the business's actual and proposed expenditure? For example, what information should we require from businesses and where could we credibly incorporate more benchmarking into our expenditure review process?
7. What changes to our approach would enhance efficient new entry and competition in the supply of water and wastewater services?

2.4 Promoting a customer focus

Our current framework

Our objective is for our framework to replicate as much as possible the outcomes of a competitive market, where firms continually strive to understand what their customers want and structure their businesses to deliver their services accordingly.

Therefore, when determining prices, we have encouraged the businesses to understand their customers' preferences and reflect these in their pricing proposals (see Box 2.3, for relevant extracts from our submission guidelines to the water businesses).

However, we consider there is scope to strengthen the incentives or requirements in our framework for the businesses to understand what their customers want and deliver accordingly.

Box 2.3 Customer consultation provisions in IPART's submission guidelines to the water businesses

Extracts from IPART's Guidelines for Water Agency Pricing Submissions:

Overarching principles (p 1)

"In regulating your prices, we aim to ensure that prices reflect:

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

Therefore, your pricing submission should reflect the prudent and efficient costs of providing your services, and a strong understanding of what your customers want."

Customer consultation (pp 23-24)

"You should indicate how customers have been consulted about your proposed prices, and how customer views are reflected in your pricing submission."

"You should have a strong and up to date understanding of your customers' preferences.

You are responsible for engaging with your customers to understand their views, priorities and needs, which should inform your decision making and your pricing submission. You are also responsible for the form and content of your consultation.

Customer engagement by water businesses could be used to argue for proposals such as:

- **regulatory allowances for discretionary expenditure**[10] – we would require evidence of customer capacity and willingness to pay to achieve outcomes above those mandated by regulation (eg, environmental standards above those required by the EPA)
- **changes to price structures** – along with cost structure, customer preferences would be a relevant consideration in reviewing price structures
- **changes to service standards** – customers' capacity and willingness to pay for higher standards, or willingness to accept lower standards, would be key considerations in any review of operating licence service standards."

Source: IPART, Guidelines for Water Agency Pricing Submissions, November 2018, www.ipart.nsw.gov.au.

10 Discretionary expenditures occur when you invest in projects that provide services or achieve outcomes that are not mandated or go beyond service standards stipulated in your operating licence or other regulatory instruments/requirements.

What could be improved?

We currently leave it to the business to lead and engage with customers. IPART has limited interaction with customers. This is because we consider the biggest benefits of customer engagement are from the dynamic and cultural effects of putting customers' interests at the centre of the business on an ongoing basis. There is less benefit to simply making customer engagement something that occurs once every four years as part of the price review process.

During a pricing review, we consider whether the business's pricing proposal establishes outcomes that are in the long-term interests of customers and are in line with community expectations. However, at this stage, it is often too late to rectify or ask the business to improve its customer engagement.

This is not to say that all business decisions should be driven purely by customer preferences. There may be a distinction between short-term customer preferences and the long-term interests of customers, including future generations, which may need to be balanced by the businesses and IPART. We also acknowledge there is a large element of aggregation – ie, the businesses cannot provide different service offerings to each customer based on their own unique willingness to pay. And, we also note that the broader regulatory framework (eg, EPA requirements) plays an important role in ensuring the businesses operate according to community expectations, not just customer expectations.

Our aim is to ensure that the businesses have a focus on understanding customer preferences and expectations, and that this drives innovation and feeds into their decision making processes. We want the businesses to engage with, and respond to, their customers consistently, and not just once every four years in advance of a price review. We also want businesses to consult broadly on a range of potential projects that they could deliver and not just specific projects in isolation.

As noted in the previous section, our building block framework provides financial incentives for businesses to implement cost savings over time and still meet a minimum level of service. However, it does not provide a similar financial incentive to encourage better performance where customers are willing to pay for these outcomes.

In this review, we will:

- Review our framework's effectiveness in promoting a customer focus for businesses.
- Consider how our framework can encourage businesses to deliver services of most value for customers, and how customers' views can be elicited as part of this approach.

Other regulatory approaches

A common theme among a number of jurisdictions is that regulated companies are now required to undertake greater and more sophisticated levels of customer engagement, than previously. Regulators, on the other hand, have sought to remove themselves from undertaking or supervising customer engagement.

Our consultant's case studies indicated that regulated businesses are undertaking significant levels of customer engagement and that this requirement has been introduced as part of the regulators' methods to ensure customer preferences are clearly incorporated into their price control decisions.

CEPA's review found that a number of regulators now require businesses to establish independent customer panels to assess their business plans and customer engagement. Two of the regulators, Ofgem and the AER, also have sector wide expert customer challenge panels to assess company proposals and customer engagement. The independent customer panels are required to report back to the regulator on the businesses' engagement and how engagement outcomes are reflected in their proposals.

The intention is to ensure that companies take ownership of identifying and providing services that their customers value, rather than relying on regulatory direction.

The two approaches employed by the regulators in CEPA's case studies are:

1. Expert customer representatives. These representatives have a role in negotiating with the business, and the regulator is committed to giving explicit and/or binding weight to agreed positions reached between the representatives and the businesses. This approach was applied or trialled by ESCOSA, WICS and the AER.
2. Customer forums (or other forms of customer representation). These were established to challenge the businesses proposals, but the businesses are not required to set out whether or not they have reached an agreement. The ESC, Ofwat, Ofgem and OEB are using this approach.

The choice between these two approaches appears to be dependent on the number of regulated businesses, with regulators that oversee multiple businesses not adopting the negotiation approach with expert representatives.

IPART seeks comments on the following

8 What level and type of engagement are customers looking for from water businesses?

9 How do we provide the right incentives for the businesses to genuinely engage with their customers, understand what they want and incorporate this into the heart of their operations?

10 Who is best placed to undertake customer engagement? Is it the business, IPART or another independent third-party?

2.5 We propose a stand-alone WACC review

We are proposing a separate, stand-alone review of the WACC concurrent to this review.

We acknowledge that providing an efficient rate of return on investment is a central part of regulating any business that needs to invest in long-term assets. In this review of how we regulate the water businesses, we will broadly consider the role of risk, financial return and financial sustainability (or financeability). For example, stakeholders have told us that a low WACC contributes to business risk aversion. Therefore, a higher WACC could be used as a financial incentive to encourage businesses to propose a higher level of ambition in a pricing period.

The exact method and data we use to calculate each parameter within the WACC can become complex and detailed. Equally, in the recent water pricing reviews, stakeholders have raised specific concerns with how we estimate WACC parameters (particularly our method of estimating inflation expectations).

We propose reviewing our WACC methodology over a 12-month period, commencing December 2020. Given we recently reviewed our WACC methodology in 2018, Box 2.4 proposes that the upcoming WACC review focuses on select aspects of the methodology. However, as part of this Position Paper, we are seeking feedback on the scope, timing and application of the upcoming WACC review.

IPART seeks comments on the following

11 When should we conduct our next WACC review? What are your views on the scope of the review and when should the outcomes of a new WACC method apply to future pricing reviews?

Box 2.4 We expect the WACC review to focus on key issues

It has not been long since we last reviewed our WACC method. We published the Final Report in February 2018. That review introduced several important process improvements, including the trailing average approach to the cost of debt, a more sophisticated way of estimating the current market risk premium (MRP), a more detailed and robust spreadsheet model and automated tools for the bi-annual market update report that minimised the risk of errors.

We expect that many aspects of the WACC method that were settled in 2018 will remain fit for purpose. These aspects include the trailing average cost of debt, our approach to estimating the current MRP and improvements to our tools for producing the bi-annual update reports. While we acknowledge that stakeholders may put any aspect of the WACC method on the table, we do not expect to revisit these aspects in the new review.

Instead, we expect the focus of the review would be on how we account for inflation risk when we estimate the WACC, and the cost of equity. The present low-interest rate, low-inflation environment appears to have increased the financial risk caused by any errors we might make in identifying inflationary expectations held by financial market participants at the time other WACC parameters are observed. Concern about having insufficient nominal income to repay debt obligations has prompted Sydney Water, Hunter Water and Water NSW to propose various mechanisms to remove or minimise that risk. This review would present an opportunity to consider these proposals and other mechanisms in detail, and to hear from other stakeholder groups.

3. Our current water regulation model

This chapter looks at our current approach to regulating water businesses' prices and performance. It highlights our initial observations on our current approach and how these link to the three key focus areas we discussed in Chapter 2.

Step 1 **Setting outcomes through the licensing review**

Every four to five years, we work with the businesses and other key stakeholders to recommend the terms and conditions of the operating licences for Sydney Water, Hunter Water, Water NSW and SDP.[11] The licences set the terms and conditions each business must adhere to so it can:

- Protect consumers – for example, the licence ensures drinking water is safe, customers receive necessary information, and the business offers payment assistance options for disadvantaged customers.
- Ensure service quality and reliable supply – for instance, there are conditions around supply continuity and water pressure.
- Assess the impact of the business on the environment – for example, the business must conserve water where it is economic to do so, and ensure wastewater is safely treated.

In recent licensing reviews, the water businesses and IPART have worked together to set licence conditions based on economic optimisation. That is, a cost-benefit analysis is used to inform where performance standards should be set to maximise benefit to the community.

Box 3.1 Observations on our current licensing approach

We recommend licence conditions and monitor compliance against these conditions for only some of the water businesses. The Central Coast Council and Essential Water's performance is not monitored by IPART. Instead, these businesses are regulated under the W*ater Management Act 2000* and their performance monitored by DPIE.

This arguably increases the complexity of the regulatory framework for these businesses, and potentially increases the regulatory burden. It also strengthens the case for a strong relationship between IPART and other regulators.

Currently, we set licence standards before we begin a price review. However, there may be merit in running these processes simultaneously, or looking at other ways to enhance linkages between the regulation of prices and performance.

11 Note that the Central Coast Council and Essential Water do not have an operating licence; instead, their performance is monitored by the DPIE. For more information, see https://www.industry.nsw.gov.au/water/water-utilities/lwu-performance-monitoring-data

Our review focus areas would promote better licensing outcomes

Promoting a customer focus	We will explore how customer preferences could better inform service and performance standards and the appropriate levels for their settings.
Encouraging innovation	When setting licence conditions, we want standards that reflect appropriate long-term price and quality trade-offs for customers, and encourage the businesses to improve their performance.

Step 2 Utility proposes prices

In the next step, the regulated businesses puts together a proposal for IPART about the costs they expect to incur when delivering their services. The proposal outlines the capital and operational expenditure required to deliver their services effectively, and the prices to recover these costs over the next four years.

Our regulatory approach asks the businesses to propose what revenue and prices they need to deliver services effectively, and how these will be recovered from customers. This is because they are best placed to understand their business and what is needed to meet the expectations of their customers. However, IPART has developed public submission guidelines to help prepare pricing submissions and provides a Submission Information Package to each business ahead of a pricing review. This package includes the strategic issues identified by IPART in advance of each pricing review.

Discretionary Expenditure Framework

As previously indicated, in the recent 2019–20 Sydney Water and Hunter Water pricing reviews, we applied a 'discretionary expenditure' framework. The framework assessed the businesses' proposed expenditure to provide services or achieve outcomes above those required in their operating licences or by other regulatory instruments (eg, EPA licence requirements).

Box 3.2 Observations on our current approach

There may be opportunities to improve the following elements of our framework:

Customer engagement – In this review, we want to carefully consider the roles and responsibilities of the businesses, other regulators, Government and IPART in engaging with customers to understand their preferences. In particular, we want to consider:

- How can we provide greater incentives for the regulated businesses to understand customer preferences and put customers at the centre of their operations (to feed through into their price proposals)?
- What is the optimal level of independent scrutiny or challenge from IPART to ensure business submissions are unbiased and objectively reflect customer preferences?

Regulatory engagement – In setting prices, we seek to ensure the businesses have sufficient revenue to efficiently comply with their operating licence requirements and the requirements of other regulators, including the EPA and NSW Health. It is therefore important that IPART works closely with other regulators to ensure business proposals meet all regulatory obligations and objectives in a cost-effective manner. Better coordination and communication with these regulators, including the EPA, NSW Health and DPIE, could improve outcomes and stakeholder confidence in our process.

We also need to look at how our licence reviews and the discretionary expenditure framework developed for pricing reviews work together. Do they create the right incentives for businesses to optimise their actual performance, particularly where there is customer willingness to pay for higher levels of service, and are these outcomes delivered efficiently to customers?

Our review focus areas would promote better customer outcomes

Promoting a customer focus

Our regulation is focused on what will deliver a better outcome for customers: that the business delivers the mix of services that maximises value to customers and community, while ensuring bills are affordable today and into the future.

Step 3 Setting revenue and prices

Under the IPART Act, we periodically set the prices that certain monopoly water suppliers in NSW, can charge their customers.

IPART assesses whether the business's proposed costs would allow it to efficiently deliver its services and fulfil its requirements under its licence and other regulatory instruments. To set the business's revenue needs, we work with a consultant to undertake an 'expenditure review' of the business, which includes review of the business's:

- Actual investment in long-term assets over the previous regulatory period (its historical capital expenditure). Costs are reviewed so that customers only pay for the efficient costs for the service provided. Anything not deemed prudent and efficient is not funded by customers.
- Proposed capital expenditure for the next pricing period. Our review aims to establish the efficient level of investment needed to deliver services to customers at the point in time of the pricing proposal. Evidence to inform this assessment includes how the business has justified its proposed services/standards, and evidence that the proposed expenditure is the best response to meet its proposed services. This generally involves reviewing a sample of future projects.
- Proposed operating expenditure for the next pricing period on day-to-day items (such as labour, energy, materials, operating contracts, and contractors). This follows a similar process to proposed capital expenditure, but also considers how proposed operating expenditure for the next pricing period compares to actual operating expenditure over the current (most recent) period and the reasons for any material differences.

We do not generally adjust the business's revenue over the next pricing period if its actual historical operating costs were different to the operating costs that we included in the previous pricing period. This is because the revenue allowance we set is designed to be an envelope of cash for the business to use and prioritise as the regulatory period progresses. See Appendix A for more detail on our building block approach.

In theory, our building block framework creates a financial incentive for the business to reduce its operating costs during a pricing period. This is because the business gets to 'keep' (or 'bear') any cost savings (increases) it identifies before IPART reviews its proposed costs in the next pricing period, at which point IPART would reflect these efficiencies in the prices paid by customers over future periods.[12] Our building block approach for capital expenditure has a similar financial incentive. However, as these are long-lived investments, we share the efficiency gains made by the business on its historical investments between the business and its customers.

Once we have established the revenue the business needs to provide services, we set prices to recover that revenue from customers. Put simply, we generally use a two-part tariff structure, with customers paying both a fixed charge for access and a usage charge for the volume of water consumed or wastewater discharged. For the metropolitan water utilities, the usage charge for water is based on our best estimate of the LRMC of supplying water, while the fixed charge is set to make up the revenue shortfall between what the usage charge will bring in, and the total revenue the business needs.

12 Since 2016, we have allowed for efficiency carryover mechanisms (ECMs) for operating expenditure. Under an ECM, the business can 'keep' any cost savings for the same number of years as the length of the determination period (eg, 4 years) before we hand it back to customers in the form of a lower operating expenditure allowance for the business, regardless of when in the determination period the business realises these savings. This provides an equal incentive for the business to pursue efficiency gains throughout the determination period, whereas previously (in the absence of an ECM) it had an incentive to delay such savings until the beginning of the following determination period (to maximise the time it kept them before 'handing them back' at the next price re-set).

When setting prices, we must have regard to a number of factors under Section 15 of the IPART Act, which balance the need for the business to earn a commercial rate of return, deliver service standards and provide affordable services to customers. These are outlined in Figure 3.2 below.

Figure 3.2 Matters for IPART to consider

While our framework aims to encourage the business to manage and, if necessary, reprioritise expenditure within each pricing period, it also acknowledges there are cost and revenue risks outside the business's control that can arise within a pricing period. Further, if a specific project arises in a period and the materiality of the project is sufficiently large, the business can seek a preliminary assessment from IPART. This considers the efficiency of a contingent project, and provides a level of comfort that the capital expenditure will be fully reflected in prices at the next pricing period. And, if the unanticipated cost impost is very large, the business can also request a resetting of the determination.

Box 3.3 Observations on our current approach

Our expenditure review process and building block framework aim to mimic the pressure of competition to reduce costs and maximise performance.

Our current approach provides a financial incentive for the regulated businesses to reduce their costs, while still meeting the service standards in their operating licences and other regulatory requirements. This requires the businesses (which are generally Government-owned) to be responsive to such a financial incentive – which, in turn, requires the shareholder to push the businesses to actively look for and deliver on opportunities to reduce their costs. Our approach also implicitly assumes that the businesses are relatively risk-neutral and are not more concerned about avoiding a loss than they are about earning a profit.

Our current approach involves the business providing information to be reviewed by IPART (or its consultants). We refer to our framework as one that is 'incentive-based', and not based on the 'actual' cost of service. However, there is a tension here, as we review a sample of the business's proposed projects to establish the efficiency of its operations and the 'need' for any step-changes in expenditure.

While our current approach provides a financial incentive to reduce costs and allows for the recovery of discretionary expenditure where there is evidence of customer willingness to pay, it does not provide a financial reward to deliver higher levels of performance to customers. We will consider such incentives in this review. One difficulty is that levels of performance and costs in the water sector can be cyclical in the short-term. For example, performance may change due to weather conditions rather than through any concerted effort to improve performance.

We currently set maximum prices for the water businesses and have a range of ex post true-ups and cost pass-throughs to manage cost and revenue risks. There may be an opportunity to provide businesses with more flexibility to manage these risks within pricing periods, while encouraging them to take ownership of managing the bill impacts on their customers.

Our review focus areas would promote better expenditure review processes

Encouraging innovation

In this review we will consider what other non-financial incentives can be used to drive performance.

We will also explore ways for implementing an expenditure review process that encourages businesses to improve performance, as well as reduce costs.

Step 4 Examining our method between reviews

In between pricing reviews, we periodically review:

- Elements of our building block framework. One of the most important of which is the WACC, or the return on capital expenditure, which provides an economic rate of return to the business. We typically review the WACC every four to five years. We review other elements of the building block calculation less frequently when we or our stakeholders identify a need. For example, we recently reviewed working capital requirements and intend to review our method of setting 'asset lives' before the next review of Sydney Water and Hunter Water's prices.
- Our financeability method, which is a formal check after we set prices to ensure the revenue we have provided the business is sufficient for it to remain financeable over the pricing period.
- Other elements of our framework that affect the prices charged to specific customers. This includes, for example, how the costs of recycled water schemes are recovered from customers, the prices charged to wholesale customers, and the developer charges levied on new connections to water and wastewater networks.

Box 3.4 Observations on our current approach

Many other elements of our pricing approach are common, or similar, across the businesses. Over time, there has generally been a convergence in our 'form of regulation'[13] including:

- Our method for setting water, wastewater and stormwater prices
- How we manage demand and cost pass-throughs
- Other mechanisms we use to encourage businesses to become more efficient and flexible in responding to customers' preferences and behaviour.

The principles for making these decisions should be the same irrespective of the business.

There could be value in having a separate review that establishes these parameters for all businesses every four years, rather than at each pricing review.

Our review focus areas would consider how we can more simply or efficiently address common issues across businesses

Encouraging innovation

We will explore how 'generic' issues affecting all businesses could be dealt with in periods between pricing reviews.

Steps 5&6 Monitoring compliance and collecting data

We monitor businesses' compliance with their operating licences (established in Step 1). The five key performance areas we monitor are:

- Water quality
- Asset performance
- The economic level of water conservation
- Environmental indicators and management
- Customer and consumer rights.

13 The 'form of regulation' is the set of methods we use to regulate prices for the business's monopoly services. The form of regulation can determine how risk is allocated amongst the regulated business, its customers and taxpayers, and includes:

- How long we set prices for before our next review
- Whether prices are directly or indirectly controlled
- How we can incentivise the business to improve its performance
- How revenue and cost risks are shared between the business and its customers.

For pricing, we collect data on how the business's expenditure is tracking against its original pricing proposal, through an Annual Information Return (AIR). We also use output measures to track a business's performance. For instance, in the recent Sydney Water review we included reporting measures relating to drought expenditure, water conservation, and discretionary expenditure, to provide greater transparency to all stakeholders around Sydney Water's performance in these areas.

Performance in these areas helps to inform the objectives and outcomes set in the next review process. Future reviews of the business should help impose a discipline and encourage it to deliver appropriate levels of performance and to spend efficiently.

Box 3.5 Observations on our current approach

The data and the information on 'output measures' we collect from businesses following price reviews have not historically been outcomes-focused. Rather, the focus has been to use these measures to track forecast expenditure against actual expenditure.

Outcomes of the pricing review could be better integrated with the existing reporting requirements of the businesses as part of their licensing requirements. This would streamline reporting requirements, allow performance to be more easily tracked, and reduce regulatory burden.

Our review focus areas would promote an outcomes-focus

Lifting the performance of the sector

We will explore how we can refine the output measures we collect to be more 'outcomes' focused, to show how well the businesses are delivering on their proposed outcomes and meeting customer and community expectations.

4. Our proposed approach

4.1 How to engage with our process

We will involve and engage with stakeholders in this review. There are a number of ways that you can engage with IPART during our public review process. You can engage with us through:

- Meetings and workshops – both planned or impromptu throughout the review
- Submissions to our papers and reports at different phases of our review, ie, scoping, discussion and draft decisions – we will present our preliminary positions and seek your comment and feedback
- The Public Hearing – this is an opportunity for all interested stakeholders to express their views on our draft decisions and for the Tribunal to receive feedback from you directly.

We will also update you on the progress of our review through our website and other communication material (see also the indicative timeline for our review below).

4.2 How we are structuring our review

We propose structuring our review roughly into three 6-month periods as set out below.

Six months to consult on scope and present initial views

We have already met with the NSW water businesses we regulate, a number of key Government agencies, interstate regulators and peak consumer bodies.

We have published this Position Paper to seek views on the scope of the review and our preliminary positions. We will follow this with a Final Position Paper, outlining stakeholder responses and the next steps.

Six months to solve problems and make decisions

Subject to our consideration of feedback to this Position Paper, we propose holding workshops on three focus areas for the review:

- Lifting the performance for the sector
- Encouraging innovation
- Promoting a customer focus.

We would then publish Discussion Papers on these focus areas. Feedback from these papers would be collated into a Draft Report at the end of this period.

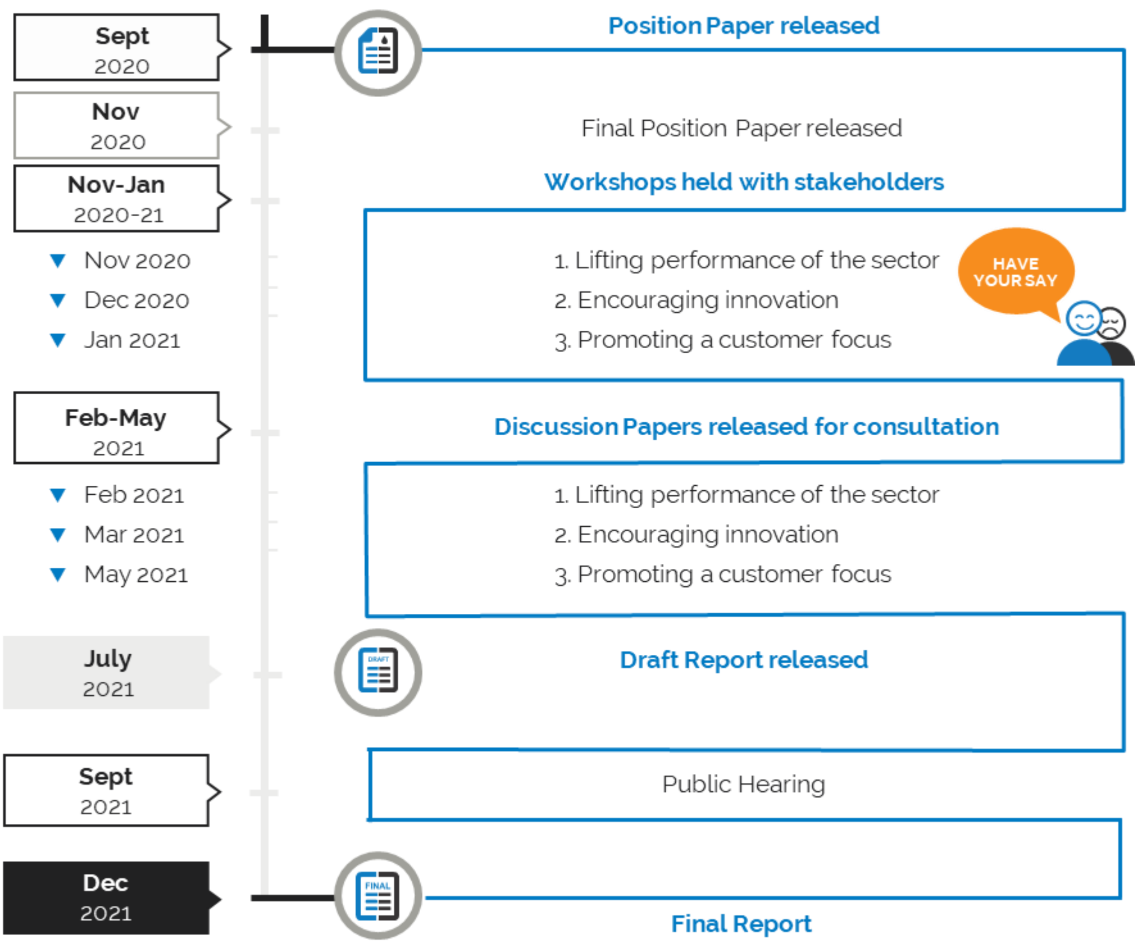
Six months to present, explain and refine draft decisions with stakeholders

We propose releasing our draft decisions early in this period to allow time to consult on the Draft Report, followed by a round of consultation through the Public Hearing.

The Draft Report will present our draft decisions on all key areas of the review presented in Discussion Papers and seek to minimise the investment of time and resources by stakeholders given their involvement at the Discussion Paper phase of the review.

After due consideration of all feedback, we plan to release our Final Report in December 2021.

Figure 4.1 Indicative timeline for our review



IPART seeks comments on the following

12 Do you have any comments on our proposed review process and timeline?

Next steps

We are seeking feedback on our Position Paper on how we regulate water businesses.

We would like to know what you think by **30 October 2020.**

Make a submission via the IPART website or by getting in touch with us. More information on how to make a submission is provided at the start of the paper.

After considering all stakeholder feedback, we will release an update to our Position Paper which summarises the feedback we receive. At the same time, we will confirm and outline the next steps in our review process.

APPENDIX

A The Building Block Framework

We use cost building blocks to establish a Notional Revenue Requirement

We have historically used a 'building block' approach to calculate a Notional Revenue Requirement (or NRR) for the water businesses. In this approach, we break-down the business's costs into five components (or building blocks) to establish the revenue that they should recover from customers (see Figure A.1). These five blocks are the:

- Operating expenditure allowance, to cover the costs of day-to-day maintenance and administration costs
- Capital cost allowance, which recovers the capital expenditure gradually from customers over time. It is comprised of two building blocks, which are:
  - A return on the assets that the business uses to provide its services, and
  - An allowance for depreciation (or a return of the assets that the business uses to provide its services), which involves deciding on the appropriate asset lives and depreciation method.
- Tax allowance, which approximates the tax liability for a comparable commercial business
- Working capital allowance, which represents the holding cost of net current assets.

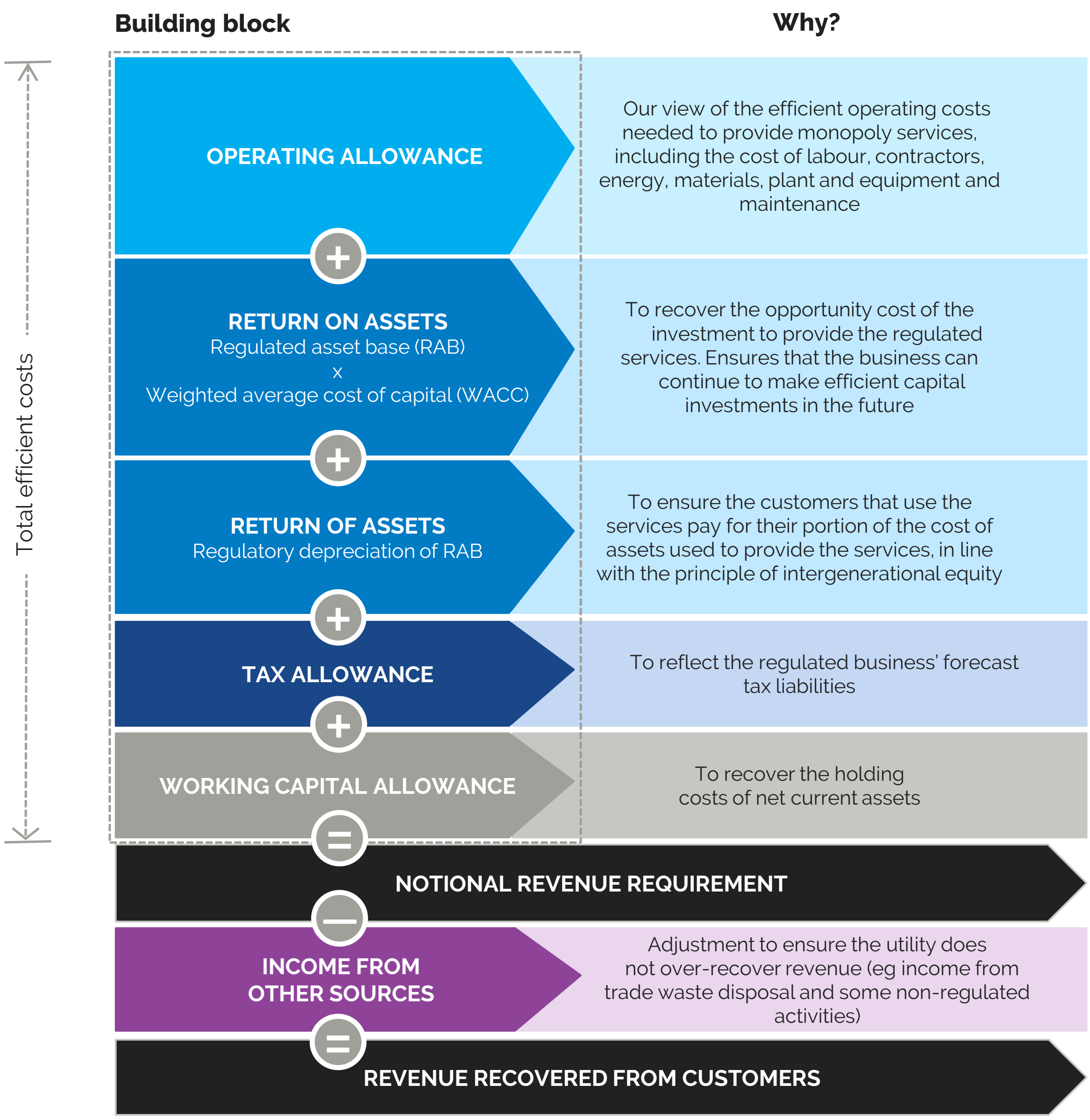
Regulatory Asset Base

The Regulatory Asset Base (RAB) forms the basis for the revenue we provide to the businesses on their capital expenditure, in the NRR.

Each review, we establish the business's RAB, which is economic value of all assets the business owns (both new and existing). The RAB is then multiplied by the Weighted Average Cost of Capital (WACC) – a measure of rate of return to investments – to set the return on assets in the NRR. In effect, this step is to simulate the return the business would earn in a competitive market. An allowance for depreciation is then calculated for the RAB. We usually calculate the depreciation allowance using the straight-line method, which allows the regulated business to recover the value of its assets evenly over their assumed economic lives.

During this process we complete an ex-post capital expenditure review, where we review the business's expenditure from the previous period to ensure that customers have only paid the efficient costs. Anything deemed prudent and efficient is added to the RAB, but anything beyond that that the business has spent is excluded from the RAB and therefore is not funded by customers. This process provides an incentive for the business to engage in thorough long-term planning (to ensure that only prudent costs are proposed to IPART in the first place).

The Building Block Framework



Note: The building block components of the NRR in the figure above are not to scale and are for illustrative purposes only.
Source: IPART (2020), Review of prices for Sydney Water from 1 July 2020, Final Report, June 2020, p.190.

Weighted Average Cost of Capital

The WACC is the rate of return that the business earns on its regulated assets (the RAB). It is a key input for calculating the revenue requirements and setting prices for the businesses we regulate. We use a standard method to determine the WACC in our pricing reviews, which is a weighted average of debt and equity costs required for an efficient business (the benchmark entity) to invest in necessary infrastructure.

The WACC influences the level of investment a regulated firm makes. Set too high, customers would pay too much for the services and the regulated business could be encouraged to overinvest. Set too low and the business's financial viability could suffer, leading it to underinvest.

Our definition of a benchmark entity is 'a firm operating in a competitive market and facing similar risks to the regulated business'. The cost of capital for this (hypothetical) benchmark firm may be different to the regulated business's actual cost of capital.