



ICRC

independent competition and regulatory commission

Issues Paper

Water and sewerage services price regulation: incentive mechanisms

Report 14 of 2019, December 2019

The Independent Competition and Regulatory Commission is a Territory Authority established under the *Independent Competition and Regulatory Commission Act 1997* (the ICRC Act). The Commission is constituted under the ICRC Act by one or more standing commissioners and any associated commissioners appointed for particular purposes. Commissioners are statutory appointments. Joe Dimasi is the current Senior Commissioner who constitutes the Commission and takes direct responsibility for delivery of the outcomes of the Commission.

The Commission has responsibilities for a broad range of regulatory and utility administrative matters. The Commission has responsibility under the ICRC Act for regulating and advising government about pricing and other matters for monopoly, near-monopoly and ministerially declared regulated industries, and providing advice on competitive neutrality complaints and government-regulated activities. The Commission also has responsibility for arbitrating infrastructure access disputes under the ICRC Act. In discharging its objectives and functions, the Commission provides independent robust analysis and advice.

The Commission's objectives are set out in section 7 of the ICRC Act and section 3 of the *Utilities Act 2000*.

Correspondence or other inquiries may be directed to the Commission at the following address:

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The Commission may be contacted at the above addresses, by telephone on (02) 6205 0799, or by fax on (02) 6207 5887. The Commission's website is at www.icrc.act.gov.au and its email address is icrc@act.gov.au.

How to make a submission

This Issues Paper provides an opportunity for stakeholders to provide feedback and evidence to inform the development of the draft report. It will also ensure that relevant information and views are made public and brought to the Commission's attention.

Submissions on the Issues Paper close at **5.00 pm Friday 28 February 2020**, and can be emailed to the Commission at icrc@act.gov.au.

Alternatively, submissions may be made online through the form on the Commission's website: www.icrc.act.gov.au or mailed to the Commission's address below.

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The Commission encourages interested parties to make submissions in either Microsoft Word format or PDF.

The Commission is guided by and believes strongly in the principles of openness, transparency, consistency, and accountability. Public consultation is a crucial element of the Commission's processes. It is the Commission's preference that all submissions it receives be treated as public and be published on the Commission's website unless the author of the submission indicates clearly that all or part of the submission is confidential and not to be made available publicly. Where confidential material is submitted, the Commission prefers that this be under a separate cover and clearly marked 'In Confidence'. The Commission will assess the author's confidentiality claim and discuss appropriate steps to ensure that confidential material is protected while maintaining the principles of openness, transparency, consistency and accountability.

The Commission secretariat may be contacted at the above addresses, by telephone on (02) 6205 0799 or by fax on (02) 6207 5887. The Commission's website is at www.icrc.act.gov.au.

Contents

How to make a submission	ii
Foreword	1
1 Introduction	2
1.1 Background to the Review	2
1.2 Purpose of the issues paper	5
1.3 Commission’s role and objectives	6
1.4 Indicative review timeline	9
1.5 Structure of the issues paper	9
2 Current approach to incentive mechanisms	12
2.1 Operating expenditure	12
2.2 Capital expenditure	13
2.3 Service standards	14
2.4 Price control mechanism	15
3 Other incentive mechanisms	19
3.1 Efficiency sharing schemes	19
3.2 Total expenditure approach (‘totex’)	22
3.3 Victorian ‘PREMO’ approach	23
4 Consolidated list of questions	25
Abbreviations and acronyms	26
References	27

List of tables

Table 1.1 Regulatory objectives and pricing principles for water and sewerage tariffs	8
Table 1.2 Indicative timeline for the review of incentive mechanisms	9

List of figures

Figure 1.1 Simplified building blocks methodology	4
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List of boxes

Box 1.1	Sections 7 and 19L: Commission objectives	6
Box 1.2	Section 20(2): Commission's considerations	7
Box 2.1	Forms of price control	17
Box 3.1	Details of the operating expenditure efficiency sharing scheme for Sydney Water	20
Box 3.2	Details of the AER's capital expenditure efficiency sharing scheme for network service providers	22

Foreword

In its final report for the 2018 Water and Sewerage Services Price Investigation, the Independent Competition and Regulatory Commission (the Commission) indicated that it would undertake a review of associated incentive mechanisms (the Review).

The purpose of the Review is to ensure that the Commission's approach to determining water and sewerage prices provides appropriate incentives for Icon Water to operate efficiently. It also ensures the Commission's regulatory framework continues to be consistent with the Commission's objectives under the *Independent Competition and Regulatory Commission Act 1997* (the ICRC Act).

Incentive mechanisms are an important tool in the Commission's approach to regulation as they encourage regulated businesses to pursue efficiency improvements (such as improved services and financial outcomes) that can be shared between the business and consumers.

This Issues Paper begins the consultation process for the Review. It seeks stakeholder input on the current incentive mechanisms and on how the Commission proposes to approach the Review. Feedback from customers, community groups, businesses, Icon Water, and other stakeholders is crucial to ensuring the Commission's Review is appropriate in scope and considers the appropriate options.

The process for making submissions is set out in page ii of this Issues Paper. Submissions on the issues paper close on Friday 28 February 2020.

Joe Dimasi
Senior Commissioner

4 December 2019

1 Introduction

This review of incentive mechanisms in relation to water and sewerage services (the Review) seeks to ensure that the Independent Competition and Regulatory Commission's (the Commission) approach to determining water and sewerage prices provides appropriate incentives for Icon Water to operate efficiently. It also ensures the Commission's regulatory framework continues to be consistent with the Commission's objectives under the *Independent Competition and Regulatory Commission Act 1997* (the ICRC Act).

1.1 Background to the Review

The Commission is the Australian Capital Territory's (ACT) independent economic regulator, which regulates prices, access to infrastructure services and other matters in relation to regulated industries in the ACT. The Commission is responsible for setting regulated prices for the supply of water and sewerage services, as well as setting minimum service standards and targets (guaranteed service levels or GSLs) for water and sewerage services in the Consumer Protection Code, made under the *Utilities Act 2000*.

The Commission undertakes price investigations in accordance with sections 15, 16 and 17 under Part 3 of the ICRC Act, and issues Price Directions under Part 4 of the ICRC Act. The 2018 Price Direction sets the Commission's methodology for setting the maximum prices that Icon Water can charge for water and sewerage services from 1 July 2018 to 30 June 2023.

The Commission established this Review as a reset principle in the 2018 Price Direction for water and sewerage services prices for Icon Water.

The Commission's approach for this Review is to consider the effectiveness of the current incentive mechanisms used by the Commission and whether any enhancements can be made. In undertaking the Review, the Commission will consider incentive mechanisms used in other jurisdictions and whether these incentive mechanisms can be applied to Icon Water. Any changes to the incentive mechanisms will be implemented in the regulatory period after 30 June 2023.

The regulatory model

The Commission currently uses a 'building block' methodology to determine the efficient costs that Icon Water can recover from its customers in a regulatory period. It is the most widely used approach in Australia for determining the allowable revenue a utility business may recover through prices.

Under the building block model, the allowed revenue in any one year is the sum of the operating expenditure for that year and a contribution to the costs of capital

investments made over time (referred to as the regulatory asset base), plus allowances for forecast tax paid by the business. The contribution to the costs of capital investments is the sum of what is known as the 'return on capital' and the 'return of capital' (depreciation). This method of allowing for the recovery of the regulated businesses' capital gives the regulated firm a reasonable assurance that it will be able to pay back its lenders, includes a commercial rate of interest, and provide its investors with a reasonable return on their investment—given the relative risk of the businesses compared to other investments.

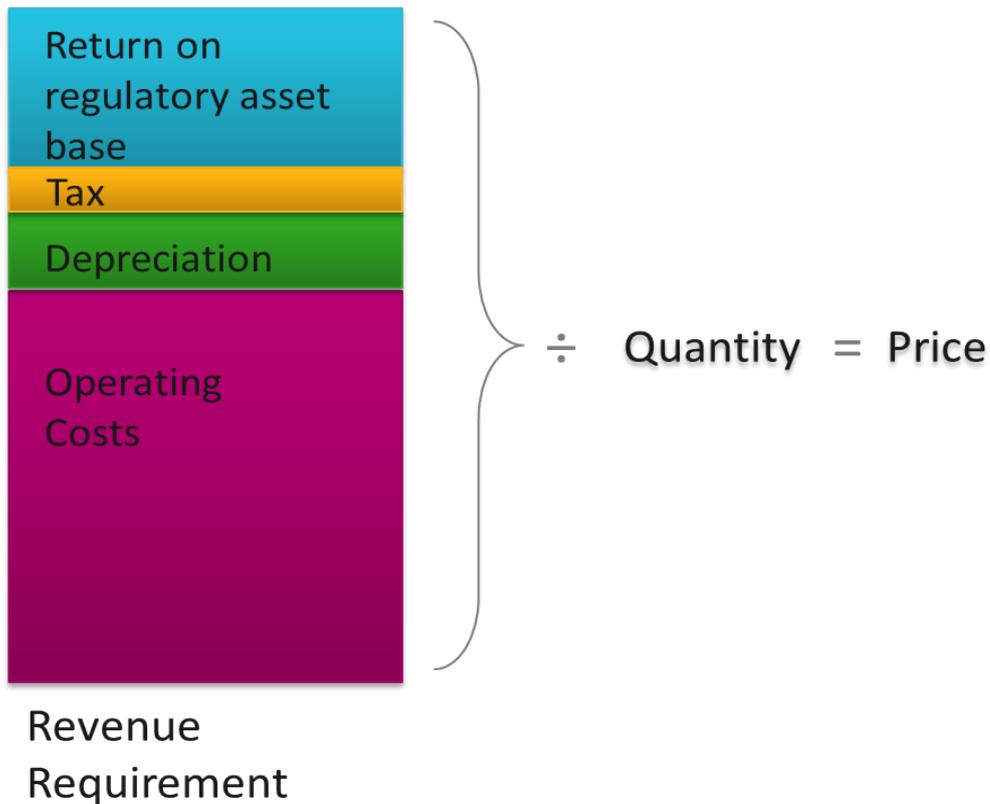
In other words, the total allowed revenue is the sum of the following cost components, or 'blocks':

- Operating expenditure for that year
- Return on capital, equal to the cost of capital multiplied by the regulatory asset base
- Return of capital, also known as depreciation
- An allowance for the forecast tax paid by the firm
- The pass-through of specified unexpected or government-mandated costs

Service standards, licence obligations and legislative requirements imposed on business operations underpin these operational expenditure and capital investments decisions.

This total allowed revenue is then divided by the forecast (or expected) water demand, which includes estimates of future water usage plus new water and sewerage service connections, to derive a price for each service (illustrated in Figure 1.1).

Figure 1.1 Simplified building blocks methodology



Under the building block methodology, expenditure is only included in allowed revenue calculations when it is deemed both ‘prudent’ and ‘efficient’. For Icon Water’s 2018 Price Direction, the Commission defined prudent and efficient as:

- Prudent expenditure. This encompasses whether the project, program or activity would reasonably be expected of a utility operating in the circumstances that apply. Evidence considered for prudence would include substantiation of the benefits of and the need for the project, program or activity.
- Efficient expenditure. This relates to whether the project, program or activity is delivered or proposed to be delivered with the best value for money. Evidence considered for efficiency would include exploration of alternative service delivery options, assessment of lowest cost over the life cycle, and the ‘deliverability’ of the proposed project, program or activity.

Purpose of incentive mechanisms

Incentive-based regulation seeks to encourage regulated businesses to pursue efficiency improvements (such as improved services and financial outcomes) that are shared between the business and consumers. Efficiency is important because it can lead to more cost-effective service delivery that best meets the needs to water and sewerage service customers. Incentive-based regulation is linked to the Commission’s objectives

(see Box 1.1), which require the Commission to promote efficiency in regulated services.

Many regulators in Australia and overseas adopt incentive-based forms of regulation. This includes the Australian Energy Regulator (AER), the Victorian Essential Services Commission (ESC), the Independent Pricing and Regulatory Tribunal (IPART) in New South Wales, and international regulators such as the Water Services Regulation Authority (OFWAT) in the United Kingdom.

Incentive schemes are commonly applied for operating expenditure, capital works expenditure, service standards, and customer engagement. These incentive schemes link financial rewards and penalties to the achievement of targeted outcomes. Additionally, incentive mechanisms may allocate risks to, or share risks between, the parties (customers or regulated entity) that are best placed to manage the risk.

Other reviews of incentive mechanisms

A number of regulators, including the AER, ESC and IPART have recently undertaken reviews of their incentive mechanism frameworks. The Commission will use these reviews to inform its thinking on potential enhancements to its existing incentive mechanisms framework for Icon Water.

The Commission previously undertook a Review of Efficiency and Service Standard Incentive Mechanisms in 2005. At that time, the Commission noted that there were benefits in implementing efficiency sharing schemes; however, the cost to design, implement and maintain such schemes were likely to outweigh any benefits given the other efficiency tools used by the Commission at the time.¹ Further information on the 2005 Review can be found on the Commission's website.²

The Commission notes that since the 2005 Review, the regulatory environment has evolved and as such it is timely to review the Commission's approach to incentive mechanisms.

1.2 Purpose of the issues paper

There are two reasons for this issues paper. The first is to alert stakeholders that the Commission is undertaking a review of incentive mechanisms and to seek stakeholder input on any issues they consider relevant.

The second purpose is to describe the Commission's current incentive mechanisms and describe other mechanisms that may enhance the current incentive mechanisms framework.

¹ ICRC 2005, p 21

² ICRC 2005

1.3 Commission's role and objectives

In carrying out its functions under the ICRC Act, the Commission has the following objectives as set out in sections 7 and 19L of the ICRC Act (Box 1.1).

Box 1.1 Sections 7 and 19L: Commission objectives

Section 7:

- (a) to promote effective competition in the interests of consumers;
- (b) to facilitate an appropriate balance between efficiency and environmental and social considerations;
- (c) to ensure non-discriminatory access to monopoly and near-monopoly infrastructure.

Section 19L:

To promote the efficient investment in, and efficient operation and use of regulated services for the long term interests of consumers in relation to the price, quality, safety, reliability and security of the service.

When making a price direction, in addition to the terms of reference and legislative objectives, the Commission is also required to have regard to the provisions in section 20(2) of the ICRC Act (Box 1.2). Of particular relevance to this Review are considerations related to service standards, efficiency, and least cost planning.

Box 1.2 Section 20(2): Commission's considerations

- (a) the protection of consumers from abuses of monopoly power in terms of prices, pricing policies (including policies relating to the level or structure of prices for services) and standard of regulated services; and
- (b) standards of quality, reliability and safety of the regulated services; and
- (c) the need for greater efficiency in the provision of regulated services to reduce costs to consumers and taxpayers; and
- (d) an appropriate rate of return on any investment in the regulated industry; and
- (e) the cost of providing the regulated services; and
- (f) the principles of ecologically sustainable development mentioned in subsection (5);
- (g) the social impacts of the decision; and
- (h) considerations of demand management and least cost planning; and
- (i) the borrowing, capital and cash flow requirements of people providing regulated services and the need to renew or increase relevant assets in the regulated industry; and
- (j) the effect on general price inflation over the medium term;
- (k) any arrangements that a person providing regulated services has entered into for the exercise of its functions by some other person; and
- (l) any arrangements that a person providing regulated services has entered into for the exercise of its functions by some other person.

Note: Underlining added.

As part of this Review, the Commission will also give consideration to the pricing principles outlined in the Commission's Final Report of regulated water and sewerage services prices 2018-23 for Icon Water (Table 1.1).³ These require the Commission to balance economic efficiency, environmental and social objectives. The Commission acknowledges that there are likely to be trade-offs in balancing the various objectives and other objectives set by government policies. Most relevant to this review are the pricing principles relating to economic efficiency and regulatory transparency and simplicity.

³ ICRC 2018a, p 5

Table 1.1 Regulatory objectives and pricing principles for water and sewerage tariffs

Category	Aspect	Detail
Objective	Overarching interpretation	<p>To promote efficient investment in, and efficient operation and use of, regulated services for the long-term interests of consumers in relation to the price, quality, safety, reliability and security of the service.</p> <p>The various aspects of economic efficiency are given emphasis but with the ultimate objective being the long-term interests of consumers. 'Economic efficiency' when properly defined encompasses environmental objectives. Consumer interests must take account of equity and other social impacts, as required by the ICRC Act.</p> <p>Economic efficiency considerations related to pricing are a starting point but need to be balanced with environmental and social considerations.</p>
Pricing Principle	<ol style="list-style-type: none"> 1. Economic efficiency in use 2. Economic efficiency for investment and operation 3. Environmental considerations 4. Community impact – gradual adjustment 5. Community impact – fair outcomes for low-income households 	<p>Regulated prices should promote the <u>economically efficient use</u> of Icon Water's <u>water and sewerage services infrastructure</u> and should also encourage economically efficient use of the water resource itself.</p> <p>This includes having regard to uneconomic bypass where water supply is sourced from a higher cost alternative.</p> <p>Regulated prices and <u>supporting regulatory arrangements</u> should facilitate the <u>efficient recovery of the prudent and efficient costs of investment and operation</u>.</p> <p>The finance recovery aspect of this principle is often described as ensuring <u>revenue adequacy or financial viability</u>. Costs also need to be efficient, which is primarily dealt with by auditing and <u>incentive-sharing mechanisms</u>.</p> <p>Regulated prices and complementary mechanisms should ensure that environmental objectives are effectively accounted for.</p> <p>Any change to prices or other regulatory arrangements that will have substantial consumer impacts should be phased in over a transition period to allow reasonable time for consumers to adjust to the change.</p> <p>Adverse impacts on households with low incomes need to be limited or moderated by phasing and other compensating mechanisms or limits on changes to regulated prices or other regulatory arrangements.</p>

6. Regulatory governance – simplicity	Regulated prices and their form should be simple for consumers to understand and straightforward for the utility to implement.
7. Regulatory governance – transparency	Regulated prices should be set using a <u>transparent methodology</u> and be subject to <u>public consultation and scrutiny</u> .

Note: Underlining added.

1.4 Indicative review timeline

The Commission proposes to adopt the indicative timeline set out in Table 1.2. In developing the indicative timeline the Commission has taken into account the timing of other regulatory processes, both in the ACT and in other jurisdictions, and has aimed to allow sufficient time for Icon Water and other stakeholders to participate fully in the Review.

Table 2.2 Indicative timeline for the review of incentive mechanisms

Task	Date
Release of issues paper	4 December 2019
Submissions on issues paper close	28 February 2020
Workshop	Late March 2020
Draft report	Late April 2020
Submissions on draft report close	July 2020
Final report	Late August 2020

The Commission intends to hold a workshop to discuss ideas for enhancing incentive mechanisms in late March 2020. The workshop will assist the Commission and stakeholders to understand the issues and explore potential options. It may also assist stakeholders in preparing submissions to the draft report.

The closing date for submissions on the Issues Paper is 28 February 2020. Written submissions received by the closing date will be considered in the development of a draft report.

1.5 Structure of the issues paper

The remainder of this paper is structured as follows.

- Chapter 2 discusses the Commission’s current incentive mechanisms.
- Chapter 3 discusses other incentive mechanisms adopted by other regulators.
- Chapter 4 is a consolidated list of questions.

The Commission is seeking feedback on:

1. Do you have any comments on the overall approach the Commission has proposed to adopt for its review of incentive mechanisms?

2 Current approach to incentive mechanisms

This chapter outlines the incentive mechanisms used by the Commission as part of the 2018 Price Direction for Icon Water. These incentives mechanisms relate to operating and capital expenditure, service standards, and the form of price control. As part of this review, the Commission may modify or supplement the existing set of incentive schemes.

2.1 Operating expenditure

The Commission currently provides incentives for efficient operating expenditure by incorporating an “efficiency dividend” (also known as an “efficiency hurdle”) as part of its regulatory approach for Icon Water. An efficiency dividend reduces the operating expenditure that a regulated business can recover each year. Regulators typically expect efficiency improvements over time due to changes in technology, economies of scale as customer growth occurs and improvements to how the business operates (e.g. efficiencies in business processes). Regulators typically implement an efficiency dividend instead of trying to identify specific program or project efficiencies for business as usual activities. This is for two reasons: first, regulators do not have the detailed information that is available to the management of a business; and second, the management of the business is best placed to identify and implement efficiencies, taking into account the needs of its customers, any operational constraints, and its overall strategic plans.

For the 2018 Price Direction, the Commission accepted Icon Water’s proposed 3.7 per cent real reduction in operating costs compared to the 2013 to 2018 period as an efficiency dividend.⁴ This efficiency dividend provides Icon Water an incentive to implement and achieve the cost efficiencies needed to meet or exceed the dividend. This is because if Icon Water is unable to achieve the efficiency dividend, its profits will be lower (a result of having higher operating costs). Conversely, if Icon Water can exceed the efficiency dividend and lower its operating costs below the level of costs that was accepted by the Commission, Icon Water will increase its profits in the regulatory period.

In its final report on the price investigation, the Commission stated that it would look further at the operating expenditure incentive schemes used by other regulators before its next price investigation for the regulatory period from 1 July 2023.⁵

⁴ ICRC 2018a, p xix

⁵ ICRC 2018a, p 168

2.2 Capital expenditure

For the 2018 Price Direction, the Commission retained its long-standing approach to capital expenditure incentives. This involved reviewing the prudence and efficiency of Icon Water's proposed and actual capital expenditure over the 2018-2023 regulatory period. Specifically:

- At the beginning of the regulatory period, following a prudence and efficiency assessment, the Commission approves a proposed capital expenditure allowance by Icon Water to be included in the regulatory asset base. Icon Water earns a return on and a return on this capital allowance (refer section 1.1 for further details on the building blocks methodology). This process is known as an ex-ante review.
- As part of the assessment for the next regulatory period, the Commission will review the actual capital expenditure incurred by Icon Water over the 2018-23 regulatory period to assess its prudence and efficiency (known as an ex-post review). The Commission will use this ex-post review in determining the roll forward value of the regulatory asset base⁶ for the next regulatory period on which Icon Water can earn a return on and return of its capital investments.

As a result of these reviews, Icon Water is incentivised over the regulatory period to find capital expenditure efficiencies compared to the capital expenditure allowance approved by the Commission. This is because, during the regulatory period, Icon Water earns a return on the capital expenditure allowance rather than on actual capital expenditure during the regulatory period; if it finds efficiencies in its capital program such that it spends less than the allowance, its profit will be larger. The ex-post review also provides a disincentive for Icon Water to overspend on its capital expenditure; this is because Icon Water will not earn a return on capital expenditure above the allowance unless the Commission assesses the higher expenditure as efficient and prudent.

Only capital investments that have been assessed by the Commission as prudent and efficient can be rolled into the regulatory asset base for the next regulatory period. An example could be where the Commission may assess as prudent and efficient higher than allowed for capital expenditure that are needed for a larger than forecast expansion of the sewer network to service higher than forecast growth in customer numbers.

It is important to note that the Commission (as part of its ex-post review of capital expenditure) may reject the inclusion in the regulatory asset base of capital expenditure assessed as not prudent or efficient. If this occurs, Icon Water would need to self-fund the cost of this expenditure over the asset's life.

⁶ The roll forward value of the regulatory asset base is a key input to the building blocks model at the beginning of a regulatory period. The roll forward value sets the asset values that will be used to calculate the return on and the value of depreciation for the next regulatory period.

The Commission signalled its intention as part of the 2018 Price Direction to investigate opportunities to explore enhancements to its capital expenditure incentive mechanisms before its next price investigation for the regulatory period from 1 July 2023. The Commission indicated that it would consider capital expenditure incentive mechanisms used by other regulators (outlined in Chapter 3).⁷

2.3 Service standards

The Commission's current regulatory framework provides incentives for Icon Water to maintain service standards through two mechanisms. First, the Commission requires Icon Water to deliver services to a certain minimum standard imposed through the Customer Protection Code (the Code); these are known as guaranteed service levels (GSLs). The GSLs require Icon Water to provide rebates (payments) to customers when service standards are not met. The 2019 Determination on the Consumer Protection Code⁸ includes GSLs for:

- customer connection times
- responding to complaints
- notice of planned interruption
- duration of interruptions (single event)
- frequency of interruptions
- response time to notification of a fault, problem or concern that affects the premises of the customer.

These GSL payments are a service level incentive mechanism. They incentivise Icon Water to provide a minimum level of service quality to its customers and therefore minimise GSL payments, by ensuring its operating and capital expenditures are efficient and sufficient to ensure the delivery of water and sewerage services that meet the needs of its customers. As outlined in section 1.1, service standards underpin Icon Water's operating and capital expenditure decisions on how they best deliver services. By reducing GSL payments below the amount included as part of the Commission's assessment of efficient costs of operation, Icon Water can increase its profit. Conversely, if Icon Water makes more GSL payments than allowed for by the Commission, this will reduce profits.⁹

Further, the Commission requires Icon Water to report on actual outcomes for service standards against the targets set in the Code. This increases public scrutiny of Icon

⁷ ICRC 2018a, p 168

⁸ ICRC 2018b, p 36

⁹ It is generally accepted practice by economic regulators to allow an inclusion of reasonable GSL payments as part of the efficient costs of operating a business. Including an allowance for GSL payments acknowledges that some level of service failure is inevitable because fault-free service delivery would be prohibitively expensive.

Water's performance and increases the incentives for Icon Water to meet the minimum service standards.

During 2019, the Commission undertook a review of the Code, including the GSLs. The Commission's decision to extend the number of rebates, update the value of rebates and introduce automatic payment of rebates will strengthen Icon Water's incentives to meet the minimum service standards set in the Code. The Commission will not consider GSLs as part of this review.¹⁰

2.4 Price control mechanism

Overview of the price control mechanism

The price control mechanism refers to the method by which price regulation is implemented. Price control mechanisms can also act as a mechanism to allocate certain risks between the regulated business and its customers.

The Commission has a long standing practice of using a hybrid price and revenue cap with a demand volatility adjustment mechanism to regulate Icon Water.¹¹ This form of control involves the Commission setting prices for individual water and sewerage services, as well as approving the forecast demand and water sales revenue cap that Icon Water can recover over a five year regulatory period. The actual revenue recovered by Icon Water depends on the level of water demand. Actual demand may differ from forecast demand, meaning that Icon Water will recover more revenue (than the revenue cap) when demand is higher than forecast and less revenue when demand is lower than forecast.

A more detailed explanation of individual price caps and revenue caps is in Box 2.1.

In applying the revenue cap for the regulatory period, the Commission uses a six per cent threshold (referred to as a "deadband") when assessing, at the end of the regulatory period, whether Icon Water's revenue over the period from water sales has met or exceeded the revenue cap. If Icon Water's water usage revenue differs from the revenue cap by more than plus or minus six per cent, the Commission will allow a revenue adjustment for the difference above or below the six per cent threshold. The revenue adjustment will be recovered from (or returned to) customers during the following regulatory period.

The "deadband" essentially shares demand risk (that is, the risk of water usage being lower or higher than expected) between Icon Water and its customers. The Commission considers that the "deadband" appropriately allocates demand risk by:

¹⁰ Further details of the Commission's review of the Consumer Protection Code are available at <https://www.icrc.act.gov.au/projects/current-projects/consumer-protection-code-review>.

¹¹ ICRC 2018a, p. 11

- requiring Icon Water to manage the revenue impacts of reductions in demand of up to six per cent from forecast demand by identifying and implementing efficiency improvements, reducing variable costs, providing information to customers on water saving measures, and earning lower than expected profits, noting that the return on its capital investments includes an allowance for business risk;¹² and
- requiring customers to share larger risks that would affect the long-term financial sustainability of Icon Water and its ability to continue to deliver water and sewerage services in the future (that is, where demand is more than six per cent lower than forecast demand).¹³

During the 2018-23 regulatory period, revenue from water usage charges are forecast to account for approximately 77 per cent of Icon Water’s water revenue requirement (\$881.3 million)¹⁴ and approximately 44 per cent of Icon Water’s total revenue requirement (\$1 546 million).¹⁵ The six per cent “deadband” is equivalent over the five year 2018 Price Direction period to approximately \$41 million or 2.6 per cent of Icon Water’s total revenue requirement for the period. This means that Icon Water is exposed to demand risk that may result in revenue being \$41 million higher or lower than forecast.

¹² If demand is higher than forecast, Icon Water would benefit from higher revenue and profits.

¹³ Where demand is more than six per cent higher than forecast, Icon Water would benefit from higher revenue and profits up to the six per cent “deadband” and customers would benefit during the next regulatory period from any variation above the six per cent “deadband” through lower prices.

¹⁴ ICRC 2018a, p 138

¹⁵ ICRC 2018a, p 138

Box 2.1 Forms of price control

This Box outlines the two main forms of price controls. However, it should be noted there are other price control mechanisms, such as hybrid approaches that combine elements of individual price caps and revenue caps.

Individual price caps

The individual price cap approach sets an initial price and price path for each service provided by a regulated entity over the regulatory period. Individual price caps give regulated entities and customers price certainty over the regulatory period (subject to any pass-through mechanism events,¹⁶ e.g. a material change in the water abstraction charge¹⁷).

Individual price caps allocate demand risk to the regulated business. If demand is higher than expected, the regulated business will earn higher revenue. Because there are high fixed costs in supplying water to customers (from the costs of dams, pipes, treatment facilities, and administration that do not vary with the amount of water delivered to customers), the regulated business will make higher than expected profits because higher demand will usually result in its revenue increasing by more than its costs increase. Conversely, if demand is lower than expected, the regulated business will earn lower than expected revenue and earn less profit because its revenue will fall by more than its costs fall.¹⁸ The regulated entity is incentivised to achieve additional efficiencies over the regulatory period to manage demand volatility risk. .

Revenue cap

Revenue caps give with the regulated business certainty about the revenue it will earn over the regulatory period. It does this by adjusting the prices customers pay to account for differences between actual and forecast demand over the regulatory period, either during the period or at the end of the period. If demand is lower than forecast, prices will be increased to ensure the revenue cap will be met. If demand is higher than forecast, prices will be reduced to ensure the revenue cap is not exceeded.

Unlike individual price caps, customers do not have certainty about the prices they will pay. The risk of actual demand being different to forecast demand is borne by customers; that is, a revenue cap allocates demand risk to customers, in contrast to individual price caps which allocate demand risk to the regulated business.

Under a revenue cap approach regulated entities face different incentives to the price cap approach to achieve efficiencies. A revenue cap providing revenue certainty (and profit certainty) for regulated entities, regulated entities remain incentivised to reduce costs below the costs allowed in setting the revenue requirement. However these incentives may be blunted compared to a price cap as the regulated entity is insulated from the demand risk incentive.

Incentives from the “deadband” price control mechanism

The Commission’s current form of control provides incentives for Icon Water to carefully plan for and manage the risk of lower water consumption. For example, if water consumption is lower over the regulatory period than was forecast by Icon Water (and accepted by the Commission), Icon Water will recover a lower than forecast revenue. The lower revenue means that Icon Water may not be able to cover all of its costs or generate the profit it was expecting. In this scenario, Icon Water would have incentives to find cost efficiencies. The “deadband” approach provides incentive for Icon Water to manage demand risk carefully, including by identifying potential efficiency gains.

Additionally, the “deadband” approach provides greater incentives for Icon Water to invest in more accurate models for forecasting demand, by better understanding the factors driving customer usage and the growth in connections, to reduce risks of under/over recovery of revenue during the regulatory period. At the same time, the Commission has recognised the difficulties of accurately forecasting water inflows (and rainfall) and has therefore limited Icon Water’s exposure to demand risk by setting the “deadband” threshold.

The Commission has a long standing view that a six per cent threshold over the regulatory period is an equitable risk sharing allocation between Icon Water and its customers.

The Commission is seeking feedback on:

2. Do you have any comments on the current incentive mechanisms used by the Commission?
3. What changes, if any, could the Commission make to improve its current incentive mechanisms?

¹⁶ Pass-through mechanisms are used to pass through the cost impacts of events that are uncertain at the start of the regulatory period but may occur and have a material cost impact on the business providing the service.

¹⁷ ICRC 2018a, p. 10

¹⁸ If demand is lower because of lower than expected water inflows into its lowest cost water sources, the business’ costs could increase because it has to obtain water from higher cost sources.

3 Other incentive mechanisms

This chapter summarises incentive mechanisms for water and electricity distribution businesses currently applied or recently considered in Australia and the United Kingdom. The Commission intends to consider the incentive mechanisms described in this section in making its decision to modify or supplement the current incentive mechanisms.

The Commission may also consider any other incentive mechanisms suggested by stakeholders in response to this Issues Paper or other mechanisms found during its research for this Review.

3.1 Efficiency sharing schemes

Efficiency sharing schemes are a common incentive mechanism used by regulators. These schemes provide continuous incentives for efficiency in operating and capital expenditure, and service standards. They do this by allowing a regulated business to retain part of an efficiency gain for a fixed period, regardless of when the efficiency improvement was made within a regulatory period.

These schemes attempt to overcome the “periodicity problem”, which refers to the situation whereby regulated businesses may have lower incentives to find efficiency gains in later years of the regulatory period. This situation arises because operating expenditure and allowed profit is reset at the beginning of each regulatory period; any profit resulting from efficiency gains will be taken from the regulated business as part of this reset and returned to consumers in the form of lower prices. That is, the value of an efficiency gain is worth less to the regulated business in later years of the regulatory period compared to early years. By allowing the regulated business to retain part of an efficiency gain for a fixed period, these schemes seek to overcome the periodicity problem.

Efficiency sharing schemes can apply to both operating expenditure and capital expenditure.

Operating expenditure efficiency sharing schemes

Two current examples of operating expenditure incentive schemes are IPART’s efficiency benefit sharing scheme for Sydney Water,¹⁹ and the AER’s efficiency sharing scheme for electricity network service providers (NSPs).²⁰

¹⁹ For details about the Sydney Water incentive scheme, see IPART 2016.

²⁰ For details about the AER’s scheme, see AER 2013.

The expenditure efficiency benefit sharing scheme for Sydney Water allows it to keep the value of an efficiency gain for four years regardless of when it was made in the regulatory period.²¹ Efficiency gains can be recovered in the following regulatory period via a ‘carryover payment’ that is added to Sydney Water’s building block model revenue requirement (refer to Chapter 1 for an explanation of the building block model). In the absence of the scheme, Sydney Water’s operating expenditure and profit would be reset every five years as part of IPART’s price investigations. Further details on the Sydney Water operating efficiency benefit scheme are provided in Box 3.1.

Box 3.1 Details of the operating expenditure efficiency sharing scheme for Sydney Water

The scheme applies to controllable operating expenditure (approximately 70 per cent of total operating expenditure for regulated services).

The scheme is asymmetric in that it does not allow automatic sharing of permanent cost increases, but does allow for the automatic sharing of cost decreases. IPART considers this to be in the long-term interests of consumers.

The scheme does not apply to capital expenditure, reflecting concerns that it would lead to inefficient deferral of capital expenditure, limited opportunities for efficient trade-offs between operating and capital expenditure, and complexity.²²

Like IPART’s scheme for Sydney Water, the AER’s efficiency benefit sharing scheme allows NSPs to retain a share of efficiency gains for a fixed period (known as the carryover period and typically equal to the length of the regulatory period of five years). The AER also penalises NSPs for efficiency losses as it requires NSPs incur the costs of delivering higher than forecast operating expenditure in each year of a regulatory period.²³ This penalty aims to remove the incentive faced by NSPs to increase operating expenditure at the end of the regulatory period.²⁴ This incentive can arise because operating expenditure at the end of a regulatory period is used to inform the level of operating expenditure for the next regulatory period.

In absence of the scheme, operating expenditure and allowed profit would be reset in five yearly intervals as part of the AER’s price investigation.

Capital expenditure efficiency sharing schemes

The AER’s capital expenditure efficiency sharing scheme is similar to the operating expenditure efficiency sharing schemes described above. Under the scheme, NSPs

²¹ Sydney Water did not seek to carryover any operational expenditure efficiency gains as part of its 2020 Price Submission to IPART.

²² IPART 2016, p. 268.

²³ AER 2013, p. 5.

²⁴ AER 2013

retain a share of capital expenditure efficiency gains or losses for a fixed period (generally five years).

A potential issue with efficiency sharing schemes is that they may introduce incentives for the regulated business to prefer capital expenditure over operating expenditure. This incentive can arise if there are differences in how capital expenditure efficiency gains and operating expenditure efficiency gains are shared. The AER's efficiency sharing scheme overcomes this issue by setting the sharing ratio for both schemes to be approximately the same (30 per cent, assuming there is a six per cent real discount rate). The "sharing ratio" refers to the share of the total efficiency gain that the NSP can retain as profit in each of the carryover years. This means that there are reduced incentives for the NSP to prefer one type of expenditure to the other.

Another potential issue with capital efficiency sharing schemes is that they can create an incentive for the regulated business to inefficiently delay capital expenditure. This is because the business may be able to claim it has achieved capital efficiencies by delaying expenditure from one regulatory period to another, but the delayed capital investment may be delivered at a higher cost in a future regulatory period.²⁵ The AER's scheme includes measures to remove this incentive; for example, in assessing forecast capital expenditures proposed for the next regulatory period the AER seeks to identify any expenditures that reflect a deferral from the previous period. Further details of the scheme are provided in Box 3.2.

²⁵ Even if the capital investment is delivered at the same cost in a future period, the delay may result in a lower level of service to customers until the investment is made.

Box 3.2 Details of the AER's capital expenditure efficiency sharing scheme for network service providers

Like the AER's operating efficiency benefit sharing scheme, the capital expenditure sharing scheme is an application of an efficiency carryover scheme for capital expenditure. The scheme operates on a fixed-sharing basis. This means that at the end of each regulatory period, a sharing ratio of 30 per cent is applied to the value of the cumulative capital expenditure underspend or overspend to determine the NSP's share that can be retained or paid for by the NSP for a five year period.

The carryover payment can be positive or negative depending on whether there is underspending or overspending compared to the forecast. The payment also takes account of the net benefit the NSP has already earned, or net cost already incurred, in the regulatory period. This amount is added to or deducted from the next period's allowed revenue.

The AER's capital efficiency sharing scheme makes adjustments to remove the incentive to inefficiently defer capital expenditure. Without such an adjustment, a business can gain an advantage from the financing benefit (return on and return of capital) associated with the difference between forecast capital expenditure and lower actual expenditure in the current regulatory period while still being compensated when the deferred capital expenditure actually occurs.

3.2 Total expenditure approach ('totex')

In Australia, economic regulators typically set revenue allowances for regulated businesses using a 'building block' framework (refer to section 1.1). This has involved regulators and regulated businesses treating operating expenditure and capital expenditure separately.²⁶ An alternative to this arrangement is to adopt a total expenditure approach (known as 'totex').

A benefit of the totex approach is that it can reduce incentives faced by regulated businesses to favour capital expenditure over operating expenditure. The current building block approach may provide businesses with incentives to favour capital expenditure over operating expenditure even when an operating expenditure is more efficient. This is because capital expenditure increases the businesses' regulated asset bases on which businesses earn returns over the life of those assets. A totex approach may also allow businesses more freedom and flexibility to find the most efficient ways of delivering regulated services.

The totex framework has not been adopted by economic regulators in Australia. This is likely because of challenges in implementing the approach. For example, the totex

²⁶ Frontier Economics 2017.

approach would require a change to how forecast costs are assessed. It would also require a regulator to develop a return on totex. The totex approach has been considered as part of the regulation of energy networks in Australia.²⁷

3.3 Victorian ‘PREMO’ approach

In 2018 the ESC implemented a new regulatory framework for water businesses in Victoria known as Performance, Risk, Engagement, Management and Outcomes (PREMO). The framework is designed to be primarily driven by customer engagement and is designed to provide incentives for water businesses to deliver services and outcomes that matter most to customers as efficiently as possible.²⁸

Under PREMO, each business’s rate of return is linked to the outcomes it proposed to deliver to customers. This is achieved by allowing the return on equity to vary according to the level of “ambition” shown in a price submission. A higher rate of return is allowed for businesses that put forward improvements in customer value, including commitments to significant improvements in cost efficiency.

Ambition is assessed using the PREMO Assessment Tool and broadly involves assessing the proposal against the five elements of PREMO:²⁹

- Performance — have the performance outcomes to which the business committed in its price submission been met or exceeded?
- Risk — has the business sought to allocate risk to the party best positioned to manage that risk?
- Engagement — how effective was the business’s customer engagement?
- Management — is there a strong focus on efficiency? Are controllable costs increasing, staying the same, or decreasing?
- Outcomes — do proposed service outcomes represent an improvement, the status quo, or a withdrawal of service standards?

In addition to affecting the rate of return, there are likely to be reputational incentives for businesses to be as ambitious as possible.³⁰ This is because the PREMO ratings are published and ratings of businesses can be compared against each other. This form of competition by comparison may incentivise businesses to avoid being positioned at the

²⁷ Frontier Economics 2017.

²⁸ ESC 2016, p. 4

²⁹ ESC 2016, p. 10.

³⁰ ESC 2016, p. 11

bottom of the ranking, as it may increase attention of the Government as shareholder on performance of senior leadership.³¹

The United Kingdom has adopted an approach to water regulation that is similar to PREMO. It is known as 'RIIO' (Revenue = Incentives + Innovation + Outputs). A key element of RIIO and PREMO is that they require water businesses to engage with customers and understand their preferences in relation to the delivery of water and sewerage services.³²

In determining the level of ambition, the ESC adopts a benchmarking approach that uses information from other water businesses operating in Victoria. The Commission considers that it may not be appropriate to adopt this approach in the ACT. This is because there are a lack of comparative benchmarks in the ACT as Icon Water is the only water and sewerage services provider. Benchmarks from other jurisdictions may not be comparable because of different operating characteristics compared to the ACT operating environment, for example, different geology, water quality and population density.

The Commission is seeking feedback on:

4. Do you have any comments on the incentive mechanisms described in this chapter that the Commission proposes to consider during its review?
5. What other incentive mechanisms should the Commission consider during the review?
6. What factors should the Commission consider in judging whether an incentive mechanism is suitable for Icon Water? Are there any ACT specific considerations?

³¹ KPMG 2018, p. iii.

³² KPMG 2018, p. iii.

4 Consolidated list of questions

The preceding chapters identified a number of questions on which the Commission is seeking feedback. The list is consolidated in this section.

This list is not exhaustive and submissions may address other issues that relate to the review. Submissions do not have to address all the questions set out by the Commission.

1. Do you have any comments on the overall approach the Commission has proposed to adopt for its review of incentive mechanisms?
2. Are the current incentive mechanisms used by the Commission appropriate?
3. What changes, if any could the Commission make to improve its current incentive mechanisms?
4. Do you have any comments on the incentive mechanisms described in this chapter that the Commission proposes to consider during its review?
5. What other incentive mechanisms should the Commission consider during the review?
6. What factors should the Commission consider in judging whether an incentive mechanism is suitable for Icon Water? Are there any ACT specific considerations?

Abbreviations and acronyms

ACT	Australian Capital Territory
AER	Australian Energy Regulator
Commission	Independent Competition and Regulatory Commission (ACT)
ESC	Essential Services Commission
GSL	Guaranteed service level
ICRC	Independent Competition and Regulatory Commission (ACT)
ICRC Act	<i>Independent Competition and Regulatory Commission Act 1997 (ACT)</i>
IPART	Independent Pricing and Regulatory Tribunal
NSP	Network service provider
OFWAT	Water Services Regulation Authority
PREMO	Performance, risk, engagement, management and outcomes
TOTEX	Total expenditure
Utilities Act	<i>Utilities Act 2000 (ACT)</i>

References

AER 2013, Efficiency benefit sharing scheme (EBSS) – November 2013, available at <https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/efficiency-benefit-sharing-scheme-ebss-%E2%80%93-november-2013>.

ESC 2016, Water Pricing Framework and Approach: Final Paper, available at <https://www.esc.vic.gov.au/sites/default/files/documents/Water-Pricing-Framework-and-Approach-Final-Paper-Oct-2016.pdf>.

Frontier Economics 2017, Total expenditure frameworks, available at <https://www.aemc.gov.au/sites/default/files/content/ae0d3fc5-4b9a-496a-a072-50886bc5c86f/2017-12-20-Totex-frameworks-Final-report-STC.pdf>.

ICRC 2005, Final Decision – Review of Efficiency and Service Standard Incentive Mechanisms, available at https://www.icrc.act.gov.au/__data/assets/pdf_file/0020/1247042/report_16_of_2005_incentive_final.pdf

ICRC 2018a, Final report – Regulated water and sewerage services prices 2018-23, available at https://www.icrc.act.gov.au/__data/assets/pdf_file/0019/1250236/Report-1-of-2018-Final-Report-Water-Sewerage-Services-2018-23.pdf.

ICRC 2018b, Draft Utilities (Consumer Protection Code) Determination 2019, https://www.icrc.act.gov.au/__data/assets/pdf_file/0020/1406216/Draft-Consumer-Protection-Code-August-2019.pdf

IPART 2016, Review of prices for Sydney Water Corporation, available at https://www.ipart.nsw.gov.au/files/sharedassets/website/shared-files/investigation-legislative-requirements-water-metropolitan-water-sydney-water-corporation-pricing-investigation-commencing-from-1-july-2016/final_report_-_review_of_prices_for_sydney_water_corporation_-_from_1_july_2016_to_30_june_2020.pdf.

KPMG 2018, Optimising network incentives, available at <http://www.coagenergycouncil.gov.au/publications/optimising-network-incentives-report>.