



# Western Water's 2020 water price review

Guidance paper

December 2018



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# 1. Introduction

The Essential Services Commission of Victoria (the commission) is undertaking a review of the maximum prices Western Water can charge for its water and sewerage services for the regulatory period from 1 July 2020.

Our pricing powers and functions in Victoria's water industry are governed by the Water Industry Regulatory Order 2014 (WIRO),<sup>1</sup> which sits within the broader context of the *Water Industry Act 1994* (Vic) (WI Act) and the *Essential Services Commission Act 2001* (Vic) (ESC Act).

## Our role

We must make a price determination which determines the maximum prices (or the manner in which prices are to be calculated, determined or otherwise regulated) that Western Water may charge for prescribed services for the regulatory period commencing 1 July 2020.<sup>2</sup>

This paper is the guidance we must issue Western Water under clause 13 of the WIRO (clause 13 is provided at Appendix A). To comply with clause 13 of the WIRO, the guidance sets out our approach to the price review and information requirements for Western Water's price submission.

Clause 14 of the WIRO (provided at Appendix D) requires us to assess a price submission prepared by a water business, and form an opinion on whether the price submission:

- complies with the guidance issued by us under clause 13 of the WIRO, and
- has adequate regard for the matters specified in clause 11 of the WIRO.

If we form a view that a price submission satisfies our guidance and WIRO criteria, then we must approve Western Water's price submission — otherwise, the WIRO affords us discretion to specify maximum prices, or the manner in which prices are to be calculated, determined or otherwise regulated.<sup>3</sup>

Section 13(b) of the WIRO provides for us to vary or add to the guidance provided to Western Water following consultation, including with the business.

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<sup>1</sup> The WIRO is available at <http://www.gazette.vic.gov.au/gazette/Gazettes2014/GG2014G043.pdf#page=45>, 45-51.

<sup>2</sup> WIRO, clause 10(a). The prescribed services are listed at clause 7(b) of the WIRO.

<sup>3</sup> WIRO, clause 14.

## **Why we approved a two year pricing period**

In June 2018, we approved a two year pricing period for Western Water. Our 2016 guidance for the 2018 price review of our urban and rural water businesses specified a five year pricing period. We stated in our 2016 guidance that we were open to a different pricing period. Western Water requested a two year pricing period and we agreed with its request to allow it time to assess its capacity to address challenges associated with servicing unprecedented levels of growth in its region, while providing affordable and value adding services to customers, before committing to longer term prices.<sup>4</sup>

## **We will not to apply our PREMO return on equity matrix or fast-track Western Water’s price submission to an early decision**

Our guidance outlines the minimum information requirements for a ‘Standard’ rated corporation under our PREMO incentive mechanism.<sup>5</sup> Western Water is not required to give itself a PREMO rating but it must be satisfied that it has met the requirements of our guidance. If we make the same assessment, we will set Western Water’s return on equity at 4.5 per cent, which reflects the rate of return a ‘Standard’ corporation would receive under the PREMO incentive mechanism. If we assess that Western Water has not met the minimum requirements of our guidance, then we may specify a lower return on equity.<sup>6</sup>

We will not fast-track Western Water’s price submission to an early decision, as it has noted that it is facing challenges arising from unprecedented growth levels. This suggests that we will be required to undertake deeper levels of analysis, at least, on its demand and expenditure forecasts.

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<sup>4</sup> Western Water, Letter, 20 October 2017, available on our website at [www.esc.vic.gov.au](http://www.esc.vic.gov.au).

<sup>5</sup> Under the PREMO incentive mechanism, return on equity is linked to a water corporation’s level of ambition – ‘Leading’, ‘Advanced’, ‘Standard’ or ‘Basic’. However, this mechanism does not apply to Western Water in the 2020 price review. More information on the PREMO mechanism is available in Essential Services Commission 2016, *2018 Water Price Review, Guidance paper*, November.

<sup>6</sup> We will refer to our indicative return on equity values for a business we assess as less than “Standard”, which are outlined in our water pricing framework paper – Essential Services Commission 2016, *Water Pricing Framework and Approach – Implementing PREMO from 2018*, June pp. 13.

Our practice in past reviews has been to take into account current market conditions before finalising the return on equity. We will continue with this approach in our 2020 price review. The return on equity will not be lower than our benchmark cost of debt.

## **We consider a three year regulatory period from 1 July 2020 supports Western Water’s commitment to address the challenges it is facing**

Our guidance specifies a three year regulatory period for Western Water from 1 July 2020. In our draft guidance we noted that we were open to a different pricing period if Western Water set out the reasons why a different length would be in the long-term interests of its customers. In response to our draft guidance, Western Water accepted a three year regulatory period without the application of our PREMO return on equity matrix, and without the option to fast-track to an early decision.<sup>7</sup>

A regulatory period of three years recognises that Western Water’s challenges arising from unprecedented growth levels require it to make substantive strategic changes (for example, structural, capacity or operational).<sup>8</sup> We consider that a three year regulatory period from 1 July 2020 supports Western Water’s commitment to address its challenges and adapt to the complexities that can arise from a dynamic environment.

We also require Western Water to provide us with forecasts in our financial model based on robust underlying assumptions for us to make an assessment of Western Water’s 2020 price submission. Our guidance outlines the consequences if we assess that its price submission and financial model are not consistent and do not meet the requirements of our guidance. For example, we may lower the return on equity from 4.5 per cent and/or set a lower revenue requirement than Western Water’s proposal.

## **We consider a three year regulatory period is in the long-term interests of customers**

A three year regulatory period aligns our future review of Western Water with the majority of the other water businesses we regulate. We intend to apply our full PREMO framework – that is, we will also apply the PREMO return on equity matrix and offer the option to fast-track a price submission to an early decision, as well as the other elements of our PREMO framework – at our 2023 price review of the majority of our urban and rural businesses.<sup>9</sup> We consider that it will be in

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<sup>7</sup> Western Water 2018, *Response to draft guidance paper – Western Water’s 2020 water price review*, 4 December.

<sup>8</sup> Western Water’s 2017-18 Annual Report p3 outlines that service properties grew by 5.5 per cent during the year and that it is forecasting a growth rate in property numbers of 4.6 per cent per annum over the next decade.

<sup>9</sup> We commenced engaging with water businesses from the second half of 2018 to seek feedback on our 2018 price review, including our PREMO framework. Based on the feedback from our consultation with water businesses, and any further review we may undertake over the next year or so, we may modify our PREMO framework. Before finalising any changes to our framework, we will consult with water businesses and seek their feedback on our proposed changes.

the long-term interests of Western Water’s customers to align our review of Western Water with our reviews of other businesses under the PREMO incentive based mechanism.

## **Our information requirements for Western Water’s 2020 price submission recognises that much of the information already exists**

We recognise that Western Water has already undertaken extensive work for its 2018 price submission and its upcoming 2020 price submission.<sup>10</sup> Much of our information request for the 2020 price submission would already exist within normal business practice – for internal planning and corporate reporting.<sup>11</sup>

In some areas, the guidance indicates where Western Water should only provide a summary in the price submission, and make supporting detailed information available on our request. Further, in some situations where Western Water is proposing to maintain the status quo (such as the form of price control) we do not require detailed justification in the price submission.

## **What we require from Western Water in its price submission**

Western Water must be satisfied that it has met our guidance, which has set out our minimum information requirements for a “Standard” rated business under our PREMO framework.

To provide us with sufficient information to assess Western Water’s longer term service, revenue and price path, our guidance requests forecasts for the three year regulatory period and for the following five years. We will only make a decision for the three year regulatory period, but we will review Western Water’s forecasts over an eight year period.

Western Water should also address the issues we raised in our 2018 draft and final decisions on its expenditure, demand, depreciation and new customer contributions in its 2020 price submission.<sup>12</sup> We have noted in our guidance that should Western Water propose tariff reforms (for example, change the fixed to variable tariff structure), it should engage with its customers and take their views into consideration in its proposal. We also outlined that we will not include a provision for rebates in our financial model. Our role is to approve the maximum prices for Western Water.

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<sup>10</sup> Western Water outlined in its letter to us in October 2017 that it has already undertaken extensive customer engagement for over a year. We also met with Western Water in August 2018 to discuss the 2020 price review.

<sup>11</sup> Under Section 4C (a) of the *Water Industry Act 1994* (Vic) the commission has an objective to ensure the costs of regulation do not exceed the benefits, wherever possible.

<sup>12</sup> These issues are also summarised in this draft guidance in the sections on expenditure, demand, depreciation and new customer contributions.

Western Water can choose to adopt a rebate to provide to its customers after we have made our decision on its maximum prices.

## 2. Our approach to the price review

This chapter sets out:

- the manner in which we propose to regulate Western Water's prices<sup>13</sup>
- our approach and methodology to assessing Western Water's price submission and making a price determination<sup>14</sup>
- our approach to consultation during the price review process<sup>15</sup>
- timelines for the price review process.<sup>16</sup>

### 2.1. The manner in which we propose to regulate Western Water's prices

We have flexibility to decide how Western Water's prices are regulated.<sup>17</sup>

We will use a building block methodology to determine Western Water's revenue requirement over the regulatory period commencing 1 July 2020. The revenue requirement is the forecast amount that a water corporation needs to deliver on customer outcomes, government policy, and regulator obligations, and to earn a reasonable rate of return on its assets.<sup>18</sup>

For a defined regulatory period the building block methodology involves the following steps:

- first, outcomes that a water business proposes to deliver to its customers will be assessed to validate that they reflect government (and technical regulator) obligations or demonstrated customer needs, and
- second, the following 'building blocks' will be determined in accordance with governing criteria for each element (specified in chapter 3), to:

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<sup>13</sup> WIRO, clause 13(a)(i).

<sup>14</sup> WIRO, clause 13(a)(ii).

<sup>15</sup> WIRO, clause 13(a)(iv) and 13(a)(viii).

<sup>16</sup> WIRO, clause 13(a)(vi) and 13(a)(vii).

<sup>17</sup> This is provided under clause 12(b) of the WIRO and Section 33(5) of the ESC Act.

<sup>18</sup> Regulatory obligations include those specified by Environment Protection Authority Victoria and the Department of Health and Human Services.

Our approach to the price review

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- establish an efficient benchmark level of forecast operating expenditure for the next regulatory period<sup>19</sup>
- establish an efficient benchmark level of forecast capital expenditure for the next regulatory period
- roll-forward the regulatory asset base
- apply a rate of return to the regulatory asset base, calculated using:
  - a benchmark cost of debt estimated using a 10-year trailing average approach
  - a benchmark return on equity value
- establish a return of capital through regulatory depreciation
- establish a benchmark tax allowance.

These 'building blocks' will determine the forecast revenue that is required for Western Water to deliver on its service outcomes and obligations.

A summary of the building block methodology is shown in figure 2.1.

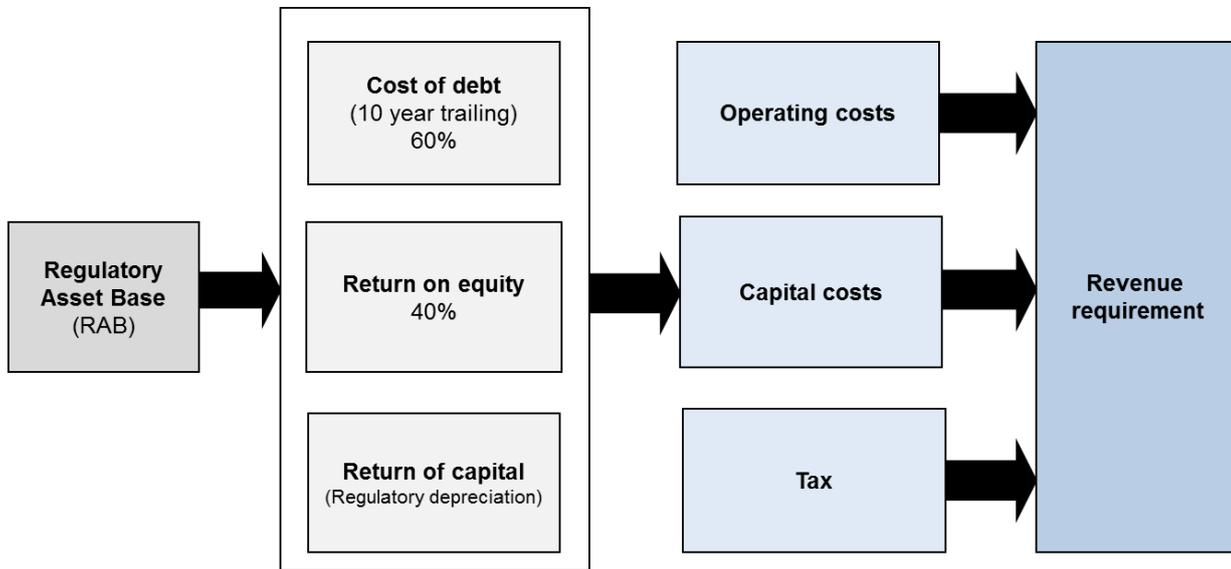
Once the revenue requirement for the regulatory period has been determined using building blocks, the form of price control that will be applicable to Western Water specifies how its revenue requirement is translated into customer prices. Western Water currently uses a price cap form of price control. We expect Western Water will continue to use a price cap form of price control. The revenue requirement and forecast demand will determine the maximum prices Western Water may charge.

The commission's final determination will specify the prices that are to apply for the year commencing 1 July 2020, and the prices or the manner in which prices will be calculated for the remaining years of the regulatory period.

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<sup>19</sup> Next regulatory period covers the period from 1 July 2020.

**FIGURE 2.1 REVENUE UNDER BUILDING BLOCKS**



## 2.2. Approach and methodology for assessing Western Water’s price submission

Our regulatory task is to assess Western Water’s price submission and form a view about whether or not the price submission:<sup>20</sup>

- has adequate regard for the matters specified in clause 11 of the WIRO
- complies with guidance we issue under clause 13 of the WIRO.

### Assessing the extent to which the submission has regard for matters specified in clause 11

Clause 11 of the WIRO refers to matters specified in the ESC Act, the WI Act, the guidance we issue under clause 13 of the WIRO, and a number of pricing principles (at clause 11(d)) that we must have regard to in making a price determination.<sup>21</sup>

<sup>20</sup> WIRO, clause 14(b)(i).

<sup>21</sup> The matters referred to in clause 11 of the WIRO have been grouped into themes in Appendix B.

To facilitate our assessment, Western Water is required to support the proposals in its price submission by reference to the matters in clause 11 of the WIRO.

In doing so, Western Water is required to place particular emphasis on the matters in clause 8(b) of the WIRO which primarily relate to the promotion of various types of efficiency.<sup>22</sup> Chapter 3 sets out a number of matters Western Water's price submission must address in order to demonstrate it has fully and meaningfully addressed clause 11 of the WIRO.

### Assessing compliance with this guidance

Western Water must lodge its price submission with the commission by 15 November 2019. We will assess whether Western Water has sufficiently justified its proposals in accordance with the governing criteria in Chapter 3, and satisfied all of the information requirements.

### Consequences

Consistent with clause 14 of the WIRO, if we form a view that Western Water's price submission complies with our guidance, and has adequate regard for the matters specified in clause 11 of the WIRO, then we must approve the proposals in its price submission. Otherwise, clause 14 of the WIRO allows us discretion to specify maximum prices, or the manner in which its prices are to be calculated, determined or otherwise regulated.<sup>23</sup>

In practice, where Western Water's price submission has not fully complied with the guidance, our intention is to provide Western Water with an opportunity to provide the required information before the commission makes a draft decision.

## 2.3. Our consultation process

We will invite submissions from interested parties on the proposals contained in Western Water's price submission prior to making a draft decision.

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<sup>22</sup> In summary, clause 8(b) of the WIRO provides that in having regard to the overarching objectives in the ESC Act and the WI Act, particular emphasis is to be placed on:

- (i) the promotion of efficient use of prescribed services by customers;
- (ii) the promotion of efficiency in regulated entities as well as efficiency in, and the financial viability of, the regulated water industry; and
- (iii) the provision to regulated entities of incentives to pursue efficiency improvements.

<sup>23</sup> WIRO, clause 14(b)(i).

Following the release of our draft decision, we will invite submissions and we may hold a public forum before we make a final decision and issue a price determination.<sup>24</sup>

We will consult with agencies such as the Department of Environment, Land, Water and Planning, the Department of Health and Human Services, and the Environment Protection Authority Victoria.

We will make papers (including the reports of consultants assisting with our review), Western Water's further submissions, and submissions from other interested parties, available at [www.esc.gov.au/waterpricereview](http://www.esc.gov.au/waterpricereview) subject to any confidentiality issues.

If there is information that Western Water or a customer does not want disclosed publicly, because it is confidential or commercially sensitive, the matter should be discussed with commission staff before lodging the submission.

## **2.4. Process and timeline**

Key steps and indicative dates for Western Water's price review are set out below.<sup>25</sup>

- Western Water lodges its price submission – 15 November 2019
- We issue a draft decision for consultation – March 2020
- Our consultation on the draft decision closes – May 2020
- Commission issues final decision and price determination – June 2020

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<sup>24</sup> WIRO, clause 16(b).

<sup>25</sup> Clause 13(vi) of the WIRO requires the commission to provide guidance on the timing and processes it proposes to follow in making a price determination. Clause 13(vii) also requires the Commission to specify the date by which the water businesses are to deliver their price submissions to the Commission.

### 3. Required contents of Western Water’s price submission

Pursuant to clause 13(a)(iii) and 13(a)(v) of the WIRO, this chapter sets out the governing criteria and supporting information requirements for the major components of Western Water’s price submission, covering the regulatory period commencing 1 July 2020 (the next regulatory period).

Western Water should prepare its price submission with the commission as its target audience. Although the price submission will be released publicly, the content and language should be tailored to facilitate our review. Western Water may consider other ways – such as fact sheets – to communicate its proposals to other stakeholders, including its customers. We may request copies of customer focused material supporting a price submission.

The price submission must clearly and succinctly identify and explain how Western Water’s proposals demonstrate value for money for customers — that is, what outcomes will be delivered to customers in return for the prices they pay, and how this reflects what customers value most.

The information requirements specified in this chapter reflect the information we need to undertake Western Water’s price review consistent with the WIRO. Much of the information requested would already exist within normal business practice — for internal planning and corporate reporting, for example. Also, much of the detail can be provided by completing the financial model (issued by us) that forms part of Western Water’s price submission (see Section 3.18.3).

Western Water may, in the interests of brevity, choose not to include all the supporting information for the claims made in its submission. However, it must be able to provide any supporting information requested by us. For example, it may reference a consultant’s report in its submission without providing the full report as an attachment.

We expect Western Water’s price submission will focus on those matters having a material impact on the prices customers pay or the services customers receive.

### 3.1. Managing risk

The WIRO requires us to place particular emphasis on matters relating to various efficiencies in undertaking our regulatory functions in Victoria's water sector.<sup>26</sup>

Efficiency is promoted when risk is adequately identified, quantified, allocated, and where appropriate, managed by a water corporation. Prices should reflect the costs incurred in delivering services, incorporating reasonable assumptions about risk.

Western Water's price submission must be informed by a robust risk identification process. It must demonstrate that it has allocated risk appropriately, and where it is best placed to do so, specify the mechanisms it will use to manage risk.

Appendix C summarises some of the major risks facing a water business, and potential approaches that Western Water may propose to deal with risk.

In the past, we observed many water businesses adopting overly risk-averse assumptions in price submissions, which implies that customers are expected to bear more than an efficient allocation of risk (one result of this is that proposed prices are higher than they need to be).

For example, in past price submissions some water businesses have:

- proposed to include the costs for highly uncertain projects and large contingencies in capital expenditure forecasts (and therefore, prices)
- sought to justify price increases on the basis of financial viability concerns, without providing evidence they have fully explored other avenues to manage financial performance.

Rather than including upfront allowances for uncertain projects and contingencies, Western Water should seek alternative ways to mitigate construction and capital forecasting risk, such as through better project or contract management. Alternatively, it could exclude planned but not fully scoped projects from upfront cost recovery, noting that actual prudent and efficient capital expenditure will be rolled into its asset base at the end of the regulatory period.

Any concerns about financial viability or financial risks should be supported by a credit rating assessment undertaken by an independent credit rating agency. Western Water should also demonstrate that it has sought to manage its financial risks before transferring them to customers.

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<sup>26</sup> WIRO, Section 8(b).

In later sections of Chapter 3, we have specified where we require information on Western Water's consideration of risk to support its proposals.

However, we are also seeking evidence that Western Water has given strategic consideration to risk, and identified risks that may have a material impact on the prices customers pay, or the services they receive, taking into account a long-term planning horizon.

This is the focus of the information requirements in Section 3.1.1.

### **3.1.1. Supporting information**

In its price submission Western Water must:

- identify any significant risks that may impact on customer prices or services, and if requested, make available to us scenario analysis for each risk including an assessment of the nature and scale of the risk and its probability of occurring
- identify how it has addressed significant risks through its proposals, explain how the corporation considered the allocation of risk, and demonstrate how its proposals support efficiency
- provide evidence that the corporation has given strategic consideration to the allocation and management of risk in developing its price submission — this may involve providing references and making available to us material on the corporation's risk identification and management framework or processes, rather than including detail in its price submission.

Upon request, Western Water must also make available to us the following information about significant risks it proposes to manage that require cost allowances:

- the categorisation of the risk (as operational or financial risk, for example)
- measurement of the risk including:
  - the nature and scale of the risk
  - the probability of the risk event occurring
  - factors influencing the probability of the risk event occurring
  - the financial or service impact of the risk if it occurs
- options considered for allocating the risk
- rationale for the allocation of the risk, given alternative options
- an explanation of why the regulatory risk mitigation tools listed in Appendix C do not adequately mitigate the risk
- the role customers will be expected to play in dealing with these risks and how customers will be engaged in this process.

Required contents of Western Water's price submission

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## 3.2. Regulatory period

We must set the term of the regulatory period for which prices will apply.<sup>27</sup> Our guidance sets a three year term starting from 1 July 2020. Western Water accepted our draft guidance for a three year regulatory period.<sup>28</sup>

## 3.3. Customer engagement

The WIRO requires us to set out our expectations regarding customer consultation by Western Water in developing its price submission.<sup>29</sup>

In its letter to us on 20 October 2017, Western Water noted it had undertaken deep and thorough engagement with its stakeholders (including customers) for over a year.<sup>30</sup> We note that Western Water only recently completed its 2018 price review. Our expectation is that Western Water will further develop its engagement on issues material to this price submission, rather than duplicate efforts or activities used to prepare for its past price submission.

The following key principles should guide the customer engagement:

- The form of customer engagement undertaken should be tailored to suit the content on which it is seeking to engage, and to the circumstances facing Western Water and its customers.
- Western Water must provide customers with appropriate information, given the purpose, form and the content of the customer engagement, and a reasonable and fair opportunity to participate as part of the process.
- Western Water's customer engagement should give priority to matters that have a significant influence on the services provided and prices charged by the business.
- Western Water should start customer engagement early in its planning. The engagement should be ongoing, to keep testing proposals with customers.
- Western Water should demonstrate in its price submission how it has taken into account the views of its customers.

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<sup>27</sup> WIRO clause 9.

<sup>28</sup> Western Water 2018, op.cit.

<sup>29</sup> WIRO, clause 13(a)(iv).

<sup>30</sup> Western Water, Letter, 20 October 2017, available on our website at [www.esc.vic.gov.au](http://www.esc.vic.gov.au)

### 3.3.1. Criteria

We will not assess the design of Western Water’s customer engagement. For example, we will not second guess the method of engagement decided on by Western Water. We will focus on the justification provided by the business for undertaking its engagement in the way it did.

Our assessment will consider:

- the business’s justification for its decisions on how and when to engage, and the matters that it decided to engage on
- whether customers were given a reasonable and fair opportunity to participate
- how feedback received through customer engagement was taken into account by the business in reaching its proposals (and what feedback was provided to customers)
- the business’s justification for how it will address customer expectations that will not or cannot be met.

### 3.3.2. Supporting information

Western Water’s price submission must:

- describe and justify how and when the business engaged with its customers
- describe and justify the matters covered by customer engagement
- explain what the business learned from customer engagement, and how it satisfied itself that customers were given a reasonable and fair opportunity to participate and that any views expressed were sufficiently representative of its customers
- explain how feedback was taken into account by the business in reaching its proposals
- explain how the business will address customer expectations that will not or cannot be met.

Western Water must make available, or provide on request, resources and materials provided to customers during its engagement, and any customer feedback about the engagement program.

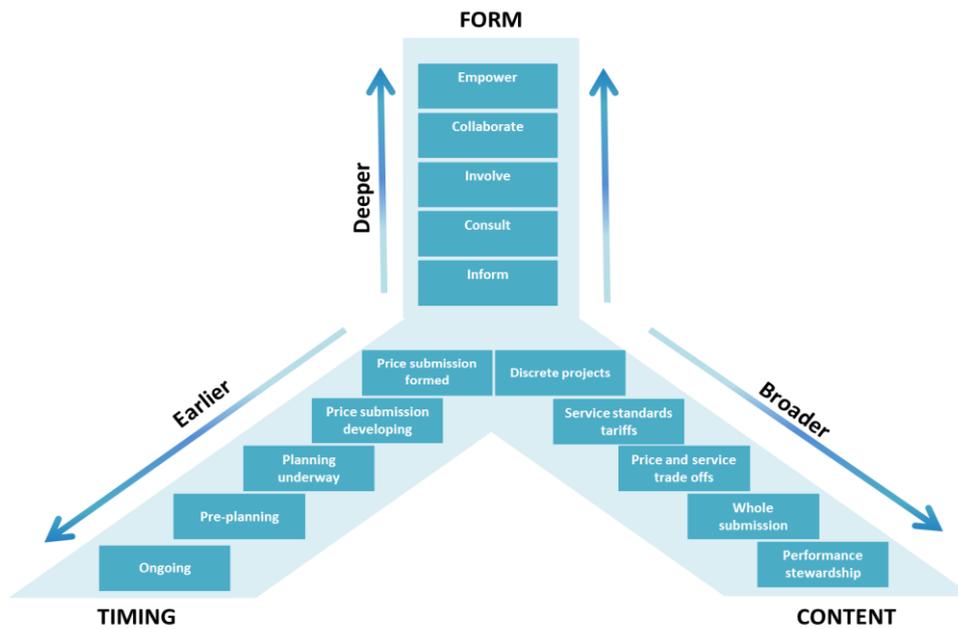
Western Water may use the customer engagement diagram (figure 3.1) as a descriptive tool of its overall program, or of individual activities.

### 3.3.3. Service Standards

Western Water must also provide a list of service standards relating to reliability and attending faults that align with provisions in our urban water customer service code.<sup>31</sup>

Western Water must explain how any changes in service level or targets were informed by customer preferences.

**FIGURE 3.1 CUSTOMER ENGAGEMENT DIAGRAM**



### 3.4. Outcomes

Western Water must propose outcomes that its customers will receive during the next regulatory period. It must define measurable outputs and deliverables, and associated targets that will be monitored to demonstrate the achievement of each outcome.

Western Water’s submission must outline a process by which it will report at least annually to its customers on its performance against the specific outputs and deliverables for each outcome.

<sup>31</sup> Essential Services Commission 2017, Customer service code—urban water businesses water customer service code, April.

### 3.4.1. Criteria

Proposed outcomes must demonstrate linkages to customer preferences, as revealed through Western Water’s customer engagement.

### 3.4.2. Supporting information

Western Water’s price submission must:

- present a set of customer outcomes, each with a set of clearly defined and relevant measurable outputs or deliverables, with associated performance targets for each year of the regulatory period
- explain how the outcomes were informed by the corporation’s customer engagement program
- specify the key actions, activities and programs that the corporation will undertake to meet its targets (and consequently outcomes)
- demonstrate the connection between the outputs, key actions, activities and programs proposed and achievement of a specified outcome
- present and explain any cost increases or cost savings for operating or capital expenditure that correspond to each outcome (Sections 3.7 and 3.8)
- explain how the cost increases or cost savings are reflected in prices charged to customers
- specify targets for service standards at Section 9.2 of our customer service code for urban water businesses.

An example of how an outcome links to outputs and deliverables, programs and activities, and inputs is provided in Table 3.1.

**Table 3.1 Outcome example**  
Safe clean drinking water for all customers

Outcome	Safe clean drinking water for all customers
What the customer will receive	
<p><b>Outputs and deliverables</b></p> <ul style="list-style-type: none"> <li>• Measures and targets</li> <li>• Key projects</li> <li>• Derived with customers</li> </ul>	<ul style="list-style-type: none"> <li>• Compliance with E. coli and turbidity standards</li> <li>• No boil water notices required</li> <li>• Water quality complaints per 100 customers</li> <li>• Percentage of customers that trust the safety of water supply</li> <li>• Completion of specific water quality related capital projects</li> <li>• Publish annual water quality report</li> </ul>
<p><b>Activities and processes</b></p> <ul style="list-style-type: none"> <li>• Business programs</li> <li>• Specific actions to be developed/implemented</li> </ul>	<ul style="list-style-type: none"> <li>• Catchment to tap water quality management</li> <li>• Upgrade treatment plant to implement dual barrier protection in accordance with Safe Drinking Water Act 2003</li> <li>• Water mains cleaning program</li> </ul>

Required contents of Western Water’s price submission

- Protections to avoid down time at water treatment plants
- Hazard Analysis and Critical Control Points (HACCP) certification
- Pass water quality regulator’s audit (Department of Health and Human Services)
- Undertake water quality testing in accordance with regulations
- Investigate water quality complaints

#### Inputs

- Costs and/or cost movements
- Resources required
- Price impact
- \$ - opex and capex costs, or cost changes, to deliver or improve the specific programs
- Resources
- Business unit responsibility

Source: ESC 2016, *Water Pricing Framework and Approach*, October, p. 20.

Western Water may also choose to describe in its price submission:

- how it proposes to report on performance against the delivery of its outcomes to customers during the next regulatory period, including:
  - its proposed strategy for communicating its performance to customers
  - how the business might respond to underperformance on outcome delivery
- how it might adapt its outcomes to respond to changing customer preferences, including an ongoing customer engagement program to inform business priorities throughout the next regulatory period.

### 3.5. Guaranteed service levels

Western Water must propose guaranteed service levels (GSLs) for the regulatory period from 1 July 2020 (a GSL scheme). GSLs define Western Water’s commitment to deliver a specified service level to individual customers. For each GSL, Western Water commits to a payment or a rebate on bills to those who have received a level of service below the guaranteed level.

#### 3.5.1. Criteria

A GSL scheme will:

- reflect the main service priorities and concerns of customers, informed by Western Water’s customer engagement
- provide incentives for Western Water to provide efficient service levels to all customers.

Each GSL must be objectively defined, easily understandable, and able to be reported.

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The GSL scheme must include the payment difficulty information disclosure GSL that has been in place since 2010.<sup>32</sup> That is, a payment or rebate will be made available to customers if a corporation breached its service level obligation by:

Restricting the water supply of, or taking legal action against, a residential customer prior to taking reasonable endeavours to contact the customer and provide information about help that is available if the customer is experiencing difficulties paying.

### 3.5.2. Supporting information

Western Water’s price submission must specify each GSL and the corresponding payment or rebate amount that will apply where a customer has received a level of service below the guaranteed level. The price submission must identify and justify any changes to the GSL scheme compared with those approved for the current regulatory period.

For any new or amended GSL, Western Water’s price submission must<sup>33</sup>:

- explain the basis for the GSL, including how it has been informed by customer engagement
- specify whether benefits to customers will take the form of payments or rebates
- explain the reasons for the proposed size of the customer payment or rebate that applies to each GSL.

## 3.6. Revenue requirement

Our decision on Western Water’s revenue requirement for the next regulatory period must meet the WIRO objectives of promoting and providing incentives for efficiency in the regulated entities, as well as efficiency in, and the financial viability of, the regulated water industry.<sup>34</sup>

### 3.6.1. Criteria

The required revenue for Western Water will be estimated by the building block approach, under which the building blocks are:

- prudent and efficient forecast operating expenditure — determined in accordance with Section 3.7

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<sup>32</sup> Previously known as the hardship related GSL, refer to: Essential Services Commission 2012, *Hardship Related Guaranteed Service Level Scheme Review – Final Decision*, May. The latest (3 February 2015) check-list for minimum “reasonable endeavours” at the time of this paper can be found at <http://www.esc.vic.gov.au/water/codes-guidelines/hardship-related-guaranteed-service-level/>

<sup>33</sup> This does not apply if the GSL was approved in our 2018 final decision on Western Water.

<sup>34</sup> WIRO, Section 8(b).

- prudent and efficient forecast capital expenditure — determined in accordance with Section 3.8
- return on the regulatory asset base (RAB) — determined in accordance with the sections below:
  - the ‘roll forward’ of the RAB — determined in accordance with Section 3.10.1
  - the cost of debt — determined in accordance with Section 3.10.4
  - return on equity — determined in accordance with Section 3.10.5
- return of capital through a regulatory depreciation allowance — determined in accordance with Section 3.10.3.
- a benchmark tax allowance — determined in accordance with Section 3.11.

The revenue requirement is net of any additional revenue earned from regulated assets, outside of scheduled tariffs — revenue from the sale of water entitlement allocations, for example. The revenue requirement is also net of any revenue earned from non-prescribed services (discussed at Section 3.18.8).

### **3.6.2. Supporting information**

Western Water’s price submission must specify its revenue requirement for each year of the next regulatory period.

The price submission must also provide an estimate of the required revenue for each year after the next regulatory period to 2027-28, for consistency with our 2018 price review where we sought forecasts to at least 2027-28 from all water businesses. It must provide a brief explanation of the trend in the forecast over the period from 2018-19 (the first year of its current regulatory period) to 2027-28.

## **3.7. Forecast operating expenditure**

### **3.7.1. Criteria**

The forecast operating expenditure to be included for the purposes of calculating the revenue requirement is operating expenditure which would be incurred by a prudent service provider acting efficiently to achieve the lowest cost of delivering on service outcomes over the regulatory period, taking into account a long-term planning horizon (prudent and efficient forecast operating expenditure).

We consider that a prudent and efficient operating expenditure forecast has the following characteristics:

- baseline year expenditure is reflective of efficient operating costs and is used as a basis to forecast expenditure
- forecast operating expenditure incorporates expectations for a reasonable rate of improvement in cost efficiency

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- expenditure requirements above the baseline year (adjusted for growth and efficiency improvements) are fully explained and justified.

### **3.7.2. Supporting information**

Western Water's price submission must include a forecast of total prudent and efficient operating expenditure for each year of the next regulatory period. Forecast operating expenditure is to be presented separately for each major service category.<sup>35</sup>

For total and annual forecast operating expenditure and for each major service category, forecast operating expenditure for each year of the next regulatory period, and beyond to 2027-28, must be further broken down where relevant, in the financial model for:

- operations and maintenance
- bulk charges
- treatment
- customer service and billing
- GSL payments
- licence fees
- corporate costs
- other operating expenditure.

Forecasts for the environmental contribution must also be provided in the financial model.

Western Water must also provide actual operating expenditure for the current regulatory period (using forecasts for 2019-20), categorised in the same way as above, in the financial model.

Forecast operating expenditure must be presented relative to a reference or baseline operating year (Box 3.1), with allowance for customer growth and cost efficiency improvements over the next regulatory period. Any significant changes in the forecast years' costs relative to this baseline year must be clearly presented and explained, including how they are reflected in the proposed customer outcomes and how they represent improved customer value (Section 3.4).

Our financial model sets out the forecast operating costs consistent with this approach.

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<sup>35</sup> For Western Water, the major service categories include water, sewerage, recycled water, and bulk water.

### **Box 3.1 Baseline controllable operating expenditure**

In preparing forecast operating expenditure, Western Water's price submission must establish a baseline controllable operating expenditure which comprises efficient recurring controllable costs from the last full year of actual data (2018-19) for those activities and services that are expected to be incurred throughout the next regulatory period.

The baseline is established from the actual prescribed operating expenditure for 2018-19, adjusted as follows:

- remove any non-controllable expenditure<sup>36</sup>
- remove any one-off or non-recurring expenditure items incurred in that year, or add any normally occurring items that did not occur in that year
- remove any further ongoing cost savings or efficiency commitments that will be realised in the final year of the current regulatory period (2019-20).

Western Water's price submission must justify the adjustments proposed to the baseline year in order to establish the baseline controllable operating expenditure, and demonstrate that this represents efficient ongoing operating costs (consistent with any efficiency targets for the current regulatory period).

The baseline year actual expenditure must reconcile with Western Water's audited regulatory account data.

Using the 2018-19 baseline controllable operating expenditure, Western Water must propose and justify:

- its forecast customer growth rate assumptions (for each year)<sup>37</sup>
- its annual cost efficiency improvement rate (for each year)<sup>38</sup>

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<sup>36</sup> Controllable costs are those that can be directly or indirectly influenced by a water business's operational decisions. Examples of non-controllable costs include: bulk water costs (where prices are set by the Commission), regulatory licence fees, and the environmental contribution.

<sup>37</sup> Western Water should draw on Victoria in Future forecasts, Australian Bureau of Statistics data, and other information as required.

<sup>38</sup> In our draft decision on Western Water's 2018 price submission, we noted its proposed efficiency improvement rate on controllable operating costs of 4.0 per cent per year was very high compared to the 2013–18 period, and was the highest rate proposed by any water corporation (although we noted Western Water's efficiency rate only applied for two years, where other water corporations' efficiency rates applied for five or eight years). Given Western Water's request for a two year

- how proposed cost changes deliver improved customer value.

Its price submission must also:

- demonstrate how proposed cost changes relate to the proposed customer outcomes and the associated outputs and deliverables (Section 3.4), and in particular:
  - identify and explain operating expenditure savings or new operating expenditure arising from capital expenditure and projects
  - explain any trend or major annual variations in forecast operating expenditure (including identifying cost items that are having an upward or downward influence on operating expenditure) compared with historic operating expenditure<sup>39</sup>
- demonstrate that proposed costs associated with new or revised regulatory obligations and policy requirements are prudent and efficient
- set out and where relevant justify the non-controllable cost forecasts including:
  - bulk water purchases from other water corporations
  - regulatory licence fees
  - environmental contribution
  - any other proposed non-controllable costs.

The price submission should explain Western Water’s approach to allocating shared costs, or reference documentation that may be requested by the commission to verify its approach.

### **3.8. Forecast capital expenditure**

Capital expenditure forecasting essentially involves anticipating the scope, timing and costs for a large number of various sized projects, ranging from the replacement of existing assets at the end of their lives to the construction of major new assets and facilities.

In preparing capital forecasts, Western Water should avoid including speculative capital expenditure in its price submission forecasts. Where capital projects are not fully scoped, costed or internally

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regulatory period to allow it to address cost pressures arising from its unprecedented customer growth, we were surprised it had proposed such a high efficiency improvement rate.

<sup>39</sup> Including, but not limited to, assumptions and trends relating to:

- wage and salary escalations, total labour costs and employee number assumptions
- electricity and energy costs, and underlying volume and load assumptions
- information technology costs.

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approved (via an approved business case, for example) at the time of preparing the price submission, Western Water should consider the following options so that customers are not asked to bear the full cost should the project scope or timing change:

1. Include sufficient expenditure to cover only the development costs of the project, with efficient actual construction costs incurred during the period to be rolled into the RAB at the end of the period, along with any accumulated interest. This provides sufficient revenue allowance for the project to proceed during the next regulatory period, with cost recovery to commence in the following regulatory period at no net loss to the business.
2. Include development costs and a notional allowance for construction, with the balance of efficient construction costs (plus associated interest if required) to be rolled into the RAB at the end of the period. This allows a reasonable portion of the project, based on the various options and cost estimates at the time of preparing the price submission, to be included in prices.
3. Identify the project as a possible 'uncertain and unforeseen event' to be addressed via the mechanisms outlined in Section 3.15 during the regulatory period.

### 3.8.1. Criteria

The forecast capital expenditure to be included for the purposes of determining the required revenue is capital expenditure that would be incurred by a prudent service provider acting efficiently to achieve the lowest cost of delivering service outcomes, taking into account a long-term planning horizon (prudent and efficient forecast capital expenditure).

We consider that prudent and efficient capital expenditure has the following characteristics which reduce the risk borne by customers:

- required expenditure is based on a P50 estimate, in which there is an equal likelihood of project costs being higher or lower than forecast (noting a P50 estimate may not be appropriate if Western Water's proposed capital program is dominated by one or two major projects)
- contingency allowances are optimised
- forecast capital expenditure for renewals incorporates expectations for a reasonable rate of improvement in cost efficiency
- risks of project delays and cost overruns are managed through contractual agreements with service providers.

Where actual construction costs are found to exceed their efficient level, the commission will not roll these inefficient expenditures into the regulatory asset base. Inefficient costs will be borne by Western Water and will not be recovered from customers.

### 3.8.2. Supporting information

Western Water's price submission must include a forecast of total prudent and efficient capital expenditure for the next regulatory period, including forecast capital expenditure for each year of the next regulatory period, and beyond to 2027-28.

Forecast capital expenditure is to be presented by major service category<sup>40</sup> and by the following cost drivers:

- forecast capital expenditure to maintain service standards — that is, renewals
- forecast capital expenditure to expand or improve services — that is, growth and improvements/compliance (improvements or upgrades to existing services or to comply with existing or changed government or regulator obligations).

Western Water's financial model must also specify actual capital expenditure for the current regulatory period (including a forecast for 2019-20), categorised in the same way as above.

Capital expenditure will fall into one of three key types:

- Major capital projects — large, discrete capital investment projects (may be completed within a regulatory period, or may span more than one period)
- Capital programs — ongoing programs of capital expenditure allocation, containing multiple works or projects (for example; water main renewals, sewer odour management, ICT equipment upgrades, etc.)
- Other capital expenditure — typically smaller discrete projects and programs.

The price submission must present the capital expenditure forecasts set out according to these three key types, as follows:

**Major capital projects** — comprising the 'top 10' discrete capital projects, by total capital cost, to be started or completed during the next regulatory period. Western Water may also include significant discrete projects that fall outside the top 10 by cost but are scheduled during the next regulatory period. For each of these major projects, provide:

- the project name and scope, and relevant major service and asset category
- justification for the project, including the cost driver
- start and completion dates
- total capital cost (itemising any government or customer contributions), and expenditure by year

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<sup>40</sup> For Western Water, the major service categories include water, sewerage, recycled water, and bulk water.

- objectives of the project, including how the project aligns with the various customer outcomes proposed (Section 3.4)
- and have available:
  - a business case outlining the options considered for achieving the identified objectives and the approach to identifying the optimal solution<sup>41</sup>
  - risk analysis of the selected option and plans to mitigate the identified risks to ensure the project can be delivered on budget and on time
  - the incentive and penalty payment arrangements with contractors<sup>42</sup>
  - information to identify whether the project has (or will be) the subject of competitive tendering.

**Capital programs** — all key capital expenditure programs or allocations that will be ongoing throughout the regulatory period (excluding any discrete projects separately specified in the ‘top 10’ above). For each program, provide:

- the program (or cost allocation) name, and relevant major service category
- the cost driver
- total capital cost (itemising any contributions), and expenditure by year
- objectives of the program, including how the program aligns with the various customer outcomes proposed (Section 3.4)
- historical annual costs, and an explanation for significant increases or decreases in the forecast average annual expenditure
- and have available:
  - the list of projects included within the program or cost allocation for the next regulatory period, and business cases and options analyses
  - a description of the methodology for assessing risk and prioritising projects within the program
  - the cost estimation basis.

**Other capital expenditure** — all other capital expenditure not associated with a defined major project or major capital program should be grouped into one or more programs as appropriate, to be included under the capital programs list, as above.

Consistent with the above capital expenditure breakdowns (by type and major service category) in the price submission or financial model where appropriate, Western Water must also:

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<sup>41</sup> This should also include an assessment of a ‘do nothing’ option. Cost comparisons of various options should consider P5, P50 and P95 estimates. Forecasts for capital expenditure must be based on the P50 estimate.

<sup>42</sup> A business’s proposed prices must reflect incentive and penalty payment arrangements that are based on a symmetrical sharing of risk for delivery or non-delivery of projects.

- for each year of the next regulatory period, and beyond to 2027-28, provide annual forecasts for capital expenditure separately identifying (where appropriate) and reconciling:
  - total capital expenditure
  - contributions (government and customer)
  - gifted assets
  - proceeds from asset sales
  - written down value of assets disposed
  - net capital expenditure.
- explain the methodology used to estimate forecast capital expenditure
- identify and explain the key assumptions which underpin the capital expenditure forecasts by each major service category, and how any risks or uncertainties have been addressed – including its compliance with risk standards specified in the Statement of Obligations (e.g. ISO 55001).
- justify the timeframe for delivering the proposed new capital expenditure given the corporation’s delivery of major projects in the past
- explain the reasons for the trend or any major annual variations in forecast capital expenditure (including identifying cost items that are having an upward or downward influence on capital expenditure), compared with historic capital expenditure
- justify the total forecast capital expenditure against the criteria in Section 3.8.1, taking into account:
  - forecast demand
  - any relevant industry or economy-wide benchmarks of expenditure
  - the substitution possibilities between forecast operating expenditure and forecast capital expenditure.

The commission’s financial model sets out the forecast capital expenditure consistent with the breakdowns and methodology described above.

### **3.9. Return on the regulatory asset base**

A regulatory rate of return is applied to the regulatory asset base (RAB) to calculate the annual return on the RAB to be included in the revenue requirement. The regulatory rate of return comprises two components: a return on equity and a cost of debt.

The benchmark cost of debt will be determined based on a trailing average approach. A benchmark gearing level of 60:40 debt to equity will apply.

The formula for the regulatory rate of return is therefore:

$$\text{Regulatory rate of return} = R_e 0.4 + R_d 0.6$$

Where:

Re = rate of return on equity

Rd = rate for the cost of debt

The benchmark regulatory rate of return must be calculated in nominal terms, and then converted to real terms.<sup>43</sup>

## 3.10. Forecast regulatory asset base

### 3.10.1. Criteria

The RAB calculated for the purposes of determining the revenue requirement must reflect capital expenditure (less regulatory depreciation, contributions and/or asset disposals) which would be incurred by a prudent service provider acting efficiently to achieve the lowest cost of delivering on service outcomes, taking into account a long-term planning horizon (prudency criteria).

The opening RAB must be calculated as follows:

Opening RAB 1 July 2020 = RAB at 1 July 2018 (adjusted to reflect 2017-18 actual)

- + Actual capital expenditure (gross) 2018-19
- + Forecast capital expenditure (gross) 2019-20\*
- Actual contributions 2018-19
- Forecast contributions 2019-20\*\*
- Forecast regulatory depreciation 2018-19 to 2019-20\*
- Proceeds from disposal of assets 2018-19
- Forecast proceeds from disposal of assets 2019-20\*\*

(\*denotes the forecast used in the 2018 price determination)

(\*\* denotes the latest available forecast for 2019-20)

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<sup>43</sup> The Fisher equation will be used to convert from nominal to real estimates; that is:

$$(1 + \text{nominal rate}) = (1 + \text{real rate}) * (1 + \text{inflation rate}).$$

The Commission will use a market based inflation estimate and specify the applicable inflation rate in the financial model.

Where the up-to-date 2019-20 gross capital expenditure forecast is lower than the forecast benchmark for that year in the 2018 price determination, then Western Water must use the lower amount.

The same approach must be used to determine the opening value on 1 July for each subsequent year in the next regulatory period, using the forecasts for capital expenditure, customer and government contributions, regulatory depreciation and asset disposals.

In addition, the opening RAB (at 1 July 2018) must be adjusted for inflation (based on the Consumer Price Index – all Groups, Australia) over the current regulatory period.

### **3.10.2. Supporting information**

Western Water's price submission must propose:

- the closing value for the RAB at 30 June 2019 (using actual data)
- the opening value of the RAB at 1 July 2020 (calculated according to the criteria above)
- the forecast value of the RAB for each year of the next regulatory period, in accordance with the prudence criteria set out above
- the forecast value of the RAB for each year after the next regulatory period until 2027-28.

Western Water's price submission must also:

- provide estimates for regulatory depreciation (Section 3.10.3)
- provide separate data and justify estimates for:
  - government contributions — federal, state and local government contributions towards the capital cost of a project
  - customer contributions — upfront cash payments made by new customers
  - the value of gifted assets — assets constructed and then handed over to Western Water to operate and maintain
- include estimates of revenue expected from disposal of assets for each year from 1 July 2020, to be deducted from the roll forward of the RAB.

To assist with our review, we may seek further information on Western Water's justification for capital expenditure in the period from 2017-18 to 2018-19. We may also request a reconciliation of actual net capital expenditure against the benchmarks allowed in Western Water's 2018 price determination.

### **3.10.3. Regulatory depreciation**

We recognise a return of capital expenditure (regulatory depreciation) for an asset when the asset enters service. We prefer a straight line depreciation profile.

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Western Water's estimates and profiles for regulatory depreciation should reflect reasonable assumptions about asset life and utilisation.

Western Water can propose an alternative approach to straight line depreciation having regard to the following assessment principles:

- the depreciation rate should account for technological change, projected future demand and any other factors that may affect the value of the assets in the future
- the technical lives of assets
- impact on prices over the long-term.

If Western Water proposes a lower depreciation rate than the calculated straight line depreciation rate, which it proposed in its 2018 price submission, it must provide reasonable justification for taking this approach as deferring the recovery of depreciation places pressure on future prices.<sup>44</sup>

#### **3.10.4. Cost of debt**

We will use a 10 year trailing average approach to estimate the benchmark cost of debt. The trailing average approach will determine the whole cost of debt (risk free rate and debt risk premium). The averaging period will be the 10 years preceding the year in which the rate applies.

Each year, the 10 year trailing average cost of debt will be updated by rolling forward the data series by one year, such that:

- the cost of debt for the roll-forward (previous) year reflects the yields of the RBA 10 year BBB rated corporate bond – Reserve Bank of Australia Table F3 series FNFYBBB10M
- the annual update is a simple average of 12 months of the RBA 10 year BBB rated corporate bond over 1 April to 31 March
- the trailing average is a simple average of 10 years of cost of debt
- the cost of debt is calculated in nominal terms.

The historical data series for the cost of debt calculated using the method described above is set out in Table 3.2.

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<sup>44</sup> Our full discussion on our reasons for not approving Western Water's 2018 proposal to defer its depreciation is set out on pp 22-23 of our 2018 draft decision on Western Water – Essential Services Commission 2018, *Western Water draft decision 2018 Water Price Review*, April

**Table 3.2 Historical cost of debt**

Nominal

	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
<b>Cost of debt</b>	7.0%	6.3%	5.3%	7.1%	5.4%	5.3%	4.9%	4.5%	4.5% <sup>a</sup>	4.5% <sup>a</sup>

<sup>a</sup> The cost of debt for 2018-19 and 2019-20 will be updated to reflect annual averages based on actual data, prior to the final decision.

Data source: Treasury Corporation Victoria and the Essential Services Commission.

Western Water is not required to submit information on the cost of debt in its price submission, as the cost of debt will be determined on the basis of the external data outlined above. However, Western Water must use the values above to estimate its revenue requirement and prices, subject to any updates before we make a price determination.

The cost of debt specified in a price determination for each year of the next regulatory period will be the rate calculated for the ten years up to and including 2019-20. During the next regulatory period, the cost of debt will be updated annually as outlined above. We expect Western Water will continue using the existing annual adjustment mechanism to adjust prices to reflect changes in the cost of debt. If Western Water proposes to change its annual adjustment mechanism, it must demonstrate how the new adjustment mechanism better meets the WIRO requirements.

### 3.10.5. Return on equity

We will set Western Water's return on equity at 4.5 per cent per annum (in real terms, after tax) if we assess Western Water has met the requirements of our guidance – which outlines the minimum information requirements of a 'Standard' business under our PREMO framework. This level is the same rate allowed for Western Water at its most recent price review (2018), and reflects the rate of return a 'Standard' business would receive under the PREMO incentive mechanism.<sup>45</sup>

If we assess that Western Water has not met our guidance, we may set a return on equity lower than 4.5 per cent.<sup>46</sup>

<sup>45</sup> Under the PREMO incentive mechanism, return on equity is linked to a water corporation's level of ambition – 'Leading', 'Advanced', 'Standard' or 'Basic'. However, this mechanism does not apply to Western Water in the 2020 price review. More information on the PREMO mechanism is available in Essential Services Commission 2016, *2018 Water Price Review, Guidance paper*, November.

<sup>46</sup> We will refer to our indicative return on equity values if we assess Western Water's price submission as less than 'Standard'. These are outlined in our water pricing framework paper – Essential Services Commission 2016, *Water Pricing Framework and Approach – Implementing PREMO from 2018*, June pp. 13. Our practice in past reviews has been to take into

## 3.11. Tax allowance

### 3.11.1. Criteria

The tax allowance included for the purposes of determining the required revenue must reflect an estimate of the corporate income tax to be paid, less the imputation credits that would be received by a hypothetical private investor in Western Water. In estimating the value of imputation credits Western Water must multiply the annual estimated corporate income tax bill by an imputation factor. This is consistent with the income tax calculation in the financial model.

### 3.11.2. Calculating the tax allowance

Once populated by Western Water, the financial model will include an estimate of the corporation's future nominal tax allowance based on the following formula:

$ETC_t = (ETI_t \times r_t) (1 - \gamma)$ , where:

- $ETC_t$  is an estimate of the future nominal tax allowance
- $ETI_t$  is an estimate of the taxable income for each regulatory year
- $r_t$  is the expected statutory income tax rate for each regulatory year
- $\gamma$  is the value of imputation credits (which will be at the rate of \$0.50 for every \$1 of company tax paid, as in past price reviews).

In relation to the estimate of  $ETI_t$  for each year of the next regulatory period:

- the revenue and expenditure estimates used in the calculation are the same revenue and expenditure estimates used to establish maximum prices (except that customer contributions and gifted assets are treated as revenue)
- the interest expenses (deductions) reflect the nominal cost of debt and the assumed stock of debt (that is, gearing multiplied by the regulatory asset base)<sup>47</sup>
- the calculation allows for an adjustment to reflect tax depreciation.

The financial model provides an adjustment to the nominal tax allowance for inflation, in order to derive the real tax allowance for each regulatory year. This estimate must be used by Western Water as the

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account current market conditions before finalising the return on equity. We will continue with this approach in our 2020 price review. The return on equity will not be lower than our benchmark cost of debt.

<sup>47</sup> The nominal cost of debt will be calculated using a 10 year trailing average (Section 3.10.4). The tax allowance will be kept constant for the regulatory period consistent with the values in the price determination and will not vary with the cost of debt.

basis for its tax allowance forecasts. The forecast tax allowance may also be informed by the corporation's latest estimate of tax to be paid over the next regulatory period.

### **3.11.3. Supporting information**

Western Water's price submission must propose a total tax allowance for each year of the next regulatory period. The price submission must also:

- state the basis on which the tax allowance for the next regulatory period has been calculated
- in the financial model, provide an estimate of the income tax for each year after the next regulatory period up until at least 2027-28
- provide the corporation's latest corporate forecasts for annual tax payments for the next regulatory period, and make available to the commission the basis for the forecasts.

## **3.12. Demand**

Our 2018 draft decision noted that we considered Western Water's demand forecasts as optimistic. We outlined that we would monitor Western Water's actual demand over 2018-19 to 2019-20 to inform our review of its demand forecasts in the 2020 price review.<sup>48</sup>

### **3.12.1. Criteria**

Demand forecasts proposed by Western Water must represent the best available estimates derived from an appropriate forecasting methodology. Assumptions on the key drivers of demand over the next regulatory period must be well explained and reasonable.

### **3.12.2. Supporting information**

Western Water's price submission must summarise its demand forecasts, including expected trends for the next regulatory period, as well as outline the key assumptions adopted to develop those forecasts. It should use an eight year horizon for demand forecasting and scenario work, and reflect this in its price submission.

Western Water's price submission must also include:

- a description of the key demand forecasting issues that lists and justifies the most important assumptions adopted in generating the forecasts — demand forecasts should be based on the latest Victoria In Future forecasts issued by the Victorian Government
- a description of the forecasting methodology used, and the justification for using the methodology

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<sup>48</sup> Essential Services Commission 2018, *Western Water draft decision – 2018 Water Price Review, April pp 24.*

- reference to any external reports or information relied upon
- a description of how forecasts have accounted for the impact of any proposed changes to tariff structures or form of price control expected in the next regulatory period
- details on the levels of restrictions or nature of any permanent water conservation measures reflected in the forecast
- written information on where price elasticity was applied, the input assumptions used, and how the assumptions were translated into the corporation's demand forecasts
- an explanation of how demand forecasts are consistent with proposed expenditure (in terms of the level and nature of expenditure).

Western Water must also make available evidence that a range of supply and demand scenarios were modelled, including low, normal and high water inflow scenarios, and written justification for the selection of the modelled scenario.

The financial model will require Western Water to provide detailed demand forecasts for every tariff and tariff category, by residential and non-residential customers. If detailed forecasts at this level are unavailable, Western Water must explain why and provide estimated demand for these services. The detail in the model does not need to be reproduced in the price submission.

### **3.13. Form of price control**

Western Water's tariffs are currently managed by a price cap form of price control. This means it can charge its customers up to the maximum price approved in a determination issued by us.

We expect Western Water to continue with its existing form of price control over the next regulatory period. Where an existing price control structure is being continued, the justification requirements below may be satisfied more easily. Where a change is proposed, Western Water will need to provide evidence to demonstrate that the new price control better satisfies the requirements in clause 11 of the WIRO than the existing structure.

#### **3.13.1. Criteria**

We will assess proposals against the following factors:

- the business's justification for the proposed form of control, including its consideration of efficiency and risk allocation and management
- the business's approach to consultation on the form of control and how the views of customers were taken into account
- whether the business has considered and demonstrated that appropriate transition strategies will be implemented for affected customers
- the administrative complexity of the proposed form of control

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- the ability of customers to understand the resulting tariffs and tariff movements throughout the regulatory period.

In assessing a business’s proposed form of price control, in particular where a change is proposed, we will place a strong weighting on the feedback a water business receives from customers.

### 3.13.2. Supporting information

Western Water’s price submission must clearly state the proposed form of price control to apply to each service over the next regulatory period.

If changes to the form of price control are proposed, then the price submission must:

- explain how the proposed form of control would operate and services affected
- demonstrate the business has consulted with potentially affected customers, and explain how the feedback from customers informed its proposals, and how the change benefits customers
- provide data and supporting information that describes how the proposed form of price control is consistent with providing signals about the efficient cost of delivering services and how it is likely to impact on price stability
- explain how the business considered risk allocation and management (including demand and financial risk)
- explain how a transition to a new form of price control may impact customers and the water business’s approach to minimising any adverse impacts.

## 3.14. Prices and tariff structures

We typically provide businesses with a large degree of discretion to decide on tariff structures. This recognises that businesses are often best placed to consider the interests of their customers in designing tariffs and that existing tariff structures have been developed over time to deal with a variety of local circumstances.

If Western Water proposes tariff reforms (for example, change the fixed to variable ratio), it should engage with its customers and take into consideration their views in its proposal.<sup>49</sup>

Western Water’s price submission must list each of its proposed tariffs to apply in the next regulatory period and include:

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<sup>49</sup> Western Water should also review the customer feedback on changes to the fixed to variable tariff structure that was provided on its 2018 proposal and our 2018 draft decision and final decision on Western Water. The customer feedback is available on our website.

- each element of a multi-part tariff structure
- a price for each tariff
- where relevant, the pricing principles that it proposes to apply in setting prices.

Prices for some services such as specialised trade waste, recycled water, and miscellaneous services can be set with reference to pricing principles.

The pricing principles we propose to approve for Western Water are listed in our framework and approach paper.<sup>50</sup> There may be instances where tariffs are proposed that relate to a very small proportion of revenue or are applicable to very few customers. In these cases, Western Water may propose specific pricing principles.

### 3.14.1. Criteria

We will assess proposals against the following factors:

- the business's consideration of risk and efficiency — particularly how proposed tariffs are consistent with providing signals about the efficient cost of delivering services
- the business's approach to consultation on the tariff structures and how the views of customers were taken into account
- whether the business has considered and demonstrated that appropriate transition strategies will be implemented for any materially affected customers
- the ability for customers to understand the resulting tariffs and tariff movements throughout the regulatory period.

For price levels, we will assess proposals against the following factors<sup>51</sup>:

- the business's justification for the proposed prices, particularly how proposed prices are consistent with providing signals about the efficient cost of delivering services, and providing incentives for the business to pursue efficiency improvements
- how the business has taken into account the interests of customers, in particular low income and vulnerable customers
- whether the business has adequate transition strategies in place to manage the impacts of significant price shocks for affected customers.

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<sup>50</sup> Essential Services Commission 2016b, *Water Pricing Framework and Approach: Implementing PREMO from 2018*, October, pp. 37–9.

<sup>51</sup> We will not include a provision for rebates in our financial model. Our role is to approve the maximum prices for Western Water. Western Water can choose to adopt a rebate to provide to its customers after we have made our decision on its maximum prices.

In making a decision under clause 11 of the WIRO, we will have particular regard to whether tariffs are continuing in the same form as applied during the last period, or whether changes are proposed.

We recognise that an important objective includes avoiding price shocks for customers where possible. Where an existing tariff structure is being continued, this may be satisfied more easily. Where changes are proposed, however, Western Water will need to provide evidence to demonstrate that the amended tariff structure better satisfies the requirements in clause 11 of the WIRO than the existing structure.

### 3.14.2. Supporting information

Western Water's price submission must:

- Include a tariff schedule listing each tariff and the price (or principles) proposed, including each element of a multi-part tariff structure.
- Justify its proposed prices having regard to the matters covered by clause 11 of the WIRO.
- For any changes in tariff structures and principles, or new tariffs:
  - state how each tariff is to be applied – for example, frequency of charging, customer class, applying prices through connection or meter size
  - describe the relationship between the proposed price for a service and the associated short run or long run marginal cost
  - provide data and supporting information that describes how proposed tariffs are consistent with providing signals about the efficient cost of delivering services<sup>52</sup>
  - justify how the proposed change delivers better signals to customers about the efficient costs of service provision
  - describe how the corporation considered risk and its allocation and management
  - provide a summary of the corporation's approach to consultation and how the views of customers informed the price submission.
- For price changes of more than 10 per cent for any tariff in any year for the next regulatory period:<sup>53</sup>
  - describe the relationship between the cost of service provision and the proposed price

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<sup>52</sup> We require the price submission to propose prices that seek to reduce and minimise cross-subsidies. The extent to which this may be achieved will depend on a range of factors, including how well any adverse customer impacts may be managed. These issues will need to be explored in the price submission.

<sup>53</sup> Clause 11(d)(ii) of the WIRO requires us to have regard to the principle that prices should provide signals about efficient costs of providing services, while avoiding 'price shocks' where possible. For the purposes of the 2020 price review, we have defined a price shock as an increase of greater than 10 per cent in any year for any individual tariff. This is consistent with our approach for the 2018 price review of urban and rural water businesses. For any proposed price increases of greater than 10 per cent in any year, we will consider the merits of the increase while having regard to the cost of delivering the particular service (that is, cost reflectivity) and the impacts on customers.

- provide a summary of the Western Water’s approach to consultation (including the approach to identifying affected customers)
  - summarise the customer feedback received on the proposed price increase
  - describe the transition arrangements considered, and ultimately proposed, for affected customers.
- Provide estimated tariffs for each service for each year beyond the next regulatory period up until 2027-28, in the financial model.
  - Provide the ‘Top 10’ miscellaneous charges for the next regulatory period, in the financial model.

### **3.15. Adjusting prices**

Western Water’s price submission must specify any proposed price adjustment mechanisms to apply in the next regulatory period. Its 2018 price determination includes mechanisms that allow for prices to adjust in order to take into account:

- uncertain and unforeseen events
- differences between forecast and actual desalination costs (covering desalination security payments and the cost of any water ordered)
- a ‘pass through’ of changes in some costs (such as taxes) during the regulatory period
- annual changes to the benchmark cost of debt.

Our view is that these adjustment mechanisms have worked well, and we propose these arrangements will continue for Western Water.

The proposed price control formulas must continue to include a mechanism to allow for price adjustments to occur on an annual basis, such as changes in bulk charges.

Where Western Water proposes to continue with the existing adjustment mechanisms, the supporting information requirements will be easily satisfied.

Where a change is proposed, however, Western Water will need to provide evidence to demonstrate how the new adjustment mechanism satisfies the requirements in clause 11 of the WIRO.

We will consider proposals addressing other events that may require a pass-through to adjust prices during the regulatory period, provided a clearly articulated justification is included in the submission. Where there is a potential policy or regulatory change that is known but uncertain in its impact on Western Water’s costs, the change may be nominated in its price submission as a potential pass-through, or uncertain or unforeseen event. Capital projects which are anticipated, but have not been fully scoped or costed (as described in Section 3.8) may be nominated as an uncertain and unforeseen event.

### 3.15.1. Criteria

In approving proposed pass-through or uncertain or unforeseen events, we will consider:

- the extent to which the event is outside Western Water’s control and poses significant risk of cost changes during the period
- the extent to which the nominated event is uncertain in its impacts and timing
- whether it is reasonable that customers should bear risk associated with the nominated event
- the impact of the nominated event on efficiency incentives for Western Water
- the ability for Western Water to otherwise manage the risk posed by the event – for example, in its form of price control, tariff structures or approach to contracting.

### 3.15.2. Supporting information

Western Water’s price submission must:

- specify any proposed price adjustment mechanisms to apply in the next regulatory period, and specify the proposed process and/or formula for adjusting prices
- if proposing new or changed price adjustment mechanisms, then the price submission must:
  - clearly specify and explain how the adjustments would work
  - demonstrate Western Water has sought to appropriately balance revenue and cost risk between the corporation and its customers, without materially impacting on price stability
  - justify any proposal against relevant matters in clause 11 of the WIRO and consistency with proposed outcomes.

For any identified pass-through or uncertain and unforeseen events, the price submission must also:

- describe each proposed event, and explain why it is uncertain in its timing or impacts on Western Water or its customers
- explain why it is appropriate that customers should bear risk associated with the event
- explain how Western Water considered the impacts on its incentives to pursue efficiencies
- propose a price adjustment mechanism to implement the pass-through.

## 3.16. New customer contributions

New Customer Contributions (NCC) are a prescribed service for urban water businesses (also known as developer contributions). We introduced a principles-based NCC charging framework which came

into effect from 1 July 2013. For detailed guidance on NCC, Western Water should continue to refer to our explanatory note, released in December 2013.<sup>54</sup>

### 3.16.1. Criteria

Western Water must use approved pricing principles (outlined in Box 3.2) to calculate the net incremental cost of connections. NCC will be either standard NCC, which are approved by the commission in our determination, or negotiated NCC, which are agreed between a developer and Western Water.

#### **Box 3.2 NCC pricing principles**

Standard and negotiated NCC charges will:

- have regard to the incremental infrastructure and associated costs in one or more of the statutory cost categories attributable to a given connection<sup>55</sup>
- have regard to the incremental future revenues that will be earned from customers at that connection
- be greater than the avoidable cost of that connection and less than the standalone cost of that connection.

### 3.16.2. Supporting information

Western Water's price submission must specify the NCC charges proposed to apply, and provide sufficient evidence for us to assess that proposed NCC have been established in accordance with the NCC pricing principles (Box 3.2). Western Water should also engage with developers if it is proposing to materially change its NCC and outline in its price submission feedback from developers on its proposals.<sup>56</sup> Western Water must submit its NCC model supporting its proposed NCC charges.

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<sup>54</sup> Essential Services Commission 2013, New Customer Contributions: Explanatory Note, December.

<sup>55</sup> Statutory cost categories means costs for works imposed under Division 6 of Part 13 of the Water Act 1989.

<sup>56</sup> Our 2018 draft decision on Western Water's NCC proposal noted that we could see little evidence of consultation with developers on Western Water's 2018 proposal – refer to Essential Service Commission 2018, *Western Water draft decision – 2018 Water Price Review*, June pp. 28.

### 3.17. Financial position

The financial model will calculate estimates for the four financial indicators specified in Table 3.3 for each year to 2027-28. Western Water must populate the financial model to enable our assessment of its financial position in the context of the prices proposed in its price submission.

Western Water should also provide us with the findings of any independent ratings assessments conducted by an independent credit ratings agency since 1 July 2018.

**Table 3.3 Financial indicators**

Indicator	Calculation	Benchmark Range	Description
<b>Primary indicator — used to determine size of any viability adjustments</b>			
<b>FFO interest cover</b>	$(\text{FFO} + \text{net interest}) / \text{net interest}$	> 1.5 times  < 1.8 times used as a caution	Measures the extent of the cash flow buffer Western Water has to meet its debt obligations.
<b>Secondary indicators — used only as contextual information to determine whether an adjustment is necessary</b>			
<b>Net Debt / Regulatory Asset Value (%)</b> <b>(Gearing)</b>	$(\text{Interest bearing liabilities} - \text{cash}) / \text{RAV}$	< 70 per cent	Measures the debt component of the regulatory capital structure.
<b>FFO / Net debt (%)</b>	$\text{FFO} / (\text{Interest bearing liabilities} - \text{cash})$	> 10 per cent	Measures the extent to which the serviceability of debt is improving, remaining stable, or declining.
<b>Internal financing ratio (%)</b>	$(\text{FFO} - \text{dividends}) / \text{net capital expenditure}$	> 35 per cent	Measures the extent to which an entity has cash remaining to finance a prudent portion of capital expenditure after making dividends.

Notes: FFO refers to ‘funds from operations’ and RAV refers to the ‘regulatory asset value’. Regarding FFO interest cover, the commission believes the 1.8 times benchmark signals a need for caution from the corporation and closer observation by the commission in its price reviews and performance reporting. But until a corporation breaches or is forecast to breach the benchmark of 1.5 times, it is unlikely the commission would make a viability adjustment.

Required contents of Western Water’s price submission

Essential Services Commission

Western Water’s 2020 water price review

## **3.18. Additional requirements**

### **3.18.1. Executive summary**

Western Water's price submission must contain a summary which outlines and brings together the key elements of its proposals. The summary should include:

- an overview of proposed prices
- indicative bill impacts of the proposed prices, by key customer group
- an overview of the outcomes proposed for customers, including how services will change from previous levels
- an attestation from the board on the quality and accuracy of information provided in the price submission.

### **3.18.2. Board assurance**

Western Water's board is required to attest to the quality and accuracy of the information included in its price submission, and that the price submission complies with our guidance in all material respects. This attestation, endorsed by a resolution of the board of directors, must be included in the price submission.

The form of the required assurance is below:

As at [insert date], the directors of Western Water having made such reasonable inquiries of management as we considered necessary (or having satisfied ourselves that we have no query), attest that, to the best of our knowledge, for the purpose of proposing prices for the Essential Services Commission's 2020 Water Price Review:

- information and documentation provided in the price submission and relied upon to support Western Water's price submission is reasonably based, complete and accurate in all material respects;
- financial and demand forecasts are the corporation's best estimates, and supporting information is available to justify the assumptions and methodologies used; and
- the price submission satisfies the requirements of Western Water's Water Price Review Guidance paper issued by the Essential Services Commission in all material respects.

### **3.18.3. Financial model**

Western Water must complete the financial model prepared by the commission to accompany its price submission. Western Water's price submission must be consistent with the data provided in the financial model.<sup>57</sup> The financial model will clearly identify the cells for which Western Water must provide data. Western Water must not amend any other cells in the financial model – this includes adding rows, columns, or information not requested by the commission.

The model will include a forecast inflation rate (based on the Victorian Department of Treasury and Finance inflation forecasts). The inflation rate will be used to estimate components of the regulatory rate of return (see Section 3.9) and estimates for financial indicators (see Section 3.17). We will use the latest market forecast for inflation (based on the Consumer Price Index – All Groups Australia) to update the March Quarter CPI for 2019-20.

We intend to release for public comment and consultation the populated financial model that:

- accompanies Western Water's price submission and
- is used to inform the prices approved in the determination for Western Water.

### **3.18.4. Requirement for reasonably-based information**

All information contained in the price submission (and financial model – see Section 3.18.3) must be reasonably-based. All financial and demand related information must represent the best available estimates at the time of finalising the submission.

### **3.18.5. Basis upon which information is provided**

All financial information (including prices, operating and capital expenditure) in Western Water's price submission (and financial model) must be in 2019-20 dollars. We will provide the inflation forecasts in the financial model we provide to Western Water.

All reports, studies or any other materials (for example, research reports, policy documents, and cost benefit analysis or studies) which are relied upon in the price submission must be made available to the commission.

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<sup>57</sup> The financial model requires the Western Water to provide detailed information on key assumptions underpinning its prices (such as expenditure estimates) so the commission can assess its proposal. The model also provides a mechanism for Western Water to estimate its revenue allowance and prices. The model will require both historic and forecast data. Historic data must be consistent with Western Water's regulatory accounts.

### **3.18.6. Confidentiality**

Our normal practice is to make submissions publicly available on our website. If there is information Western Water does not want disclosed publicly, because it is confidential or commercially sensitive, then it should discuss the matter with commission staff before lodging the price submission.

### **3.18.7. Notification of changes to assumptions**

During the price review, Western Water must promptly advise us if it becomes aware of any substantial changes to the assumptions underpinning the proposals in its price submission. Western Water must also explain the basis for the changed assumptions, and explain the impact on its proposals (if any).

In the event of any changes, Western Water must promptly provide us with an updated financial model, reconciling changes to the financial model provided to the commission with its price submission on 15 November 2019.

### **3.18.8. Non-prescribed services**

While we have no role in regulating prices for non-prescribed services, we need to be satisfied that these services have been correctly classified as not related to regulated services, and that the costs of these services are accurately identified and excluded from the regulated cost base. Western Water's price submission must provide or reference information that demonstrates that the costs of non-prescribed services have been excluded from its expenditure and price calculations.

# Appendix A

## Matters to include in guidance

### WIRO Clause 13(a)

Before making a price determination and following consultation, including with the relevant regulated entity, the Commission must provide guidance to the regulated entity setting out:

- i. the manner in which the Commission proposes to regulate the prices which the regulated entity may charge for prescribed services for the regulatory period consistent with section 33(5) of the ESC Act and this Order;
- ii. the approach and methodology which the Commission proposes to adopt to assess a price submission and make a price determination for the regulatory period consistent with section 33(2) of the ESC Act and this Order;
- iii. the Commission's expectations of the nature and scope of matters to be addressed by the regulated entity in its price submission;
- iv. the Commission's expectations regarding customer consultation by the regulated entity in developing its price submission;
- v. the Commission's expectations of the information required to be provided by the regulated entity to enable the Commission to make a price determination;
- vi. the timing and processes the Commission proposes to follow in making a price determination consistent with section 35 of the ESC Act and the Commission's Charter of Consultation and Regulatory Practice;
- vii. the date by which the regulated entity is to deliver its price submission to the Commission;  
and
- viii. any other matter that the Commission considers should be included in the guidance provided to the regulated entity or in the regulated entity's price submission.



## Appendix B

### Matters to have regard to when making a price determination

Economic efficiency and viability matters	Industry/business specific matters	Customer matters
<ul style="list-style-type: none"> <li>• promotion of efficient use of prescribed services by customers [cl 8(b)(i), WIRO]</li> <li>• promotion of efficiency in regulated entities as well as efficiency in, and the financial viability of, the regulated water industry [cl 8(b)(ii), WIRO]</li> <li>• provision to regulated entities of incentives to pursue efficiency improvements [cl 8(b)(iii), WIRO]</li> <li>• efficiency in the industry and incentives for long term investment [s 8A(1)(a), ESC Act]</li> <li>• efficient costs of producing or supplying regulated goods or services and of complying with relevant legislation and relevant health, safety, environmental and social legislation applying to the regulated industry [s 33(3)(b), ESC Act]</li> <li>• financial viability of the industry [s 8A(b)(1), ESC Act]</li> </ul>	<ul style="list-style-type: none"> <li>• particular circumstances of the regulated industry and the prescribed goods and services for which the determination is being made [s 33(3)(a), ESC Act]</li> <li>• return on assets in the regulated industry [s 33(3)(c), ESC Act]</li> <li>• ensure that regulatory decision making and regulatory processes have regard to any differences between the operating environments of regulated entities [s 4C(b), WI Act]</li> </ul>	<ul style="list-style-type: none"> <li>• in performing its functions and exercising its powers, the objective of the Commission is to promote the long term interests of Victorian consumers [s 8(1), ESC Act] without derogating from that objective. The Commission must in seeking to achieve the objective have regard to the price, quality and reliability of essential services [s 8(2), ESC Act]</li> <li>• enable customers or potential customers of the regulated entity to easily understand the prices charged by the regulated entity for prescribed services or the manner in which such prices are calculated, determined or otherwise regulated [cl 11(d)(i), WIRO]</li> <li>• provide signals about the efficient costs of providing prescribed services to customers (either collectively or to an individual customer or class of customers) while avoiding price shocks where possible [cl 11(d)(ii), WIRO]</li> <li>• take into account the interests of customers of the regulated entity, including low income and vulnerable customers [cl 11(d)(iii), WIRO]</li> </ul>

Benchmarking	Health, safety and social obligations	Other
<ul style="list-style-type: none"> <li>any relevant interstate and international benchmarks for prices, costs and return on assets in comparable industries [s 33(3)(d), ESC Act]</li> </ul>	<ul style="list-style-type: none"> <li>the relevant health, safety, environmental and social legislation applying to the industry [s 8A(1)(d), ESC Act]</li> <li>to ensure that regulatory decision making has regard to the health, safety, environmental sustainability (including water conservation) and social obligations of regulated entities [s 4C(c), WI Act]</li> </ul>	<ul style="list-style-type: none"> <li>the degree of, and scope for, competition within the industry, including countervailing market power and information asymmetries [s 8A(1)(c), ESC Act ]</li> <li>consistency in regulation between States and on a national basis [s 8A(1)(f), ESC Act]</li> <li>the benefits and costs of regulation (including externalities and the gains from competition and efficiency) for—(i) consumers and users of products or services (including low income and vulnerable consumers) (ii) regulated entities [s 8A(1)(e), ESC Act]</li> <li>wherever possible, to ensure that the costs of regulation do not exceed the benefits [s 4C(a), WI Act]</li> </ul>

## Appendix C

### Types of risk

Water corporations face a range of risks, both within and outside of their control, for example:

- Inflow risk, which presents as an inability for water corporations to meet customer demand due to extended low rainfall and inflows.
- Demand forecasting risk results where actual customer demand during a regulatory period differs materially from the forecasts. It can be mitigated through effective demand forecasting and variable tariff structures.
- Operational risks, such as a water corporation experiencing a breach of health, environmental or customer performance standards, can result from inadequate processes within water corporations, asset failures or external factors. Water corporations manage these risks through managing operating policies, capital investment, maintenance policies, contracts and insurance.
- Construction risks arise from underestimating costs or project delays. Water corporations can manage these risks through effective forecasting and contract management, as well as including contingency allowances in cost forecasts. Including cost contingencies in water revenue allowances transfers risk of project cost overruns to customers.
- Regulatory and policy risks result from changes in laws and regulations that materially affect a water corporation's costs or revenue potential, and are typically mitigated via a pass-through mechanism.
- Financial risks are those arising from factors which affect the whole economy, such as rising interest rates or economic downturn. These risks are reflected in the cost of debt which forms part of the regulatory rate of return.
- Business risks result from a loss of revenue due to new technology or a change in the competitive landscape. Water corporations can mitigate some of these risks through innovative business practices and continually seeking cost efficiencies.

## Regulatory risk mitigation tools

The regulatory regime established through the WIRO and developed in detail through previous reviews generally identifies, categorises and allocates risk in accordance with standard principles and seeks to provide efficiency incentives to the water corporations. The regulatory framework provides the following tools to mitigate or manage risk:

- Recovery of forecast operating and capital expenditure — The forecast expenditure contained within the price submission must be consistent with the risk allocation and incentives provided within the regulatory framework. Therefore, it is important that forecasts are prepared on this basis. Where Western Water seeks recovery of costs for managing risks, we expect it to demonstrate the need for this and provide supporting information in its price submission (Sections 3.7 and 3.8).
- Indexation of prices — This ensures that Western Water remains fully responsible for management of its controllable costs, and that it does not need to bear the full risk associated with general price inflation.
- Cost of capital — This provides compensation for non-diversifiable risk (Section 3.10).
- Form of the price control — This provides a mitigating tool for Western Water. Section 3.13 contains our views on the form of the price control for the next regulatory period. The commission also notes that the form of price control can assist in managing the risk that actual demand varies from forecast demand.
- Tariff structures — Section 3.14 sets out the guiding pricing principles for new tariff structures. The impacts of any shift in the mix of service and variable charges in tariffs on risk sharing between Western Water and its customers will need to be addressed in the price submission.
- Length of the regulatory period — A shorter regulatory period can reduce the risk of forecasting uncertainty (see Section 3.2).
- Pass-through mechanisms — Significant uncertainties that materially affect Western Water and that occur within the regulatory period are generally treated as pass-through events. These events must be clearly identified in the price determination. The uncertain and unforeseen events mechanism established by the commission for the 2008 and 2009 water price reviews provides another option for managing and mitigating risks, subject to certain criteria (see Section 3.15).

## Appendix D

### Approach for making a price determination

#### **WIRO CLAUSE 14**

- a) In making a price determination the Commission may either:
  - i. approve the maximum prices the regulated entity may charge for prescribed services, or the manner in which the regulated entity's prices are to be calculated, determined or otherwise regulated, as proposed by the regulated entity in its price submission; or
  - ii. specify the maximum prices the regulated entity may charge for prescribed services, or the manner in which the regulated entity's prices are to be calculated, determined or otherwise regulated.
- b) The Commission may only specify the maximum prices, or the manner in which prices are to be calculated, determined or otherwise regulated, if:
  - i. the price submission of the regulated entity does not, in the Commission's opinion, comply with the guidance provided by the Commission under clause 13 or have adequate regard for the matters specified in clause 11; or
  - ii. the regulated entity failed to submit a price submission to the Commission within the time period specified for this by the Commission.