



MELBOURNE WATER PRICE REVIEW 2016

Final decision

June 2016



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Essential Services Commission 2016, *Melbourne Water Price Review 2016 — final decision*, June.

PREFACE

This final decision completes the Essential Services Commission's (the Commission's) review of the maximum prices that Melbourne Water may charge for its bulk water, sewage treatment, recycled water and waterways and drainage services for a five year period from 1 July 2016 to 30 June 2021.

A key focus of our review is to ensure that the prices Melbourne Water may charge are as low as possible, while enabling Melbourne Water to recover its efficient costs to deliver the services valued by its customers and in accordance with government policy and regulatory obligations. Our final decision on the maximum prices Melbourne Water may charge is, on average, lower than current levels. This partly reflects the cost savings identified by Melbourne Water in its price submission. Our review also found additional savings.

Our final decision allows Melbourne Water to continue to provide its customers with high quality and reliable services, and to undertake historically high levels of investment to upgrade and renew water, sewerage and drainage infrastructure.

We undertook our review in an open and consultative manner. This includes the release of our draft decision in March 2016, and public meetings with interested parties in February and April 2016. In total, we received 116 public submissions during the review. We considered all the feedback in reaching our final decision. The Commission thanks all the interested parties who contributed to this price review.

Dr Ron Ben-David
Chairperson

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SUMMARY

This paper sets out the Commission's final decision on the maximum prices Melbourne Water may charge over the five year period from 1 July 2016 to 30 June 2021. The price review commenced in April 2015, when we released our guidance paper to inform Melbourne Water's price submission. The guidance sets out the criteria against which the Commission will assess Melbourne Water's proposed prices.¹

In October 2015, Melbourne Water provided its price submission to the Commission. The price submission sets out the prices Melbourne Water proposes to charge, and its supporting reasons. We invited interested parties to make written submissions on Melbourne Water's price submission and held a public forum in February 2016.

In March 2016, we released our draft decision on Melbourne Water's price submission. The draft decision sets out the Commission's initial views on Melbourne Water's proposals, and invited interested parties to make further written submissions. We also held a public meeting with interested parties in April 2016 on our draft decision.

In reaching our final decision, we undertook extensive analysis of Melbourne Water's proposals and considered the feedback from our consultation. In total, we received 116 written submissions, which are available on our website. We considered other information including Melbourne Water's response to our draft decision, and reports prepared by consultants we engaged to review key aspects of Melbourne Water's proposals.

Our final decision is largely consistent with our draft decision, released in March 2016. Where the final decision confirms our position in our draft decision, we have not, in detail, outlined the supporting rationale. The analysis in this paper focuses on areas

¹ Essential Services Commission 2015, *Melbourne Water 2016 Price Review – Guidance paper*, April.

where we have reached a different decision to that proposed in our draft decision, or where Melbourne Water or other interested parties provided new information that required consideration by the Commission. As such, this report should be read in conjunction with our draft decision. We summarise our key final decisions below.

REVENUE REQUIREMENT

Melbourne Water's price submission proposed a revenue requirement that reflected cost savings identified through an internal efficiency review in 2014² and other savings identified since the efficiency review.

Melbourne Water proposed a lower revenue requirement for 2016-17 to 2020-21 (on an average annual basis) than its current regulatory period (2013-14 to 2015-16).³ Our review also found additional savings.

Our final decision approves a benchmark revenue requirement for Melbourne Water of \$7761.1 million for a five year regulatory period from 1 July 2016 to 30 June 2021. This is \$94 million (1.2 per cent) lower than the amount proposed by Melbourne Water in its price submission. The lower revenue requirement specified by the Commission mainly reflects downward revisions to Melbourne Water's forecast operating and capital expenditure.

² The review was undertaken by all Victorian water businesses and coordinated by the (then) Department of Environment and Primary Industries (now the Department of Environment, Land, Water and Planning).

³ In 2013, the Commission approved prices for a three year period from 2013-14 to 2015-16.

FINAL DECISION ON MELBOURNE WATER'S REVENUE REQUIREMENT

2015-16 \$ million

	2016-17	2017-18	2018-19	2019-20	2020-21	Total
Melbourne Water's proposed revenue requirement	1 559.5	1 575.9	1 587.6	1 570.3	1 561.4	7 854.7
Draft decision revenue requirement	1 509.2	1 533.1	1 560.0	1 574.5	1 585.9	7 762.8
Final decision revenue requirement	1 546.2	1 540.8	1 557.3	1 566.0	1 550.8	7 761.1

The revenue requirement approved in our final decision is \$1.6 million (0.02 per cent) lower than the amount proposed in our draft decision. The major areas of adjustment for our final decision include:

- a downward adjustment to our draft decision operating expenditure of \$49.6 million (chapter 3) which mainly reflects:
 - updated forecast desalination security payments (\$29 million)
 - Melbourne Water's proposal to capitalise a further \$50 million of its desalination security payments (partly offset by its proposal following our draft decision to recover \$27 million in costs associated with the Victorian Government's desalination water order for 2016-17)
- an upward adjustment to our draft decision capital expenditure program of \$139.9 million (chapter 4)
- updated financial assumptions on tax, which has an upward impact of \$37.1 million (chapter 5).

ESTIMATED END-USE CUSTOMER BILL IMPACT

Melbourne Water provides wholesale water and sewerage services to metropolitan water retailers. The prices charged by the metropolitan retail water businesses will reflect our final decision. Bills for most end-use customers in Melbourne will decline slightly in 2016-17. The metropolitan water retailers advised that they estimated end-

use customer bills will be up to \$15 (nominal) dollars lower in 2016-17 compared to 2015-16. This estimate excludes the impact of the 2016-17 desalination water order. Under our final decision, bills are likely to fall slightly for the remaining years, 2017-18 to 2020-21.

BULK WATER AND SEWERAGE TARIFFS

Melbourne Water proposed to shift from a fixed and variable water headworks tariff to a fully fixed tariff for water retail businesses. Melbourne Water's proposal reflects the Victorian Government's recent reforms to the bulk entitlements held by water retail businesses. The Commission approves Melbourne Water's proposed changes as they will provide greater transparency and better reflect the different costs of accessing Melbourne's three major bulk water supply systems.

The Commission approves Melbourne Water's proposal to shift from a fixed and variable water transfer tariff to a single variable tariff that is common across all water retailers, because it will be easier to understand and is supported by water retailers.

We approve Melbourne Water's proposed variable bulk sewerage tariff structure for treatment and transfer as it will provide clearer price signals about the different costs of treatment for the two systems. Melbourne Water proposed changes to these tariffs to allow for separate charges for its Eastern and Western sewerage systems. We also approve Melbourne Water's proposed fixed monthly tariffs for sewerage.

WATERWAYS AND DRAINAGE TARIFFS

Melbourne Water proposed significant reforms to its non-residential waterways and drainage tariffs. In its response to our draft decision, Melbourne Water proposed to transition all non-residential customers on a property based tariff to, progressively, a flat minimum tariff equal to 1.5 times the residential tariff over a ten year period.

We approve these reforms as the proposed tariff structure moves to a more cost reflective approach — that is, a move from an out-dated property based tariff to a charge that reflects the average contribution of non-residential customers to waterways

and drainage costs. These changes mean that about 34 000 non-residential customers of Melbourne Water, currently on a property based charge, will transfer to the flat tariff by 2020-21.

Melbourne Water's residential waterways and drainage customers will continue to pay the existing flat charge of \$96 per annum, indexed to inflation, over the five years from 1 July 2016.

QUIET LAKES WATER QUALITY TARIFF

After our draft decision, Melbourne Water proposed a new tariff to maintain water quality in the Quiet Lakes (which is within the Patterson Lakes precept area).

The Commission has not approved Melbourne Water's proposed tariff. We received Melbourne Water's proposal after our draft decision. In response, we invited submissions from interested parties. We received three submissions which opposed the proposal — and in support, provided a range of reasons why it would be inappropriate to impose a separate tariff applicable to Quiet Lakes residents.

In our view, we consider that it would not be appropriate to approve the proposed tariff in circumstances where key issues raised by stakeholders have been unable to be fully considered and tested in the post-draft decision consultation process.

Instead, Melbourne Water is invited to provide a submission to the Commission by 1 December 2016 setting out its proposal for a new water quality tariff for the Quiet Lakes, which may be subject of approval by the Commission as part of a variation process to Melbourne Water's determination for 2016-17 to 2020-21.

FINANCE AND TAX

Melbourne Water proposed a new approach to estimating a benchmark weighted average cost of capital (WACC). The main proposed change was to estimate the WACC using a trailing average cost of debt, rather than the current on-the-day

approach. Melbourne Water also proposed to forecast the WACC for each year of the regulatory period, based on forecasts of its future debt costs.

We approve Melbourne Water's proposed WACC method with minor amendments. Moving to a trailing average approach to estimating the cost of debt and WACC reduces price volatility, aligns the regulatory allowance for financing costs with the actual costs faced by the water business, and reduces refinancing risks. We note that changing from the on-the-day approach to estimating the cost of debt, to a trailing average approach, does not materially impact on Melbourne Water's prices.

The Commission adjusted Melbourne Water's proposed tax liability downwards, relative to Melbourne Water's proposal, following our assessment of its proposal to reflect a recent Australian Taxation Office decision on the tax treatment of its desalination security payments.

TREATMENT OF DESALINATION COSTS

Our final decision approves Melbourne Water's proposal to capitalise \$30 million of its annual desalination security payments. Between our draft and final decision, Melbourne Water consulted further with water retail businesses and proposed to increase the amounts capitalised by \$10 million each year from the \$20 million it originally proposed. This will further reduce customer bills.

While we acknowledge submissions that sought higher capitalisation amounts, we believe Melbourne Water has given adequate regard to the issues raised in our draft decision. Over time, we expect Melbourne Water to continue to capitalise its desalination security payments in order to better align the benefits that customers receive from the desalination security service with the payments that customers make. The annual amounts assumed as capital payments for tax purposes may provide a reasonable benchmark to ascertain the amount to be capitalised in any one year.

In response to our draft decision, Melbourne Water proposed to recover costs associated with the Victorian Government's water order from the desalination plant for 2016-17 (around \$27 million) through a new variable water tariff. We approve this proposal and Melbourne Water's proposed mechanism to allow it to recover the costs

of any water orders after 2016-17 from water retailers, less any avoided costs. The current determinations for the metropolitan water retailers allow the businesses to pass on the costs of water orders to end-use water customers.

OTHER MATTERS

The Commission accepts Melbourne Water's forecast demand for bulk water, bulk sewage and waterways and drainage customer numbers. We also approve the continuation of a mechanism that allows Melbourne Water, or the Commission, to consider a mid-period adjustment of approved maximum prices to reflect uncertain and unforeseen events that have a material impact on Melbourne Water's revenue or costs.

1 INTRODUCTION

The Essential Services Commission (the Commission) is Victoria's independent economic regulator. Our role in the water industry includes regulating prices and monitoring the service standards of the 19 Victorian Government owned water businesses.

This paper presents the Commission's final decision on Melbourne Water's price submission for the regulatory period commencing 1 July 2016. The Commission's pricing powers and functions in Victoria's water industry are based on *the Water Industry Regulatory Order 2014* (WIRO), which sits within the broader context of the *Water Industry Act 1994 (Vic)* and the *Essential Services Commission Act 2001 (Vic)*.

In April 2015, the Commission issued guidance to Melbourne Water to inform its price submission. The guidance paper sets out the criteria against which the Commission would assess compliance of Melbourne Water's price submission.

The Commission is required to make a final price determination on the maximum prices that Melbourne Water may charge for prescribed services, or the manner in which prices are to be calculated, determined or otherwise regulated.⁴

If the Commission considers that the price submission satisfies the criteria in our guidance paper, it must approve Melbourne Water's price submission. Otherwise, the Commission has the discretion to specify maximum prices.⁵

⁴ WIRO, clause 10(a). The prescribed services are listed at clause 7(b) of the WIRO.

⁵ WIRO, clause 14.

1.1 OUR APPROACH TO REVIEWING PROPOSED PRICES

Our guidance paper noted we would use the ‘building blocks’ method to determine the revenue that will provide Melbourne Water with a reasonable opportunity to recover the efficient costs of providing regulated services, and to comply with health, safety, environmental, social and other regulatory obligations.

The ‘building blocks’ method, in summary, involves three steps:

- First, the Commission determines the regulatory period.
- Then, we assess service outcomes for each of the regulated services that Melbourne Water proposes to deliver. This assessment reviews whether those outcomes reflect government (including regulatory) obligations or demonstrated customer needs.
- Finally, we assess Melbourne Water’s forecast of the following ‘building blocks’:
 - an efficient level of operating expenditure
 - an efficient level of capital expenditure
 - the regulatory asset base
 - a rate of return to apply to the regulatory asset base
 - the tax allowance.

These ‘building blocks’ determine the forecast required revenue for Melbourne Water to deliver on its service outcomes and obligations. The Commission approves maximum prices to achieve the required revenue in light of forecast demand over the regulatory period.

In this final decision, all values are presented in \$2015-16, unless otherwise stated.

1.2 THE STRUCTURE OF THIS FINAL DECISION

This final decision outlines our review of Melbourne Water’s proposal and is structured as follows:

- Chapter 2 sets out the Commission’s decision on the revenue required by Melbourne Water to set the prices that will apply over the regulatory period
- Chapter 3 sets out the Commission’s decision on Melbourne Water’s proposed operating expenditure
- Chapter 4 sets out the Commission’s decision on Melbourne Water’s proposed capital expenditure
- Chapter 5 sets out the Commission’s decision on Melbourne Water’s financing of capital investments
- Chapter 6 sets out the Commission’s decision on Melbourne Water’s demand forecasts
- Chapter 7 sets out the Commission’s decision on Melbourne Water’s proposed tariff structures for the provision of water and sewerage services
- Chapter 8 sets out the Commission’s decision on Melbourne Water’s proposed waterways and drainage services, diversion services, miscellaneous services and proposed developer contributions
- Chapter 9 sets out the Commission’s decision on how Melbourne Water proposes to adjust prices during the regulatory period and its proposed form of price control
- Appendix A lists the written submissions that we received on Melbourne Water’s price submission and our draft decision

2 REVENUE REQUIREMENT

2.1 INTRODUCTION

This chapter sets out the Commission’s final decision on Melbourne Water’s revenue requirement for 2016-17 to 2020-21.⁶ The Commission must be satisfied that maximum prices are set at a level that generates sufficient revenue for Melbourne Water to recover the forecast efficient costs of delivering services. The revenue requirement does not represent the approval of any particular projects or items of expenditure. Rather, Melbourne Water should allocate its revenue depending on the most efficient spending options (which may change) during the regulatory period to deliver services at the required standards.

2.2 COMMISSION’S DRAFT DECISION

In our draft decision, we adjusted Melbourne Water’s proposed revenue requirement to reflect:

- a downward adjustment to Melbourne Water’s proposed operating expenditure of \$112.4 million. This reduction mainly reflected adjustments made to proposed renewable energy and electricity network costs
- a downward adjustment to Melbourne Water’s proposed capital expenditure program of \$355.5 million
- updated financial assumptions (the cost of capital and tax) that had an upward impact of around \$60 million.

⁶ That is, the regulatory period from 1 July 2016 to 30 June 2021 as proposed by Melbourne Water and accepted by the Commission.

The Commission's draft decision proposed a revenue requirement of \$7762.8 million for a five year regulatory period from 1 July 2016.

2.3 COMMISSION'S FINAL DECISION

The revenue requirement approved in our final decision is \$1.6 million (0.02 per cent) lower than the amount proposed in our draft decision. The major areas of adjustment for our final decision include:

- a downward adjustment to our draft decision operating expenditure of \$49.6 million (chapter 3) which mainly reflects:
 - updated forecast desalination security payments (\$29 million)
 - Melbourne Water's proposal to capitalise a further \$50 million of its desalination security payments (partly offset by its proposal following our draft decision to recover \$27 million in costs associated with the Victorian Government's desalination water order for 2016-17)
- an upward adjustment to our draft decision capital expenditure program of \$139.9 million (chapter 4)
- updated financial assumptions on tax, which has an upward impact of \$37.1 million (chapter 5).

TABLE 2.1 FINAL DECISION ON MELBOURNE WATER'S REVENUE REQUIREMENT
2015-16 \$ million

	2016-17	2017-18	2018-19	2019-20	2020-21	Total
Operating expenditure	941.3	909.0	908.7	899.3	870.6	4 528.9
Return on assets	432.9	440.1	442.8	448.0	449.3	2 213.1
Regulatory depreciation	163.8	179.5	194.4	207.0	218.9	963.7
Tax liability	10.6	14.5	13.8	14.1	14.4	67.5
Non-prescribed revenue offset of revenue requirement	-2.4	-2.4	-2.4	-2.4	-2.4	-12.0
Final decision on total revenue requirement	1 546.2	1 540.8	1 557.3	1 566.0	1 550.8	7 761.1

Note: Numbers have been rounded

3 OPERATING EXPENDITURE

3.1 INTRODUCTION

This chapter sets out the Commission’s final decision on Melbourne Water’s operating expenditure. Melbourne Water recovers operating expenditure through tariffs charged directly to end-use customers (waterways and drainage) and to the retail water businesses (bulk water and sewerage services). Operating expenditure generally comprises the majority of Melbourne Water’s revenue requirement, so it is a key element for review.

The operating expenditure adopted by the Commission does not represent the amount that a business must spend or allocate to particular operational, maintenance and administrative activities. Rather, it is a benchmark that represents assumptions about the overall level of expenditure to be recovered through prices, and that the Commission considers sufficient for the business to deliver on its service commitments.

The *Water Industry Regulatory Order 2014* (WIRO) requires the Commission to have regard to, and place particular emphasis on, the promotion of efficiency in regulated water businesses and the provision of incentives to pursue efficiency improvements.⁷ Our guidance paper to Melbourne Water defined operating expenditure in these terms:

The forecast operating expenditure to be included for the purposes of determining the required revenue 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,

⁷ WIRO, clause 8.

taking into account a long-term planning horizon (prudent and efficient forecast operating expenditure).⁸

3.2 COMMISSION'S DRAFT DECISION

In its draft decision, the Commission specified operating expenditure that better reflected efficient expenditure incurred by a prudent service provider to achieve the lowest cost of delivery service outcomes, accounting for a long term planning horizon. The difference in operating expenditure specified in the draft decision (table 3.1) was mainly driven by adjustments to proposed renewable energy and electricity network costs.

We sought further details from Melbourne Water on the drivers for the increasing controllable operating expenditure from 2016-17, and on the business' steps to mitigate these cost increases. We also invited Melbourne Water to provide more information on opportunities to capitalise desalination security payments, given the Commission's draft decision on capital expenditure and the weighted average cost of capital (WACC).

⁸ Essential Services Commission 2015, *Melbourne Water 2016 Price Review – Guidance paper*, April, p. 17.

TABLE 3.1 DRAFT DECISION ON MELBOURNE WATER'S PRESCRIBED OPERATING EXPENDITURE, BY SERVICE
2015-16 \$ million

	Proposed total opex	Draft decision on total opex	Difference
Business-as-usual (BAU) operating expenditure	4 608.4	4 558.1	-50.4
Water	3 316.8	3 316.3	-0.5
Sewerage	637.3	598.6	-38.7
Recycled water	22.5	22.1	-0.4
Waterways and Drainage	626.4	615.6	-10.8
Diversions	5.4	5.4	0.0
New obligations proposed by Melbourne Water	70.9	9.7	-61.2
Water - renewable energy	55.8	0.0	-55.8
Waterways and Drainage – waterways maintenance	9.7	9.7	0.0
Waterways and Drainage – pollution response	5.3	0.0	-5.3
Regulator licence fees	11.6	10.7	-0.8
Total prescribed operating expenditure	4 690.9	4 578.5	-112.4

Note: Numbers have been rounded

3.3 COMMISSION'S REVIEW

Melbourne Water responded to the expenditure adjustments in the Commission's draft decision by providing further information or arguments to support its original forecasts and by adjusting its original forecasts. It accepted the Commission's draft decision on:

- non-controllable regulatory costs, which includes regulator licence fees, land tax and the fire services levy
- chemical costs
- fleet costs

- labour costs.

The Commission also considered Deloitte Access Economics (Deloitte) assessments of the operating expenditure forecast for 2016-17 to 2020-21. Deloitte's reports for the draft and final decisions are available on the Commission's website (www.esc.vic.gov.au).

The following sections outline Melbourne Water's response to the draft decision, and the Commission's final decision, in respect of:

- energy costs
- the pollution response costs
- the profile of controllable business-as-usual (BAU) operating expenditure
- the desalinated water order for 2016-17
- the capitalisation of annual desalination security payments.

3.3.1 ENERGY COSTS

The Commission adopted a benchmarking approach to determine an allowance for total energy costs for the draft decision. We calculated a benchmark allowance of \$117.8 million using the following input assumptions:

- Melbourne Water's annual forecasts for the purchase of energy from the electricity grid, as well as forecast export of electricity to the grid
- network costs based on a forecast price decline of 3 per cent per year across a five year period
- a wholesale energy price plus a retail margin of \$48 per megawatt hour (MWh)
- electricity feed-in credited at \$48 per MWh
- a renewable energy certificate price of \$70 per MWh
- a renewable energy proportion of 20 per cent.

In response to our draft decision, Melbourne Water proposed we increase the energy allowance by \$12.2 million, with adjustments to the network costs, the benchmark

feed-in rate and the Renewable Energy Certificate (REC) price assumption. Table 3.2 sets out Melbourne Water's proposal.

TABLE 3.2 MELBOURNE WATER'S PROPOSED ENERGY COSTS
2015-16 \$ million

	2016-17	2017-18	2018-19	2019-20	2020-21	Total
Draft decision	24.0	24.0	23.7	23.4	22.7	117.8
Adjustment – network	1.5	1.5	1.4	2.2	3.0	9.7
Adjustment – feed-in rate	0.1	0.1	0.1	0.1	0.1	0.7
Adjustment – REC price	0.5	0.4	0.4	0.3	0.3	1.8
Revised proposal	26.2	26.1	25.6	26.1	26.1	130.0
Additional allowance	2.1	2.1	1.9	2.7	3.4	12.2

Source: Melbourne Water 2016, *2016 Price Submission – Response to ESC Draft Decision*, 26 April.

Note: Numbers have been rounded

Table 3.3 outlines the Commission's final decision on energy costs. The following sections explain our response to Melbourne Water's revised proposal.

TABLE 3.3 FINAL DECISION ENERGY COSTS
2015-16 \$ million

	2016-17	2017-18	2018-19	2019-20	2020-21	Total
Draft decision	24.0	24.0	23.7	23.4	22.7	117.8
Allowance – network cost	0.3	0.5	0.6	0.7	0.8	2.9
Allowance – feed-in rate	0.1	0.1	0.1	0.1	0.1	0.7
Allowance – REC price	0.0	-0.2	-0.1	-0.1	-0.1	-0.5
Final decision	24.5	24.5	24.4	24.1	23.5	120.9
Difference	0.5	0.4	0.7	0.7	0.8	3.1

Note: Numbers have been rounded

NETWORK COSTS

At the time of the draft decision, the Australian Energy Regulator (AER) had released its preliminary price determination for electricity distribution tariffs but not for transmission tariffs. Melbourne Water agreed with the Commission's approach to align the network costs allowance with the AER's final decision, once released.

In its response to the draft decision, Melbourne Water noted the AER's determination of electricity tariffs will be unlikely to be finalised before the release of the Commission's final decision. It thus proposed a network cost allowance based on the revised distribution network operator submissions to the AER. Those submissions propose an average annual price increase of 3 per cent across the regulatory period. Melbourne Water's revised proposal for \$61.9 million adds \$9.7 million to the Commission's draft decision.

The AER released its final decision for Victorian electricity distributors on 26 May, allowing Deloitte to prepare an updated forecast for network prices. The AER's final distribution prices are slightly higher than in its draft decision, but below Melbourne Water's revised proposal. With regard to transmission prices, based on previous AER determinations, Deloitte expects the AER will reduce AusNet Services' proposed revenue requirement, and Deloitte has assumed transmission prices will remain unchanged. Deloitte's revised recommendation for total network costs for Melbourne Water is \$55.2 million across the five-year period — a \$2.9 million increase from the Commission's draft decision.

The Commission accepts Deloitte's revised recommendation and will allow an additional \$2.9 million across the five-year period for Melbourne Water's energy network costs.

FEED-IN RATE OF ELECTRICITY TO GRID

The Commission's draft decision suggested a benchmark feed-in electricity price of \$48 per MWh, which equalled the benchmark price assumed for Melbourne Water's energy purchases. We based this figure on assumed wholesale energy prices plus a 20 per cent retail margin.

In its response to the draft decision, Melbourne Water contended, because it is “not a retailer, scheduled generator or licenced market participant, it could not achieve a retail margin”.⁹

⁹ Melbourne Water's response to the Commission's draft decision, 26 April 2016, p. 5.

We accept Melbourne Water’s contention that it is not a retailer, and will remove the 20 per cent retail margin that we applied for our draft decision benchmark to calculate its income for exported energy. We have allowed an additional \$0.66 million across the five-year period to recognise the lower allowance for income from energy exports.

RENEWABLE ENERGY CERTIFICATE PRICE

In its draft decision the Commission adopted a renewable energy certificate price of \$70 per REC (that is, per MWh). Melbourne Water recommended increasing this price because the market demand for large scale generation certificates (LGCs) is likely to increase faster than the available supply from renewable energy sources, so historical pricing is not an adequate indicator. It proposed REC prices based on forward market quotes sourced from the Australian Financial Markets Association (AFMA).¹⁰

The Commission asked Deloitte to review current REC prices and recommend a forecast for LGC prices for the five-year period. Deloitte considered the AFMA forward curve has some limitations as an indicator of future REC prices, and proposed a set of prices using its own Deloitte Electricity Market Model (DEMM).¹¹ Specifically, Deloitte did not consider the AFMA forward curve to be a good indicator, as the AFMA REC market is dominated by a small number of major players, meaning substantial activity from one of these can change market dynamics and prices dramatically.

The Commission accepted Deloitte’s findings, and determined to adopt the DEMM forecast on the basis that it provided more reliable REC price forecasts for our final decision (table 3.4).

TABLE 3.4 FINAL DECISION ON RENEWABLE ENERGY CERTIFICATE PRICE
2015-16 \$ per REC

	2016-17	2017-18	2018-19	2019-20	2020-21
Draft decision	70.0	70.0	70.0	70.0	70.0
Melbourne Water’s revised proposal	80.3	79.4	78.5	77.6	76.7
Final decision	76.6	72.2	74.3	72.5	72.5

¹⁰ Melbourne Water 2016, op.cit., pp. 6–7.

¹¹ Deloitte Access Economics 2016, *Melbourne Water expenditure review – supplementary report*, May, pp. 3–4.

PROPORTION OF RENEWABLE ENERGY

The Commission's draft decision allowed for 20 per cent of Melbourne Water's energy purchase to be generated from renewable sources. Melbourne Water accepted this decision but noted Victorian Government policy expectations for water businesses are uncertain. It proposed — if its renewable energy obligations change — the mechanism for uncertain and unforeseen events could be used to adjust prices.

We agree the pass through or unforeseen events mechanisms can be used if Melbourne Water (or any other water business) experiences changes in its regulatory obligations that have a material or significant impact on revenue or costs. This is discussed in chapter 9.

For the REC allowance in our draft decision, we calculated the renewable energy portion as 20 per cent of the electricity consumption from the grid (the 'purchase grid electricity' figure in table 3.5). This portion should have been 20 per cent of the *net* grid electricity purchase, and we made this correction in calculating the REC allowance for this final decision.

TOTAL ENERGY COST ALLOWANCE

Table 3.5 shows the breakdown of Melbourne Water's final energy cost allowance.

TABLE 3.5 MELBOURNE WATER'S ENERGY USAGE COST ALLOWANCE
2015-16 \$ million (unless specified)

	2016-17	2017-18	2018-19	2019-20	2020-21	Total
Purchase grid electricity (MWh)	219 990	214 724	216 099	209 479	206 639	
Wholesale rate (\$/MWh)	48	48	48	48	48	
Net grid electricity (MWh)	201 906	197 346	199 678	193 062	190 225	
Renewable energy percentage (net)	20%	20%	20%	20%	20%	
Renewable rate (\$/REC)	76.60	72.18	74.32	72.52	72.51	
Total cost	25.2	25.1	25.0	24.8	24.1	124.3
Total income	0.7	0.7	0.7	0.7	0.7	3.4
Net cost	24.5	24.5	24.4	24.1	23.5	120.9

Note: Numbers have been rounded.

3.3.2 POLLUTION RESPONSE

Melbourne Water's 2016 price submission sought \$5.3 million as a new obligation to deliver a pollution response service, given the business's role as a protection agency under the *Environment Protection Act 1970* (Vic). Melbourne Water cited EPA Victoria guidance on this role as the basis for claiming it as a new cost obligation.

The Commission's draft decision did not adopt this pollution response expenditure, because we did not consider the role is new for Melbourne Water. Further, \$0.32 million was already included in the 2014-15 baseline year for pollution response activities (providing a total of \$1.6 million across the regulatory period).

Melbourne Water's response to the draft decision proposed an additional \$3.7 million above the included baseline expenditure, to cover the expected costs. The business thus proposed a *total* allowance of \$5.3 million (that is, not an *additional* \$5.3 million as sought in the original price submission). It provided EPA data that showed a trend of increasing statewide water related incidents requiring a response.

EPA Victoria provided the same data in its submission¹² and noted the "trend is expected to continue due to increased urbanisation and expansion of industrial areas

¹² EPA Victoria 2016, Submission, 26 April

around waterways”. It understands the increase in pollution response expenditure represented an increase in resourcing. EPA Victoria also expressed its concerns that the draft decision would require Melbourne Water to divert funds from other activities, potentially risking non-compliance with other obligations under the Environment Protection Act.

Deloitte sought further information from Melbourne Water to quantify the cost increase claimed. Deloitte reported Melbourne Water’s average incident response cost had risen from \$4600 in 2014-15 to \$7900 in 2015-16, reflecting how the clarified role has resulted in increased costs. Deloitte also confirmed that the incident rate had increased, and recommended 100 incidents per year as a reasonable basis for Melbourne Water’s forecasts — an increase from the 80 incidents to which it responded in 2014-15, and consistent with the increase in the statewide incident rate provided by EPA Victoria. Deloitte recommended allowing the additional revenue to cover costs of 100 incidents per year at \$7900 per incident, which is \$0.42 million per year above the existing \$0.32 million.

The Commission agrees with Deloitte’s recommendation — we accept the higher average incident response cost based on Melbourne Water’s current actual costs, and we consider 100 incidents per year a reasonable forecast basis, as this increase is consistent with the trend data provided by EPA Victoria. Our final decision allows an additional \$0.42 million per year (\$2.1 million over the five-year period) to more than double Melbourne Water’s pollution response allocation. Table 3.6 outlines the accepted additional pollution response costs by year and in total.

TABLE 3.6 FINAL DECISION ON MELBOURNE WATER’S ADDITIONAL POLLUTION RESPONSE COSTS
2015-16 \$ million

	2016-17	2017-18	2018-19	2019-20	2020-21	Total
Draft decision	0.0	0.0	0.0	0.0	0.0	0.0
Final decision	0.42	0.42	0.42	0.42	0.42	2.1
Difference	0.42	0.42	0.42	0.42	0.42	2.1

3.3.3 PROFILE OF BASELINE BAU OPERATING EXPENDITURE

The Commission's draft decision requested further information to understand the profile of Melbourne Water's BAU controllable operating expenditure. We understood Melbourne Water had already identified efficiency savings that offset increasing annual BAU costs. However, we were concerned about the increasing operating expenditure profile towards the end of the 2016-17 to 2020-21 period, and the possible implications for the next regulatory period. This concern was also expressed in submissions received from both City West Water¹³ and South East Water¹⁴ on Melbourne Water's original price submission, and in a submission from Yarra Valley Water on the draft decision.¹⁵

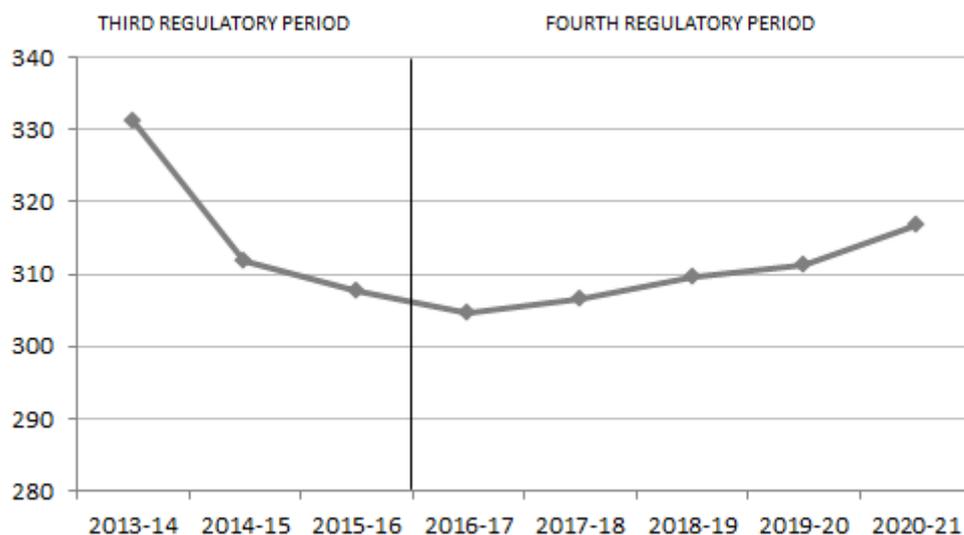
Melbourne Water's BAU controllable operating expenditure forecast in the fifth year of the period is \$12.2 million higher than in the first year (figure 3.1). For our draft decision, we were not satisfied that Melbourne Water had clearly explained the cost components producing this significant increase across the period. We asked Melbourne Water to better explain the components and drivers for the cost increases, and its mitigation steps.

¹³ City West Water 2016, Submission, February, p. 2

¹⁴ South East Water 2016, Submission, February, p. 2.

¹⁵ Yarra Valley Water 2016, Submission, April, p. 3.

FIGURE 3.1 MELBOURNE WATER'S CONTROLLABLE BAU OPERATING EXPENDITURE PROFILE
2015-16 \$ million



Note: 2013-14 and 2014-15 actual expenditure and 2015-16 forecast expenditure have been adjusted for an equivalent basis to the draft decision BAU expenditure.

In its original price submission, Melbourne Water did not provide its operating expenditure forecasts in the manner specified in our guidance paper. Forecast costs over and above the efficient costs incurred in the 2014-15 baseline year were to be specified as new costs or new obligations, and would be the focus of the expenditure review to verify the prudence and efficiency of these increased costs. However, Melbourne Water included many new costs and cost escalations above the growth and inflation allowances in its total BAU forecasts. Our draft decision provided Melbourne Water with another opportunity to set out its cost escalations and new costs in accordance with our requirements.

In response, Melbourne Water provided a general statement explaining the key drivers for the increases include escalations in labour, accommodation and maintenance costs, with maintenance costs being the primary reason for the large increase in the final year.

Deloitte explored this matter — having regard to its earlier operating expenditure review findings — to better account for Melbourne Water's increasing operating costs.

In particular, it focused on the waterways and drainage costs which showed the largest increase over the period.

Deloitte found that the majority of the BAU increases claimed by Melbourne Water could be attributed to:

- increases in labour costs, already verified in Deloitte's original expenditure review
- increases in sediment management costs.

Melbourne Water's price submission included in its BAU forecasts significant increases of over \$10 million for sediment treatment and disposal costs — these costs should have been explained separately as a new cost obligation, and were the focus of Deloitte's review.

WETLANDS SEDIMENT TREATMENT AND DISPOSAL

The major cost driver for the waterways and drainage service area is the treatment and disposal of wetlands sediment removed from constructed sediment ponds and wetland cells. Uncontaminated sediment can be used as clean-fill at no disposal cost, while contaminated sediment is sent to managed landfill facilities. Melbourne Water's proposed cost increases are due to:

- forecast increasing landfill waste disposal fees
- increasing annual sediment treatment volumes to match accumulation rates and reduce the backlog that has accumulated in ponds. This increase includes a doubling of the volume in the final year of the period, which results in the significant expenditure increase in 2020-21 (figure 3.1).

Melbourne Water plans to construct and operate its own sediment treatment facility to minimise the quantity sent to landfill, effectively offsetting the increasing waste disposal costs, and allowing an increase in treatment volumes. It expects this facility to become operational in 2018-19, and to be only 50 per cent operational for its first two years. This facility will allow an initial increase in treatment rates to 25 000 cubic metres per year, up from the current rate of 10 000 cubic metres per year. The forecast doubling of sediment volume to be treated in the fifth year (to 50 000 cubic metres) assumes the treatment plant will be fully operational by 2020-21.

Deloitte considered Melbourne Water's proposal to increase annual treatment volumes from the current 10 000 cubic metres to be prudent. Deloitte noted that despite Melbourne Water's claimed landfill price increases, its projected treatment unit costs were not increasing and Melbourne Water was actively working to reduce the unit costs. Overall, Deloitte did not recommend any changes to Melbourne Water's proposed sediment management forecasts.

The Commission accepts that sedimentation treatment and disposal is a growing cost for Melbourne Water, and we recognise Melbourne Water's initiatives to manage these costs by building its own treatment facility.

We remain concerned about the large increase in operating expenditure in the final year of the period (due to the proposed doubling of sediment treatment volumes). This increase is conditional on the successful and timely construction and commissioning of the new sediment treatment facility. This doubling of processing rates is not certain in the timeframe proposed by Melbourne Water. Deloitte noted Melbourne Water had included the facility's construction in the current regulatory period, but the facility has not been built. We consider it unreasonable to pass on the costs of such conditional increased treatment volumes to customers in the last year of the period, particularly in light of Melbourne Water's past deferrals of maintenance requirements and delayed construction of the treatment facility. For this reason, we adjusted forecast costs for the fifth year to match those in years 3 and 4 — that is, we assumed a treatment volume of 25 000 cubic metres for 2020-21.

This adjustment does not preclude Melbourne Water from increasing its sediment treatment rates within the current period as far as the capability of its new facility allows. We expect Melbourne Water's next pricing submission will reflect the actual costs of higher treatment volumes to be recovered during the following regulatory period.

The overall waterways and drainage BAU operating expenditure allowance (table 3.7) will reflect this downward adjustment to treatment volumes.

TABLE 3.7 FINAL DECISION ON MELBOURNE WATER'S SEDIMENT TREATMENT AND DISPOSAL COSTS
2015-16 \$ million

	2016-17	2017-18	2018-19	2019-20	2020-21	Total
Melbourne Water proposed	1.6	1.6	4.1	4.1	6.9	18.3
Volume adjustment	0.0	0.0	0.0	0.0	-2.8	-2.8
Final allowance	1.6	1.6	4.1	4.1	4.1	15.5
Difference from draft decision	0.0	0.0	0.0	0.0	-2.8	-2.8

3.3.4 DESALINATION PLANT WATER ORDER FOR 2016-17

The Minister for Water announced on 6 March 2016 that an order would be placed to take 50 gigalitres of water from the Victorian Desalination Plant in 2016-17. This announcement occurred after Melbourne Water provided its 2016 price submission to the Commission. In its response to our draft decision, Melbourne Water thus requested that its revenue requirement include additional operating expenditure of around \$27 million. It does not consider there to be avoided costs which could offset the order cost. However, where Melbourne Water incurs additional costs, it will manage these within its operating expenditure.¹⁶

The Commission accepts this new expenditure because it is in accordance with the pass through arrangement set out in chapter 9.

3.4 DESALINATION SECURITY PAYMENTS

This section sets out the Commission's final decision on Melbourne Water's proposed approach to the recovery of its desalination security payments.

¹⁶ Melbourne Water 2016, *2016 Price Submission – Response to ESC Draft Decision*, 26 April, p. 12.

Melbourne Water is obliged to pay for the security service provided by the Victorian Desalination Plant (desalination security payments).¹⁷ The Commission's price determination will not affect this obligation. Rather, the price review covers how and when these costs are reflected in Melbourne Water's revenue requirement and prices.

Capitalising a proportion of the security payments is in the interests of customers. Capitalisation better aligns the benefits that customers receive from the desalination security service with the payments that customers make.

3.4.1 COMMISSION'S DRAFT DECISION

Melbourne Water proposed to capitalise (that is, treat some expenditure as capital expenditure for pricing purposes) \$20 million of its forecast annual desalination security payments over the fourth regulatory period. It proposed to treat the remainder of those payments as operating expenditure.¹⁸ And it proposed to recover the capitalised amounts (via regulatory depreciation) over 60 years.¹⁹

Our draft decision accepted Melbourne Water's proposal, noting the business should review the amount to be capitalised, given:

- our draft decision on capital expenditure and finance costs, which potentially created greater capacity on Melbourne Water's balance sheet to capitalise a proportion of its security payments
- feedback from retail water businesses and some customer groups, who questioned whether it is desirable to capitalise amounts greater than proposed by Melbourne Water, in the interests of water customers.

¹⁷ For more detail on these contractual obligations, see Essential Services Commission 2013, *Price Review 2013: greater metropolitan water businesses — draft decision, volume 1*, April, pp. 44–5. Melbourne Water is also obliged to cover all costs associated with any water ordered from the Victorian Desalination Plant. Chapter 9 addresses how Melbourne Water's prices reflect any water order costs.

¹⁸ We verified Melbourne Water's forecast desalination security payments with the Department of Environment, Land, Water and Planning.

¹⁹ This time period corresponds with the estimated life of the desalination plant.

3.4.2 SUBMISSIONS AND COMMISSION'S REVIEW

In response to our draft decision, Melbourne Water proposed to increase the amounts to be capitalised from 2016-17 to 2020-21 by \$10 million per year to \$30 million per year. It proposed to recover the remainder of the annual payments as operating expenditure (table 3.8).²⁰

TABLE 3.8 MELBOURNE WATER'S PROPOSED TREATMENT OF DESALINATION SECURITY PAYMENTS
2015-16 \$ million

	2016-17	2017-18	2018-19	2019-20	2020-21
Amounts attributable to operating expenditure	559.8	551.4	547.8	536.0	504.0
Amounts attributable to capital expenditure	30.0	30.0	30.0	30.0	30.0
Total	589.8	581.4	577.8	566.0	534.0

Source: Melbourne Water 2016, *2016 Price Submission – Response to ESC Draft Decision*, 26 April; Updated forecast desalination payments from the Department of Land, Water, Environment and Planning, June 2016

Melbourne Water considered its response to the draft decision acknowledges the views of the retail water businesses, and provides further bill relief while not imposing significant interest costs on future customers. It noted interest costs for future customers were a concern raised during its consultation.

A submission from Stephen Cannon queried whether the scope of the Commission's review was too narrow, in that we did not review the efficiency of Melbourne Water's desalination security payments. As noted in 2013, we consider the Partnerships Victoria competitive tendering process (which determined Melbourne Water's contractual payment obligations) accounted for issues such as value for money.²¹

A number of submissions, including ones from water businesses, argued the capitalised amounts should be higher than proposed by Melbourne Water. Yarra Valley

²⁰ In June 2016, Melbourne Water advised the Commission that following advice from the Department of Land, Water, Environment and Planning, it had updated its forecasts for desalination security payments. These updates are reflected in table 3.8.

²¹ For more detail, see: Essential Services Commission 2013, *Price Review 2013: Greater Metropolitan Water Businesses — final decision*, June, pp. 22–3.

Water recommended we approve capitalisation of between \$45 million and \$80 million per year.²² City West Water was “disappointed” with the level of capitalisation in our draft decision, and argued the Commission “has the authority and mandate to deliver a better outcome on desalination capitalisation in its June 2016 final decision.”²³

Yarra Valley Water and City West Water noted too that Melbourne Water proposed higher capitalisation amounts (up to \$72.5 million in 2017-18) in its submissions to our 2013 water price review.

Our final decision approves Melbourne Water’s proposal to capitalise \$30 million of its annual desalination security payments from 2016-17 to 2020-21. Between our draft and final decisions, Melbourne Water consulted further with water retail businesses and proposed to increase capitalised amounts by \$10 million per year. This increase will have the effect of further reducing customer bills. While we acknowledge submissions that sought higher capitalisation amounts, we consider Melbourne Water adequately addressed the issues raised in our draft decision.

Over time, we expect Melbourne Water to continue to capitalise its desalination security payments to better align the benefits that customers receive from the desalination security service with the payments that customers make.

A recent ruling by the Australian Taxation Office (ATO) considered part of the desalination security payments relates to the purchase of the desalination plant by Melbourne Water. That is, part of the expenditure is capital in nature. It is equivalent to the annual amounts paid by Melbourne Water to reduce the principal under the finance lease that covers the desalination plant. These amounts are likely to be around \$45 million to \$55 million over the fourth regulatory period.

The amounts assumed as capital payments for tax purposes may provide a reasonable benchmark to ascertain the amount to be capitalised in any one year.

We consider that in any one year, the amounts capitalised by Melbourne Water will not exceed the expenditure amounts considered as capital for tax purposes. In other words, in future regulatory periods we will not allow Melbourne Water to capitalise the

²² Yarra Valley Water 2016, Submission, April, p. 2.

²³ City West Water 2016, Submission, April.

shortfall between its proposed capitalisation amounts in the fourth regulatory period (\$30 million per year) and the tax benchmark (\$45 million to 55 million per year), for the purpose of establishing prices. This will help to ensure that costs are not disproportionately pushed onto future customers.

3.5 FINAL DECISION

The Commission considers the operating expenditure adopted in the final decision will allow Melbourne Water sufficient expenditure to operate and deliver its proposed services in an efficient and prudent manner, and in accordance with regulatory and policy obligations.

The Commission's final decision is to adopt an operating expenditure benchmark of \$4528.9 million to establish Melbourne Water's revenue requirement used to determine prices for the 2016-17 to 2020-21 regulatory period.

The Commission's final decision on the cost components of Melbourne Water's operating expenditure is outlined in table 3.9.

TABLE 3.9 FINAL DECISION ON MELBOURNE WATER'S PRESCRIBED OPERATING EXPENDITURE, BY SERVICE
2015-16 \$ million

	Total draft decision	2016-17	2017-18	2018-19	2019-20	2020-21	Total final decision
Prescribed operating expenditure excluding desalination costs	1 800.4	354.5	357.6	360.9	363.3	366.6	1 802.9
Desalination security payments	2 878.1	589.8	581.4	577.8	566.0	534.0	2 849.0
<i>less capitalisation</i>	<i>(100.0)</i>	<i>(30.0)</i>	<i>(30.0)</i>	<i>(30.0)</i>	<i>(30.0)</i>	<i>(30.0)</i>	<i>(150.0)</i>
Desalination water order	-	27.0	-	-	-	-	27.0
Total prescribed operating expenditure	4 578.5	941.3	909.0	908.7	899.3	870.6	4 528.9

4 CAPITAL EXPENDITURE

4.1 INTRODUCTION

This chapter sets out the Commission’s final decision on Melbourne Water’s capital expenditure for the period 2016-17 to 2020-21. Expenditure to maintain existing assets and establish new assets that service water retailers and end-use customers over the longer term is referred to as capital expenditure. The core drivers of the forecast capital expenditure are the renewal of infrastructure to maintain or rehabilitate services, and compliance with policy and technical standards.

Capital expenditure is a key component of Melbourne Water’s revenue requirement. Melbourne Water recovers its capital expenditure from water retailers and end-use customers over time by adding it to the regulatory asset base (RAB). Its prices reflect capital expenditure through the rate of return on the RAB — that is, the weighted average cost of capital (WACC) multiplied by the RAB — and a return of the RAB (through regulatory depreciation).

The capital expenditure allowance that the Commission adopts for Melbourne Water in its draft or final decision does not represent the amount that the water business is required to spend or allocate to particular projects. Although the Commission reviews individual capital projects and renewals allocation programs, these are viewed as a sample representation of Melbourne Water’s proposed capital program. This informs our assessment of the amounts that should be reflected in customer prices for Melbourne Water to deliver on its service commitments.

Where we have made an adjustment to exclude a project’s capital expenditure from Melbourne Water’s revenue requirement for the 2016-17 to 2020-21 regulatory period, we are not requiring the business to cancel or defer that project. Melbourne Water determines how to best manage the allocation of its revenue and the priority of its expenditure within a regulatory period.

4.2 COMMISSION'S DRAFT DECISION

Our draft decision proposed to approve over \$2 billion of capital expenditure (detailed in table 4.1), which allows for annual expenditure levels greater than the current three year regulatory period and prior to the millennium drought. The Commission proposed to adopt adjustments based on its assessment of the prudence and efficiency of expenditure, and to defer some recovery of costs through pricing until customers have access to the new or improved service.

The proposed reductions in the draft decision were largely due to:

- The provision of business case documentation that did not seem to be updated to reflect the current options analyses.
- An assessment that the capital program for the current regulatory period was being delivered under budget or not to schedule.
- A review of cost estimates that concluded these appeared overly conservative, particularly given current market conditions for the construction industry.

The Commission also requested further information to demonstrate how the expenditure for community liveability assets falls within the scope of prescribed services as defined in the relevant legislation, and details on the program of works.

TABLE 4.1 DRAFT DECISION ANNUAL GROSS CAPITAL EXPENDITURE, BY SERVICE CATEGORY
2015-16 \$ million

	Melbourne Water's proposed capital expenditure	Draft decision capital expenditure	Difference
Water	516.6	440.5	-76.0
<i>plus desalination capitalisation</i>	100.0	100.0	0.0
Sewerage	1 080.5	905.7	-174.8
Recycled Water	7.6	7.6	0.0
Waterways and Drainage	966.4	861.7	-104.7
Diversions	0.9	0.9	0.0
Total prescribed capital expenditure^a	2 672.0	2 316.5	-355.5

Source: Commission's draft decision, March 2016. Note: Numbers have been rounded

^a Capital expenditure includes new obligations. Source: Melbourne Water draft decision, March 2016

4.3 COMMISSION'S REVIEW

Melbourne Water's response to the Commission's draft decision provided further information on issues raised in the draft decision and other matters that it thought relevant. The Commission considered this response and public submissions it received, and has made adjustments (when justified) to the forecast capital expenditure used to establish Melbourne Water's revenue requirement.

The Commission also considered detailed assessments by its consultant, Deloitte Access Economics (Deloitte), of the capital expenditure forecast for 2016-17 to 2020-21. The consultant's reports for the draft and final decisions are available on the Commission's website (www.esc.vic.gov.au).

The Commission's review and responses for the final decision are outlined in:

- section 4.3.1 – Melbourne Water's response to the Commission's draft decision
- section 4.3.2 – Melbourne Water's top five capital projects per major service category
- section 4.3.3 – Melbourne Water's top five renewals allocation programs per major service category
- section 4.3.4 – broader adjustment for Melbourne Water's remaining capital expenditure and
- section 4.3.5 – other capital expenditure issues.

The capitalisation of desalination security payments is addressed in chapter 3.

4.3.1 MELBOURNE WATER'S RESPONSE TO DRAFT DECISION

Rather than address the individual adjustments in the Commission's draft decision, Melbourne Water proposed a blanket 5 per cent reduction to the capital expenditure estimates set out in its original price submission, with the exception of the Land Development Works renewals allocation program. It considered that the \$355.5 million reduction proposed in the Commission's draft decision would compromise the level of service and increase the risk of system failure. A 5 per cent reduction lowers Melbourne Water's original forecast for capital expenditure by \$107 million, seeking total capital expenditure of \$2614.5 million for 2016-17 to 2020-21. Melbourne Water

stated that the 5 per cent target is prudent and efficient, and would “further encourage innovation while not posing such a high risk to levels of service and delivery of obligations.”

The Commission cannot accept Melbourne Water’s proposed blanket 5 per cent reduction on its original proposal, as it is not in accordance with our review methodology and does not fully address the specific reasoning for the adjustments proposed in our draft decision. The Commission assesses the prudence and efficiency of the top five major projects and major capital allocation programs in each service category (water, sewerage, and waterways and drainage). We consider these major projects and programs to represent Melbourne Water’s entire capital program, and any systemic findings and adjustments may be applied to Melbourne Water’s remaining capital program when determining the total capital expenditure forecast benchmark.

The Commission has reviewed the new information put forward by Melbourne Water to assess whether the reductions proposed in our draft decision should be adjusted for our final decision. The new information has been assessed in conjunction with Melbourne Water’s original price submission using the same review methodology.

4.3.2 MAJOR PROJECTS

Table 4.2 summarises Melbourne Water’s revised proposal and the Commission’s response for the top five capital projects in each service category.

TABLE 4.2 INFORMATION PROVIDED TO SUPPORT MAJOR PROJECTS

Project	Melbourne Water revised proposal	Commission response
<i>Water major projects</i>		
Winneke Treatment Plant – Ultraviolet disinfection system	A revised cost estimate since the price submission shows a cost increase. It will be difficult to deliver the project with the reductions in the draft decision. Melbourne Water submitted that there is sufficient timeframe contingency, and other non-infrastructure solutions have already been investigated.	<p>Partly accepted – Deloitte reviewed the latest cost estimate information. In light of the higher revised cost estimate, Deloitte noted that it did not consider that non-infrastructure options had been sufficiently investigated. It recommended the expenditure proposed in the original price submission be allowed. Deloitte also recommended that the \$1.4 million for a pilot plant be excluded.</p> <p>The Commission accepts Deloitte’s recommendation and allows an additional \$3 million for its final decision.</p>

TABLE 4.2 INFORMATION PROVIDED TO SUPPORT MAJOR PROJECTS
Continued

Project	Melbourne Water revised proposal	Commission response
<i>Water major projects</i>		
Merri Creek to MCG water main renewal	Melbourne Water disagreed with the draft decision to recommend removal of expenditure for this project. It responded that the leakages were a significant impact on end-use customers. In addition, the water main is not even operating at full pressure due to upstream works.	<p>Partly accepted – Deloitte recognised the increasing risk of significant asset failure at a level that is unacceptable for Melbourne Water’s preferred risk profile. Deloitte recommended reinstating the allowance for this project, but with a 10 per cent reduction to the original price submission to account for the level of design work still to take place and potential efficiency improvements.</p> <p>The Commission accepts Deloitte’s recommendation and allows an increase of \$32 million from the draft decision.</p>
Maroondah aqueduct renewal	Melbourne Water responded that all expenditure should be allowed for in the first year of the period 2016-17 to 2020-21. The project is currently on schedule and possible delays are mitigated or allowed for in the schedule.	<p>Partly accepted – The Commission accepts that the project is progressing on schedule. We requested Deloitte review the updated information to evaluate whether work would also take place in 2017-18.</p> <p>The Commission has been informed by Deloitte’s assessment and the final decision is to phase 80 per cent of expenditure into 2016-17 and the remainder in 2017-18.</p>
<i>Waterways and drainage major projects</i>		
Alexandra Parade main drain re-decking	Melbourne Water confirmed it would be able to deliver this project within the draft decision amount as this was in line with its most recent estimate.	Accepted – Given Melbourne Water is able to deliver within the draft decision allowance, the Commission has not made any changes for the final decision.
Regan Street retarding basin	Melbourne Water advised that it needs to align with the developer’s timelines and estimate. The primary project risk is cost of land, which may increase based on the market. The land has been rezoned as an Urban Floodway Zone (UFZ).	Not accepted – Deloitte reviewed the latest cost estimate information. The Commission was informed by Deloitte’s report and no change has been made for the final decision. As the land has already been rezoned, this limits the valuable use of the land and likelihood of significant price variation.

TABLE 4.2 INFORMATION PROVIDED TO SUPPORT MAJOR PROJECTS
Continued

Project	Melbourne Water revised proposal	Commission response
<i>Sewerage major projects</i>		
WTP 55E ASP renewal	Melbourne Water reiterated that the 55E ASP renewal must occur directly after the completion of WTP Stage 2 in order to take the existing capacity offline. It also highlighted that if this renewal is delayed the plant would be operating at high risk of non-compliance with forecast levels of ammonia exceedances.	<p>Not accepted – Deloitte accepted that there remains a risk for exceeding ammonia licence limits and that this project needs to commence immediately after the current project is completed. However, Deloitte was not convinced the work would commence as scheduled, given the size and complexity of the current works to be completed first. Accordingly, Deloitte recommended no changes to expenditure.</p> <p>The Commission accepts Deloitte’s recommendation and retains its draft decision to only allow for design expenditure. Given the uncertainty of timing, and that completion of this project will be during the following regulatory period, we consider customers should not yet bear the construction costs for this project through prices. When Melbourne Water prepares its next price submission for the 2021 price review, it will have more certainty over the progress of the project. The Commission will recognise any construction costs incurred in 2020-21 in the roll-forward of the RAB into the following period.</p>
Upper Hobsons Bay main sewer renewal	A recent condition assessment showed that the sewer would need renewal within the next five years. In addition, the sewer is reaching its capacity. Melbourne Water has undertaken further option development since the draft decision and proposed a relining solution with the construction of a relieving sewer.	<p>Partly accepted – Deloitte’s review found that Melbourne Water had provided more recent information on the development of the preferred option. Deloitte recommended allowing the full expenditure amount proposed by Melbourne Water, but based on current rate of delivery and the further work to take place, it recommended phasing construction costs over three years.</p> <p>The Commission accepts Deloitte’s recommendation and allows \$42 million, an additional \$40 million from our draft decision.</p>

Source: Melbourne Water 2016, *2016 Price Submission – Response to ESC Draft Decision*, 26 April; Deloitte 2016, *Melbourne Water expenditure review – supplementary report*, 30 May.

The Commission’s adopted expenditure for these major projects is set out in table 4.3.

TABLE 4.3 FINAL DECISION MAJOR PROJECTS
2015-16 \$ million

Project		2016-17	2017-18	2018-19	2019-20	2020-21	Total		
Water major projects	Winneke Treatment Plant – Ultraviolet disinfection system	Draft decision	-	-	0.3	6.5	20.5	27.3	
		Final Decision	-	-	0.3	7.3	22.7	30.3	
		Difference	-	-	-	0.7	2.3	3.0	
	Merri Creek to MCG water main renewal	Draft decision	-	-	-	-	-	-	
		Final Decision	3.3	17.7	10.8	0.3	-	32.1	
		Difference	3.3	17.7	10.8	0.3	-	32.1	
	Maroondah aqueduct renewal	Draft decision	17.5	17.5	-	-	-	35.0	
		Final Decision	28.0	7.0	-	-	-	35.0	
		Difference	10.5	-10.5	-	-	-	-	
Sewerage major projects	WTP 55E ASP renewal	Draft decision	0.3	0.4	2.0	5.0	-	7.8	
		Final Decision	0.3	0.4	2.0	5.0	-	7.8	
		Difference	-	-	-	-	-	-	
	Upper Hobsons Bay main sewer renewal	Draft decision	2.0	-	-	-	-	2.0	
		Final Decision	2.0	13.7	13.4	13.4	-	42.4	
		Difference	-	13.7	13.4	13.4	-	40.4	
	Waterways and drainage major projects	Alexandra Parade main drain re-decking	Draft decision	-	-	1.5	6.7	6.7	14.9
			Final Decision	-	-	1.5	6.7	6.7	14.9
			Difference	-	-	-	-	-	-
Regan Street retarding basin		Draft decision	8.3	0.1	-	-	-	8.4	
		Final Decision	8.3	0.1	-	-	-	8.4	
		Difference	-	-	-	-	-	-	

Note: Numbers have been rounded.

4.3.3 MAJOR RENEWALS ALLOCATION PROGRAMS

The Commission's draft decision adopted a 20 per cent reduction across the majority of the renewals allocation programs for its draft decision in accordance with the reasons outlined in section 4.2. The Commission requested that Deloitte review Melbourne Water's response to the draft decision and request additional information where further clarification was required.

Deloitte recommended that the 20 per cent reduction be revised to 12.5 per cent on the basis that some additional justification for expenditure levels was provided, but that there was still insufficient evidence that the original 2011-2012 business cases had been adequately updated. It also recommended that a 10 per cent reduction be maintained for the 'retarding basin spillway/embankment upgrade' program.

The Commission also considered submissions received regarding its draft decision. The Port Phillip & Westernport CMA submission expressed concern with the reductions for the waterways and drainage capital expenditure proposed in the Commission's draft decision. In particular that "short-term financial savings will generate higher long-term costs" and that "reducing current capital expenditure will literally transfer costs to future generations."²⁴

EPA Victoria stated in its submission that it:

*is concerned that a 20 per cent reduction in Melbourne Water's program of works for wetland management will put Melbourne Water at high risk of failing to meet their environmental obligations.*²⁵

In response to these concerns, we emphasise that our draft decision proposed reductions to the expenditure forecasts put forward by Melbourne Water, which were considerably higher than its historical expenditure levels. Even after our proposed reductions to Melbourne Water's renewals allocation programs, the benchmark capital

²⁴ Port Phillip & Westernport CMA 2016, Submission, 26 April, p. 2.

²⁵ Environment Protection Authority Victoria 2016, Submission, 26 April, p. 3.

expenditure forecasts allowed in our draft decision were higher than for the current pricing period.

The benchmark allowances adopted in our draft (and subsequently final) decision are considered to better reflect the capital expenditure that 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. Any reduction from Melbourne Water’s proposed expenditure forecasts should not be misconstrued as the removal of a specific project or a reduction in the extent of works to be undertaken, but rather seen as a more efficient expenditure level to deliver the same proposed outcomes. Our assessment is based on information provided by Melbourne Water, its recent history of underspending on its capital programs, and our concerns that business case documents used to justify the major projects had not been updated to account for current contract unit rates or efficiencies learned from other completed projects.

For our final decision, the Commission accepts Deloitte’s recommendation based on the further justification provided by Melbourne Water. It also accepts Melbourne Water’s justification for the Land Development Works program and has removed the reductions applied for the draft decision. Table 4.4 summarises the Commission’s final decision for renewals allocation programs.

TABLE 4.4 FINAL DECISION RENEWALS ALLOCATION PROGRAMS
2015-16 \$ million

	Draft decision	Final decision	Difference
Water	95.0	103.9	8.9
Sewerage	172.8	189.0	16.2
Waterways and Drainage	637.1 ^a	641.9	4.8
Total	904.8	934.7	29.9

Source: Melbourne Water 2016, *2016 Price Submission – Response to ESC Draft Decision*, 26 April; Deloitte 2016, *Melbourne Water expenditure review – supplementary report*, 30 May.

^a Two major projects for waterways and drainage were also included in the major renewals allocation program amount. These have been removed for the final decision.

4.3.4 BROADER CAPITAL PROGRAM

For its final decision, the Commission retains the 5 per cent reduction specified in its draft decision for the remaining expenditure not classified as major projects or allocations programs. As detailed in the draft decision, this was based on systemic issues identified across Melbourne Water’s major projects and major allocations programs.

The Commission also had regard to public submissions received from urban water businesses and other stakeholders. Yarra Valley Water submitted²⁶ that it believed the “Commission’s [draft] decision is appropriate...unless there is evidence that the overall asset base is deteriorating and consequently, risk level is increasing”. City West Water also supported, in principle, the Commission’s draft decision.²⁷

Conversely, Stephen Cannon submitted that capital expenditure should not be cut on the basis that:²⁸

[Melbourne Water’s] submission, the Labor Government’s Water for Victoria discussion paper currently open for comment , and other public documents are forecasting extraordinary population growth for Melbourne, doubling to around 8 million or more by the middle of this century ie in only 3 decades after the 5-year pricing period under review.

Although Melbourne Water provided additional information that supported the inclusion of more expenditure for the major projects and major renewals allocation programs, there were still broader concerns regarding the processes for updating old business cases and cost estimates to reflect current unit rates and market conditions. The Commission believes that a 5 per cent reduction better reflects prudent expenditure required for Melbourne Water to deliver on its proposed outcomes, whilst also taking into account a planning horizon that extends beyond 2016-17 to 2020-21. In its own response to the draft decision, Melbourne Water also stated its support of a 5 per cent

²⁶ Yarra Valley Water 2016, Submission, 26 April, p. 3.

²⁷ City West Water 2016, Submission, 2 May, p. 1.

²⁸ Stephen Cannon 2016, Submission, 28 April, p. 2.

reduction noting, that it would “further encourage innovation while not posing such a high risk to levels of service and delivery of obligations”.²⁹

4.3.5 OTHER CAPITAL EXPENDITURE ISSUES

CAPITAL EXPENDITURE FOR IMPROVED COMMUNITY ASSETS

The Commission requested further information on Melbourne Water’s plans to deliver \$29.9 million of community focused assets to improve liveability.³⁰

Melbourne Water indicated that the bulk of this expenditure (\$16.3 million) is intended for the provision of 30 hectares of green space for shade and cooling near designated waterways and land — therefore, the Commission has focused its assessment of prudence and efficiency on this ‘urban cooling component’. Melbourne Water advised that green space and urban cooling will be achieved through the planting of vegetation, capturing and treating onsite water runoff, and water storage and irrigation.

The remaining \$13.6 million is intended for:

- returning concrete drains to a more natural state by replanting waterways with native plants
- providing guidance to land managers and communities to allow for a coordinated approach for land use
- developing publicly accessible programs, including the “Our Space Your Place” application, Seed Funding and other small programs.

Melbourne Water advised the Commission that the \$16.3 million was allocated to 30 hectares of green space based on an expected average cost per hectare. The \$600 000 per hectare average cost (nominal) was based largely on Melbourne Water’s internal data and other assumptions.

²⁹ Melbourne Water 2016, *Response to ESC Draft Decision*, April, p. 16.

³⁰ In response to our request for further information in the draft decision, Melbourne Water also provided information on how it believes these projects fall within its obligations under the *Water Act 1989*.

In response, the Commission engaged Deloitte to review the prudence of the sites selected by Melbourne Water and subject of the above expenditure.

Deloitte was advised by Melbourne Water that specific sites were not yet identified and that plantings may take place on adjoining land — that is, presumably, on land which is not owned or controlled by Melbourne Water.

In addition, Melbourne Water advised Deloitte that it proposes to operate the green space and urban cooling program similar to the Living Rivers program — that is, it would operate and co-fund in partnership with other organisations, community groups and volunteers. However, Melbourne Water did not provide any supporting information about these proposed arrangements.

In light of the above, the Commission considers that Melbourne Water has not provided sufficient information to the Commission for it to assess the proposed expenditure.

The Commission considers that the location of sites is an important and relevant input in the calculation of a reasonably-based estimate of project cost. Specifically, site location is likely to inform the amount of vegetation required and associated cost at each site, as well as the costs of installation and replacement of vegetation over the regulatory period. Without identifying site locations, in the Commission's view, it cannot make a proper assessment about the efficiency and prudence of the expenditure.

In addition, the Commission considers it is unable to make a proper assessment about the extent of expected benefits to customers — in particular, it is unclear who will benefit from the green space, as well as the efficient distribution of those benefits across Melbourne Water's customers (that is, whether the plantings are proposed to be concentrated in a particular area or located across Melbourne Water's district).

Finally, it remains unclear who will participate in the co-funded program, and the level of funding provided by such partners — which may reduce the costs incurred by Melbourne Water. It is also unclear how Melbourne Water proposes to treat expenditure incurred on planting or works on adjoining land.

In the absence of critical information to assess the prudence and efficiency of the expenditure as required by the WIRO³¹, the Commission has determined not to allow Melbourne Water to recover the costs of the project through pricing at this time.

In our draft decision, we applied the 5 per cent reduction described in section 4.3.4 to the \$29.9 million proposed by Melbourne Water for community focused assets (allowing \$28.4 million). Our final decision to remove the allowance for green space and urban cooling reduces our draft decision allowance by \$15.5 million.

4.4 FINAL DECISION

The Commission adopts the benchmark capital expenditure forecast as set out in table 4.5, to establish Melbourne Water's revenue requirement for the purpose of determining prices for the 2016-17 to 2020-21 regulatory period.

³¹ In accordance with the WIRO, clauses 11 and 15(b)(ii) and the Commission's guidance paper, sections 3.2.3 and 4.6.1.

TABLE 4.5 FINAL DECISION ANNUAL GROSS CAPITAL EXPENDITURE, BY SERVICE CATEGORY
2015-16 \$ million

	Total draft decision	Fourth regulatory period					Total final decision
		2016-17	2017-18	2018-19	2019-20	2020-21	
Water	440.5	113.4	89.8	84.9	107.4	86.2	481.6
plus desalination capitalisation	100.0	30.0	30.0	30.0	30.0	30.0	150.0
Sewerage	905.7	191.1	278.3	208.2	153.4	118.0	948.9
Recycled Water	7.6	1.3	1.4	1.4	1.5	1.5	7.2
Waterways and Drainage	861.7	157.3	151.4	186.2	191.0	181.9	867.8
Diversions	0.9	0.2	0.2	0.2	0.2	0.2	0.9
Total prescribed capital expenditure	2 316.5	493.3	551.0	510.8	483.5	417.7	2 456.4

Note: Numbers have been rounded.

5 FINANCING CAPITAL INVESTMENTS

5.1 INTRODUCTION

This chapter sets out the Commission’s final decision on Melbourne Water’s financing of capital investments — namely, the regulatory asset base (RAB), the rate of return on investments, tax and regulatory depreciation.

5.2 COMMISSION’S DRAFT DECISION ON THE RAB

In our draft decision, we approved Melbourne Water’s proposed opening RAB for 2016-17. We considered that Melbourne Water’s proposed opening RAB was calculated in accordance with our guidance.

The Commission’s draft decision proposed to approve a different forecast RAB for each year of the regulatory period. We proposed to revise Melbourne Water’s forecast to reflect the outcomes of our capital expenditure review. We also adopted higher estimates for customer contributions of \$62.6 million each year, compared with the average \$55.7 million each year proposed by Melbourne Water. We considered that our revisions better reflected the latest data on developer activity.

5.3 COMMISSION’S REVIEW OF THE RAB

In response to our draft decision, Melbourne Water proposed no changes to its opening RAB.

To approve the opening RAB, we confirmed actual capital expenditure, less any actual contributions and proceeds from asset disposals as at 1 July 2015.

In determining the RAB as at 1 July 2016 which incorporates forecast parameters, the Commission proposes to accept the forecasts approved in the draft decision (that is, net capital expenditure, regulatory depreciation and assumed proceeds from disposal), except for the forecast customer contributions for 2015-16.

In the Commission's guidance paper, the Commission indicated that the opening RAB as at 1 July 2016 is to be calculated by, amongst other adjustments, deducting actual customer contributions for 2013-14 and 2014-15, and for 2015-16, the forecast benchmark contribution established in our 2013 final decision for Melbourne Water (\$47.7 million).³²

However, since the draft decision, Melbourne Water provided the Commission with updated forecasts for customer contributions for 2015-16 taking into account actual developer activities occurring over this period.³³

Specifically, Melbourne Water's updated forecast for (capital) developer contributions revenue for 2015-16 is \$105.2 million — which represents a peak in land development activity and a departure from historical trend. The increase in customer contributions is a result of a number of industry factors including stronger local economy from net overseas migration, and lower interest rates encouraging investor activity.

Melbourne Water explained that given the higher than expected development activity and therefore higher than forecast contributions over the current year to date, it would update its forecast across 2016-17 to 2020-21. It noted it did not view the 2015-16 peak in land development activity was sustainable across the regulatory period.

In accordance with the updated forecast, Melbourne Water proposed an increase in customer contributions relative to our draft decision to reflect its latest information on developer activity. The forecast contributions over 2016-17 to 2020-21 ranged from \$57.9 million to \$71.5 million, resulting in an average contribution of \$66.6 million per year over that period.

³² Essential Services Commission 2015, *Melbourne Water 2016 Price Review – Guidance paper*, April, p. 26.

³³ Melbourne Water's response to the Commission's questions, June 2016.

Given the above, the Commission's final decision:

- adjusts the opening RAB to reflect the latest, most accurate forecast for customer contributions for 2015-16
- accepts Melbourne Water's revised forecast customer contributions over 2016-17 to 2020-21.

Table 5.1 sets out the Commission's final decision on Melbourne Water's RAB for 2016-17 to 2020-21. The Commission's final decision on the RAB also reflects our final decision on:

- capital expenditure (chapter 4) and
- regulatory depreciation (section 5.11).

Table 5.1 sets out Melbourne Water's opening RAB.

TABLE 5.1 FINAL DECISION ON MELBOURNE WATER'S RAB FOR 2016-17 TO 2020-21
2015-16 \$ million

Closing RAB as at 1 July 2013	9 509.3
Plus net capital expenditure 2013-14 to 2014-15 (actual)	619.3
Less regulatory depreciation 2013-14 to 2014-15 (actual)	348.3
Less proceeds from disposal of assets 2013-14 to 2014-15 (actual)	8.7
Less customer contributions 2013-14 to 2014-15 (actual)	122.7
RAB as at 1 July 2015	9 648.9
Plus net capital expenditure (approved forecasts) 2015-16 (forecast)	535.8
Less regulatory depreciation 2015-16 (forecast)	206.3
Less assumed proceeds from disposal of assets 2015-16 (forecast)	2.6
Less assumed customer contributions 2015-16 (actual)	105.2
RAB as at 1 July 2016	9 870.5

Note: Numbers have been rounded.

TABLE 5.2 FINAL DECISION ON MELBOURNE WATER'S RAB FOR 2016-17 TO 2020-21
2015-16 \$ million

	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
Opening RAB	9 648.9	9 870.5	10 118.6	10 418.4	10 661.8	10 861.9
Plus gross capital expenditure	535.8	493.3	551.0	510.8	483.5	417.7
Less customer contributions	105.2	70.2	57.9	63.2	70.4	71.2
Less proceeds from disposals	2.6	11.3	13.8	9.8	6.1	5.9
Less regulatory depreciation	206.3	163.8	179.5	194.4	207.0	218.9
Closing RAB	9 870.5	10 118.6	10 418.4	10 661.8	10 861.9	10 983.6

Note: Numbers have been rounded.

5.4 FINAL DECISION ON THE RAB

The Commission has approved amounts for inclusion into Melbourne Water's RAB as at 1 July 2015 and the forecast RAB from 1 July 2016 to 30 June 2021, as set out in tables 5.1 and 5.2.

5.5 COMMISSION'S DRAFT DECISION ON THE RATE OF RETURN

In its price submission, Melbourne Water proposed:

- a 10 year trailing average approach to estimate the entire benchmark cost of debt (risk free rate plus debt premium) for each year from 2016-17 to 2020-21
- a simple average of actual market 10 year historical debt costs, which reflected corporate BBB bonds yields using the Reserve Bank of Australia (RBA) data series and the 2008 global financial crisis (GFC) cost of debt — which did not directly affect Melbourne Water as it does not borrow from private markets

- an annual updated cost of debt allowance whereby the 10 year average is rolled forward each year through the regulatory period
- the annual debt costs be calculated as a simple average over an entire 12 month period from 1 April to 31 March
- immediate transition from the current on-the-day approach to the proposed 10 year trailing average approach (that is, from 2016-17).

In our draft decision, we assessed Melbourne Water’s proposed trailing average approach was materially different to the regulatory allowance under the on-the-day³⁴ approach, or the actual cost of debt, because Melbourne Water included the GFC cost of debt and proposed immediate transition to the trailing average approach. Therefore, we considered that Melbourne Water’s proposed WACC did not reflect an efficient benchmark cost to be reflected in its prices.

We approved a weighted average cost of capital (WACC) of 4.2 per cent for 2016-17 to 2020-21, based on the on-the-day approach to estimating the benchmark cost of debt. We invited Melbourne Water to resubmit a trailing average approach to estimating the cost of debt, reflecting a debt series that excludes the 2008 GFC cost of debt.

5.6 SUBMISSIONS AND COMMISSION’S REVIEW OF THE RATE OF RETURN

5.6.1 DATA SERIES TO CALCULATE THE HISTORICAL COST OF DEBT

In response to our draft decision, Melbourne Water submitted a revised historical debt series using:

- actual Treasury Corporation of Victoria³⁵ (TCV) lending rates plus a corresponding Financial Accommodation Levy (FAL) to determine final rates at which a BBB rated entity could have borrowed from TCV during the GFC years (2008-09 to 2012-13)

³⁴ Under the on-the-day approach, the regulatory cost of debt allowance is fixed for the entire regulatory period at the prevailing rate at the beginning of the regulatory period.

³⁵ As a government owned business, Melbourne Water is required to borrow from Treasury Corporation Victoria.

- Reserve Bank of Australia (RBA) 10 year rates reflecting BBB rated corporate bonds for the non-GFC years (2006-07 to 2007-08, 2013-14 to 2014-15)
- a simple average of 10 year historical debt costs (risk free rate plus debt premium)
- the annual debt costs calculated as a simple average over a 12 month averaging period from 1 April to 31 March.

Table 5.3 sets out, for 2006-07 to 2015-16, Melbourne Water's:

- revised benchmark cost of debt in response to our draft decision (3.80 per cent, real)
- weighted average actual cost of debt (3.56 per cent, real).

Melbourne Water's proposed average historical benchmark cost of debt is higher than its historical weighted average actual cost of debt. The proposed average historical cost of debt is applied to the calculation of Melbourne Water's proposed 2016-17 WACC. We compared the impact of Melbourne Water's proposed historical benchmark cost of debt with the impact of the actual cost of debt on Melbourne Water's 2016-17 revenue requirement. The impact of Melbourne Water's proposal on its revenue requirement is relatively minor.

The Commission accepts Melbourne Water's:

- revised historical benchmark (BBB rated) cost of debt series
- simple average of 10 year historical debt costs (risk free rate plus debt premium)
- annual debt costs calculated as a simple average over a 12 month averaging period from 1 April to 31 March.

We consider that Melbourne Water's proposal is likely to provide reasonable estimates of the efficient debt costs associated with the provision of prescribed services. A trailing average approach is likely to produce cost of debt estimates that better reflect the debt financing costs of an efficient business.

5.6.2 FORECAST WEIGHTED AVERAGE COST OF CAPITAL

In response to our draft decision, Melbourne Water proposed a trailing average WACC of 4.4 per cent for 2016-17 and a forecast WACC for each year from 2017-18 to

2020-21, based on forecast debt costs and its trailing average method. It proposed forecasting WACC so its forecasts for revenue and proposed prices better reflected market expectations for movements in interest rates.

Table 5.4 sets out Melbourne Water's proposed forecast WACC using TCV forward rates for 2016-17 to 2020-21.

Melbourne Water provided the TCV data used to calculate its real trailing average cost of debt and WACC for 2016-17. TCV calculated a real 2016-17 WACC of 4.3 per cent. To estimate the real 2016-17 WACC, TCV used the nominal debt series to calculate a nominal trailing average WACC for 2016-17, as the historical cost of debt series is in nominal values, and then converted it to a real WACC.³⁶

In response to our queries, Melbourne Water proposed the Commission calculate real cost of debt and equity values then convert it to nominal values to calculate a nominal WACC.³⁷ The nominal WACC should then be converted to a real WACC. This results in a real 2016-17 WACC of 4.4 per cent.

We assess, and confirmed with TCV, that TCV's approach is the more accurate approach to estimating a real trailing average WACC. For this reason we approve a WACC of 4.3 per cent for 2016-17.

³⁶ TCV's approach to calculating the real trailing average WACC is also used by other regulators, as businesses do not raise debt on a real basis due to constraints in debt markets.

³⁷ Melbourne Water's responses to the Commission's questions, May and June 2016.

TABLE 5.3 MELBOURNE WATER'S HISTORICAL REAL COST OF DEBT FOR 2006-07 TO 2015-16

Per cent

	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	Average
Melbourne Water revised proposal ^a	3.72	4.11	3.98	4.74	4.17	3.44	2.56	4.40	2.95	3.94	3.80
Weighted average actual cost	3.38	3.50	3.19	3.66	3.84	3.78	3.42	3.52	3.64	3.62	3.56

^a Melbourne Water's revised historical cost of debt was converted to real rates using the historical inflation for 2006-07 to 2014-15 provided in Incenta's report (p. 31). For 2015-16, the March quarter consumer price index was used to convert to the real rate for 2015-16

Sources: Incenta Economic Consulting 2016, *Melbourne Water – trailing average cost of debt*, February; Melbourne Water's price submission, Oct 2015; Melbourne Water 2016, *2016 Price Submission – Response to ESC Draft Decision*, 26 April; and Melbourne Water's response to Commission questions, May 2016.

TABLE 5.4 MELBOURNE WATER’S PROPOSED REAL WACC USING MELBOURNE WATER’S TRAILING AVERAGE APPROACH

Real	2016-17 to 2020-21				
Risk Free Rate	0.7%				
Equity Premium	6.0%				
Equity Beta	0.65				
Gearing (Debt/Assets)	60%				
Forecast Inflation	2.2%				
Cost of equity	4.6%				
	2016-17	2017-18	2018-19	2019-20	2020-21
Total cost of debt	4.2%	4.1%	3.9%	3.9%	3.8%
Real post-tax WACC	4.4%	4.3%	4.2%	4.2%	4.1%

Source: Melbourne Water 2016, *2016 Price Submission – Response to ESC Draft Decision*, 26 April.

Our guidance did not set out a trailing average method but stated that we would consider that approach. We note Yarra Valley Water’s public submission in support of the trailing average approach but not a forecast WACC.³⁸ We also prefer a trailing average approach that establishes a single WACC for 2016-17 to 2020-21 and is updated each year for the actual cost of debt. However, we consider this is a matter of detail that we will further explore during our review of pricing services for the water sector.³⁹ The merits of adopting a trailing average approach outweigh these matters of detail because the approach:

- reduces price volatility
- aligns the regulatory allowance for financing costs with actual costs (annual updates)
- reduces refinancing risks.

³⁸ Yarra Valley Water 2016, Submission, April.

³⁹ Essential Services Commission 2016, *A new model for pricing services in Victoria’s water sector-position paper*, May, p. 45. Our paper outlines our proposal to move to a trailing average approach for the water industry. Interested parties are invited to provide written submissions on our proposal.

We also note consumer groups' submission in support of a trailing average approach to reduce price volatility.⁴⁰ We assess that the benefits of a trailing average approach outweigh the added complexity of Melbourne Water's proposed method. While we accept Melbourne Water's approach in this case, for future price reviews, we are not bound to Melbourne Water's proposed forecast trailing average approach to estimating the cost of debt. This matter will be explored in our review of a new model for pricing services in the water sector.

For the purposes of Melbourne Water's 2016-17 to 2020-21 price determination, the Commission accepts Melbourne Water's forecast WACC assumptions for 2016-17 to 2020-21 based on its proposed 10 year trailing average method. But the Commission requires the trailing average WACC to be estimated in nominal values then converted to a real WACC.

5.6.3 TRANSITION TO THE TRAILING AVERAGE APPROACH

In response to our draft decision, Melbourne Water proposed the trailing average WACC immediately apply from 2016-17. The average of Melbourne Water's proposed forecast WACC for 2016-17 to 2020-21 is 4.2 per cent. The on-the-day WACC, our current approach to estimating WACC, is calculated at 4.1 per cent for that period. We compared Melbourne Water's average forecast WACC with the on-the-day WACC over 2016-17 to 2020-21 and found the impact on Melbourne Water's revenue requirement is relatively minor.

The Commission accepts Melbourne Water's proposal to immediately transition to the trailing average approach (that is, from 2016-17).

5.6.4 ANNUAL UPDATING

In response to our draft decision, Melbourne Water proposed:

- updating the WACC each year to reduce misalignment between the actual cost of debt and the regulatory allowance. For simplicity, Melbourne Water proposed

⁴⁰ Consumer Utilities Advocacy Centre and Consumer Action Law Centre 2016, Submission, April.

limiting the annual WACC update to recalculating only the return on asset (ROA) allowance (WACC multiplied by the RAB) for each regulatory year

- the WACC update impact on the regulated revenue allowance (through the recalculation of the ROA allowance) and tariffs for the following services:
 - storage operator and bulk water services
 - bulk sewerage services
 - metropolitan waterways and drainage services (including Patterson Lakes Jetties). In addition, Melbourne Water proposed that the updated WACC impact non-residential waterways and drainage customers (not residential customers and rural customers)
 - diversions.

We undertook sensitivity analysis of Melbourne Water’s proposal and compared alternative annual updating approaches. We found the impact of limiting the annual WACC update to recalculating only the annual ROA allowance and impacting the tariffs of the services proposed by Melbourne Water — including non-residential waterways and drainage charges — to be relatively minor. We also assess Melbourne Water’s proposal to be administratively simple. However, for Patterson Lakes Jetties tariffs we assess an inconsistency between Melbourne Water’s proposals for the tariffs to be fixed in nominal values and adjusted each year to reflect the actual WACC. Our final decision approves Patterson Lakes Jetties tariffs fixed in nominal values (chapter 8).

The Commission accepts Melbourne Water’s proposal:

- to limit the annual WACC update to recalculating the return on asset allowance and to impact the tariffs of the services proposed by Melbourne Water, except the Patterson Lakes Jetties tariffs
- to pass through the impact of the WACC update to only non-residential waterways and drainage customers (not residential customers and rural customers).

DATA SOURCE

To estimate the future cost of debt from 2016-17 for the annual WACC updates, Melbourne Water proposed⁴¹ using the RBA’s BBB rated cost of debt series for 10 year

⁴¹ Melbourne Water’s response to the Commission’s questions, May.

bonds. The RBA series is publicly available on a monthly basis and is used by other regulators.

The Commission accepts Melbourne Water's proposed data source⁴².

Table 5.5 outlines the Commission's final decision on Melbourne Water's real post-tax WACC for 2016-17 to 2020-21.

⁴² TCV will provide Melbourne Water and the Commission with the cost of debt estimates based on the RBA data series.

TABLE 5.5 FINAL DECISION ON REAL POST-TAX WACC FOR MELBOURNE WATER

Real	Source of parameter	2016-17 to 2020-21				
Risk free rate	Commission estimate	0.7%				
Equity premium	Guidance paper	6.0%				
Equity beta	Guidance paper	0.65				
Financing structure (debt/assets)	Guidance paper	60%				
Franking credits	Guidance paper	0.50				
Forecast inflation	Commission estimate	2.2%				
Cost of equity	Commission estimate	4.6%				
		2016-17	2017-18	2018-19	2019-20	2020-21
Cost of debt	Melbourne Water estimate	4.2%	4.1%	3.9%	3.9%	3.8%
Vanilla post-tax WACC		4.3%	4.3%	4.2%	4.2%	4.1%

5.7 FINAL DECISION ON THE RATE OF RETURN

The Commission's final decision on the real post-tax weighted average cost of capital is outlined in table 5.5.

The Commission accepts Melbourne Water's proposed approach to estimating the trailing average forecast WACC for 2016-17 to 2020-21 but Melbourne Water must estimate the trailing average WACC in nominal values, by applying nominal data, then convert it to a real WACC.

The Commission accepts Melbourne Water's proposal to impact the annual WACC update to the tariffs of the services proposed by Melbourne Water, except the Patterson Lakes Jetties tariffs.

While we accept Melbourne Water's proposed trailing average method in this case, for future price reviews, we are not bound to Melbourne Water's proposed forecast trailing average approach to estimating the cost of debt.

5.8 COMMISSION'S DRAFT DECISION ON MELBOURNE WATER'S TAX LIABILITY

The Commission's approach to tax is to establish a benchmark tax liability that will be reflected in the revenue requirement for a water business. In other words, we do not seek to approve amounts that necessarily reflect the actual tax paid by a business. Our benchmark tax calculation is set out at table 5.6.

TABLE 5.6 BENCHMARK TAXATION LIABILITY CALCULATION^a

	Revenue requirement
plus	Customer contributions
less	Operating and maintenance expenditure
less	Taxation depreciation
less	Interest expense
less	Asset tax losses brought forward
equals	Total benchmark taxable income
multiply by	Corporate taxation rate ^b
equals	Total benchmark taxation liability (gross)
less	Value of imputation credits ^c
equals	Total benchmark taxation liability (nominal)
	Convert to real terms (\$1 January 2016)
equals	Total benchmark taxation liability (gross) (real)

a. Nominal values are used to calculate total benchmark liability. b. Total benchmark taxable income is multiplied by the corporate tax rate of 30 per cent divided by $(1-0.3(1-\gamma))$, where γ (gamma) represents the value of franking credits as a proportion of total tax payments. c. Value of imputation credits is the gross tax payment multiplied by $(1-\gamma)$.

Melbourne Water's price submission initially proposed a zero benchmark tax liability for 2016-17 to 2020-21. In late 2015, after providing us with its original price submission, Melbourne Water advised that it had increased its estimate for its forecast tax liability. The updated forecast reflected its assessment of the impact of an Australian Taxation Office (ATO) ruling on the tax treatment of its desalination payments.

Prior to the ATO ruling, Melbourne Water forecast its tax liability assuming that it could deduct the capital value of the desalination plant for the purposes of calculating income tax. In late 2015, the ATO ruled that Melbourne Water could not claim this deduction until the business takes ownership of the desalination plant in 2039. To reflect the ATO ruling, Melbourne Water advised us that this had increased its forecast tax liability for pricing purposes to around \$38 million over the period from 2016-17 to 2020-21.

The Commission's draft decision approved a benchmark tax liability of around \$30 million (table 5.7). Our draft decision mainly reflected the impact of the higher WACC estimate adopted by the Commission in our draft decision (relative to Melbourne

Water’s proposal), which increased Melbourne Water’s forecast revenue requirement and tax liability. We considered that the benchmark tax liability allowed in our draft decision would cover the impact of the ATO’s ruling on Melbourne Water.

TABLE 5.7 MELBOURNE WATER’S PROPOSED TAX LIABILITY AND COMMISSION’S DRAFT DECISION
2015-16 \$ million

	2016-17	2017-18	2018-19	2019-20	2020-21	Total
Melbourne Water’s proposed tax – price submission	0.0	0.0	0.0	0.0	0.0	0.0
Melbourne Water’s proposed tax – November 2015 update	4.7	8.4	7.9	8.3	8.8	38.1
Draft decision	0.4	3.6	5.7	8.7	11.9	30.3

Source: Melbourne Water’s price submission and updated tax liability following the Australian Taxation Office private ruling.

Note: Numbers have been rounded.

5.9 COMMISSION’S REVIEW OF MELBOURNE WATER’S TAX LIABILITY

Following our draft decision, Melbourne Water advised us that in its view, we had not fully accounted for the impact of the ATO decision on its forecast tax liability.

Melbourne Water’s response to our draft decision forecasts a benchmark tax liability of around \$89 million over the fourth regulatory period. This incorporated its estimate of the impact of our draft decision, the ATO’s ruling on the tax treatment of its desalination security payments, and changes it proposed to our draft decision. We have reviewed Melbourne Water’s forecast tax liability for our final decision.

We note that the ATO considers that a portion of Melbourne Water’s annual desalination payments are referable to the purchase of a capital asset; that is, they are capital in nature. The capital amounts referred to by the ATO are likely to be around \$45 million to \$55 million per year over the fourth regulatory period, above the \$30 million per year of desalination payments that Melbourne Water has proposed to treat as capital expenditure for pricing purposes (chapter 3).

As noted in chapter 3, the amounts assumed as capital payments for tax purposes may provide a reasonable benchmark to ascertain the amount to be capitalised in any one year. By choosing to capitalise \$30 million per year for pricing purposes rather than the \$45 to \$55 million per year assumed for tax purposes, Melbourne Water is claiming to recover revenue now that relates to costs associated with the purchase of a future asset. However, it is also basing its forecast for tax payments on the basis that higher amounts are being capitalised than \$30 million.

To ensure consistency of assumptions for pricing, for the purpose of forecasting Melbourne Water’s benchmark tax liability we have assumed for our final decision that \$45 million per year is capitalised, not \$30 million. This has the effect of reducing Melbourne Water’s tax liability relative to its response to our draft decision (table 5.8). The magnitude of the adjustment is the difference between the tax payable assuming \$30 million of Melbourne Water’s annual desalination security payments are treated as capital expenditure, versus \$45 to \$55 million per year.

We note that the tax liability benchmark approved in our final decision is much higher than the zero benchmark originally proposed by Melbourne Water in its October 2015 price submission.

TABLE 5.8 COMMISSION’S FINAL DECISION TAX LIABILITY
2015-16 \$ million

	2016-17	2017-18	2018-19	2019-20	2020-21	Total
Melbourne Water response to draft decision	15.7	17.0	17.1	19.5	19.3	88.5
Final decision	10.6	14.5	13.8	14.1	14.4	67.5

Note: Numbers have been rounded.

5.10 FINAL DECISION ON MELBOURNE WATER’S TAX LIABILITY

The Commission’s final decision on Melbourne Water’s tax liability is set out in table 5.8.

5.11 COMMISSION'S FINAL DECISION ON DEPRECIATION

In its final decision (table 5.9), the Commission accepts Melbourne Water's depreciation allowance based on a straight line approach — the same approach used in past price reviews.

TABLE 5.9 COMMISSION'S FINAL DECISION DEPRECIATION ALLOWANCE
2015-16 \$ million

	2016-17	2017-18	2018-19	2019-20	2020-21	Total
Draft decision depreciation	163.8	180.0	195.3	208.1	220.2	967.5
Final decision depreciation	163.8	179.5	194.4	207.0	218.9	963.7

Note: Numbers have been rounded.

6 DEMAND

6.1 INTRODUCTION

This chapter sets out the Commission’s final decision on Melbourne Water’s demand forecasts. We require Melbourne Water to submit demand forecasts to calculate the tariffs that Melbourne Water may charge its customers over the regulatory period. Specifically, the calculation of water charges is a function of the water business’s approved revenue and forecast demand over the regulatory period.

Melbourne Water agreed to our draft decision on bulk water tariff reforms (chapter 7). Accordingly, fixed bulk water tariffs will account for over 80 per cent of Melbourne Water’s tariff revenues from 2016-17 to 2020-21.

The components of Melbourne Water’s demand forecast include water and sewage volumes (for bulk water and sewerage variable tariffs) and growth in end-use customer numbers (for waterways and drainage tariffs). Melbourne Water forecasts an increase in demand for its services from 2016-17 to 2020-21.

6.2 COMMISSION’S DRAFT DECISION

In our draft decision, we proposed to approve Melbourne Water’s demand forecasts (bulk water and bulk sewage volumes, and waterways and drainage customer numbers) with a minor amendment — that is, Melbourne Water’s bulk water demand forecast must also reflect Western Water’s forecasts of demand because the forecasts were based on the latest information available and took into account reduced local supply in Western Water’s supply district. In our view, Melbourne Water did not have a reasonable basis to reject the forecasts proposed by Western Water.

6.3 SUBMISSIONS AND COMMISSION'S REVIEW

Melbourne Water agreed to our draft decision on demand forecasts (bulk water and bulk sewage volumes, and waterways and drainage customer numbers), which reflected Western Water's bulk water forecasts.

The Consumer Utilities Advocacy Centre and Consumer Action Law Centre had the following comment on our draft decision on demand forecasts:

*...the intention of the Victorian State Government to “reactivate the Target 155 water savings campaign”. We query the extent to which the Commission has taken the effect of this policy into its demand forecasts and the flow on effects for consumers given the revenue requirement.*⁴³

We discussed the Target 155 water savings campaign with water retailers who advised that their end-use customer volume assumptions did not materially depart from the “Target 155” volume per customer.

In our view, the Commission is satisfied that the water retailers' forecasts have taken into account water saving rules. Specifically, Melbourne Water's Frontier Economics report concluded that “all of the metropolitan water businesses have assumed ongoing non-price water conservation savings in their end user models”.⁴⁴

6.4 FINAL DECISION

For the above reasons, we have confirmed our draft decision. Accordingly, tables 6.1, 6.2 and 6.3 set out the Commission's final decision on the water businesses' demand forecasts.

⁴³ Consumer Utilities Advocacy Centre and Consumer Action Law Centre 2016, Submission, April.

⁴⁴ Frontier Economics 2015, *Metropolitan bulk water and sewerage demand review 2016*, September, p 26.

TABLE 6.1 FINAL DECISION ON FORECAST TOTAL WATER VOLUMES, BY BUSINESS
Megalitres

	2016-17	2017-18	2018-19	2019-20	2020-21
City West Water	105 300	105 900	105 900	106 600	107 200
South East Water	145 100	146 200	147 100	148 100	149 200
Yarra Valley Water	150 250	150 870	151 540	152 260	153 150
Western Water	10 700	10 900	11 100	9 300	9 600
Total	411 350	413 870	415 640	416 260	419 150

Source: Commission's draft decision, March 2016.

TABLE 6.2 FINAL DECISION ON FORECAST SEWAGE VOLUMES, BY BUSINESS
Megalitres

	2016-17	2017-18	2018-19	2019-20	2020-21
City West Water	89 600	90 500	91 400	92 300	93 300
South East Water	110 300	111 500	112 700	114 000	115 300
Yarra Valley Water	118 500	118 900	119 300	119 800	120 300
Total	318 400	320 900	323 400	326 100	328 900

Note: Western Water does not demand any bulk sewage services from Melbourne Water.

Source: Melbourne Water's price submission, Oct 2015.

TABLE 6.3 FINAL DECISION — WATERWAYS AND DRAINAGE CUSTOMERS
'000

	2016-17	2017-18	2018-19	2019-20	2020-21
Residential	1 761	1 792	1 825	1 857	1 891
Non Residential	144	147	150	152	155
Rural	105	107	109	111	113
Patterson Lakes	1	1	1	1	1
Koo Wee Rup	4	4	4	4	4
Total	2 016	2 052	2 089	2 127	2 165

Source: Melbourne Water's price submission, Oct 2015.

7 BULK TARIFFS

7.1 INTRODUCTION

This chapter sets out the Commission’s final decision on Melbourne Water’s proposed bulk tariff structure and tariffs for 2016-17. Approved price paths for 2017-18 to 2020-21 are set out separately in the Commission’s final determination.

Melbourne Water provides bulk water and storage operator services and bulk sewerage services. It supplies these services to urban retailers City West Water, South East Water and Yarra Valley Water, as well as regional retailers Western Water and Gippsland Water. It also supplies these services to Barwon Water, South Gippsland Water and Westernport Water, as required.

In its 2016 price submission, Melbourne Water proposed changes to its tariff structure and levels for 2016-17 to 2020-21.

7.2 BULK WATER TARIFFS

7.2.1 COMMISSION’S DRAFT DECISION ON BULK WATER TARIFFS

In our draft decision, we proposed to approve Melbourne Water’s proposed headwork tariffs structure based on a fixed \$/ML of entitlement.

We also proposed to approve Melbourne Water’s proposed single variable transfer tariff for all retailers.⁴⁵

⁴⁵ Essential Services Commission 2016, *Melbourne Water Price Review 2016 - draft decision*, pp. 81–2.

7.2.2 SUBMISSIONS AND COMMISSION'S REVIEW OF BULK WATER TARIFFS

In response to our draft decision, Melbourne Water submitted its revised headworks tariffs for metropolitan retailers on a \$/ML of entitlement basis. As noted in our draft decision, expressing tariffs on the basis of \$/ML of entitlement is more transparent than fixed monthly fees and could encourage more efficient trade decisions for water entitlements. This approach will also allow automatic adjustment of tariffs to account for changes in the bulk entitlement volumes for each retailer, which Yarra Valley Water raised in its submission on our draft decision.⁴⁶

For regional retailers, Melbourne Water submitted fixed monthly charges, due to transitional arrangements that it proposed for the regional retailers to shift to the new entitlement framework. Our draft decision approved Melbourne Water's proposal for bulk water entitlement fees for regional retailers to be introduced from Year 3 of the fourth regulatory period, with deferred fees from Years 1 and 2 to be recovered over Years 3 to 5 (without interest charges). While Melbourne Water expressed the consolidated fees for Years 3 to 5 as a monthly charge, we consider the \$/ML of entitlement is more transparent.

Yarra Valley Water's submission on our draft decision stated its preference for Melbourne Water's tariffs to have a price path that matches the annual revenue requirement, to avoid tariff volatility between regulatory periods.⁴⁷ Melbourne Water's proposed fixed headworks price paths for the Greater Yarra System–Thompson River and North South Pipeline reflected the average cost for each system as a proportion of total fixed water costs (excluding the Victorian Desalination Plant) over the entire regulatory period. Accordingly, proposed annual price movements in each system were identical, with prices increasing each year in line with total water revenue, as shown in table 7.1.

⁴⁶ Yarra Valley Water 2016, *Draft decision on Melbourne Water's price submission*, March, p. 4.

⁴⁷ Yarra Valley Water 2016, *Draft decision on Melbourne Water's price submission*, March, p. 1.

TABLE 7.1 MELBOURNE WATER'S PROPOSED BULK WATER FIXED HEADWORKS TARIFFS AND PRICE PATHS
2015-16 \$/ML bulk entitlement

	2017–18	2018–19	2019–20	2020–21	2017–18
1. Total Fixed Water Revenue, excluding Victorian Desalination Plant revenue	241.65m	245.71m	247.85m	253.73m	255.89m
Greater Yarra System – Thomson River					
2. Proportion of total fixed water revenue allocated to Greater Yarra System – Thomson River (average over regulatory period)	86%	86%	86%	86%	86%
3. Proposed allocated revenue requirement (\$) (1 x 2)	207.60m	211.08m	212.92m	217.97m	219.83m
4. Total bulk entitlement (ML)	624 310	624 310	624 310	624 310	624 310
\$/bulk entitlement (3÷4) and prescribed price movement (PPM)	332.52	1.68%	0.87%	2.37%	0.85%
North South Pipeline					
5. Proportion of total fixed water revenue allocated to North South Pipeline (average over regulatory period)	14%	14%	14%	14%	14%
6. Proposed allocated revenue requirement (\$) (1 x 5)	34.06m	34.63m	34.93m	35.76m	36.06m
7. Total bulk entitlement (ML)	75 000	75 000	75 000	75 000	75 000
\$/bulk entitlement (6÷7) and PPM	454.09	1.68%	0.87%	2.37%	0.85%

Source: Melbourne Water 2016, *2016 Price Submission – Response to ESC Draft Decision*, Appendix 1 – Tariff Schedule, 26 April.

Consistent with Yarra Valley Water's submission, we consider a more cost reflective approach is to allow price paths to reflect the underlying annual costs for each system. We requested Melbourne Water to resubmit revised tariffs and price paths calculated on this basis. Revised price paths, which are more cost reflective, are outlined in the Commission's final determination.

Yarra Valley Water also noted the Victorian Government's plan to transfer 8 gegalitres of the metropolitan retail water utilities' Greater Yarra System–Thompson River bulk entitlements to the environment. This transfer is expected on 1 July 2016. We sought confirmation from the Victorian Government on the timing of the transfer, and found

that the transfer decision had not been confirmed at the time of our final decision. Our final decision tariffs therefore reflect the current retailer entitlements.

7.2.3 FINAL DECISION ON BULK WATER TARIFFS

The Commission's final decision on Melbourne Water's bulk water tariffs is set out in tables 7.2, 7.3, 7.4 and 7.5

The approved prescribed price movements are set out in the Commission's final determination.

TABLE 7.2 FINAL DECISION ON BULK WATER FIXED HEADWORKS TARIFFS
2015-16 \$/ML bulk entitlement

Greater Yarra System – Thomson River	2016–17
Price per bulk entitlement (\$)	327.97
<i>Retailer bulk entitlements (ML)</i>	
City West Water	155 227
South East Water	209 562
Yarra Valley Water	223 271
Western Water ^a	18 250
Barwon Water	16 000
South Gippsland Water ^a	1 000
Westernport Water ^a	1 000
Victorian Desalination Plant	2016–17
Price per bulk entitlement (\$)	3 731.80
<i>Retailer bulk entitlements (ML)</i>	
City West Water	39 595
South East Water	53 454
Yarra Valley Water	56 951
North South Pipeline	2016–17
Price per bulk entitlement (\$)	509.25
<i>Retailer bulk entitlements (ML)</i>	
City West Water, South East Water and Yarra Valley Water	25 000

^a Regional retailers' bulk water charges for 2016-17 to 2020-21 will be recovered from 2018-19 over the remainder of the regulatory period, in line with Melbourne Water's response to the draft decision.

TABLE 7.3 FINAL DECISION ON BULK WATER VARIABLE TRANSFER TARIFF
2015-16 \$/ML

	2016–17
Variable transfer tariff – City West Water, South East Water, Yarra Valley Water, Western Water	226.03

Source: Melbourne Water’s response to Commission’s queries.⁴⁸

TABLE 7.4 FINAL DECISION ON DESALINATION PLANT VARIABLE WATER ORDER TARIFF
2015-16 \$/ML entitlement

	2016–17
City West Water, South East Water, Yarra Valley Water	539.17

Source: Melbourne Water response to Commission’s queries.⁴⁹

TABLE 7.5 FINAL DECISION ON GIPPSLAND WATER’S TARIFFS
2015-16 \$

	2016–17
Headworks (\$/ML)	339.97
Transfer (\$/month)	1 136.55

Source: Melbourne Water’s response to Commission’s queries.⁵⁰

⁴⁸ Melbourne Water’s response to Commission’s queries, May.

⁴⁹ Melbourne Water’s response to Commission’s queries, May.

⁵⁰ Melbourne Water’s response to Commission’s queries, May.

7.3 BULK SEWERAGE

7.3.1 COMMISSION'S DRAFT DECISION ON BULK SEWERAGE TARIFFS

In our draft decision, we proposed to approve Melbourne Water's proposed variable bulk sewerage tariff structure for treatment and transfer, and proposed fixed monthly tariffs for sewerage.⁵¹

We also proposed to approve Melbourne Water's trade waste tariffs for Biological Oxygen Demand, suspended solids and total Kjeldahl nitrogen, subject to Melbourne Water calculating tariffs from an updated long run marginal cost (LRMC) in line with revised operating and capital expenditure.

We proposed to approve Melbourne Water's current inorganic total dissolved solids (ITDS) tariff for the Western Treatment Plant. But we consider the ITDS tariff for the Eastern Treatment Plant is no longer appropriate because no ITDS standard is imposed there.⁵²

7.3.2 COMMISSION'S REVIEW OF BULK SEWERAGE TARIFFS

In response to our draft decision, Melbourne Water submitted revised proposed tariffs for sewage treatment and transfer that reflect updated LRMC estimates based on its revised expenditure proposal.

We confirmed the updated LRMC estimates reflect Melbourne Water's proposed major project expenditure program from 2016-17 to 2020-21. However, we also identified substantial reductions to non-demand driven capital expenditure in the LRMC models, and reduced longer term expenditure for 2022-36. Overall, Melbourne Water reduced its long term forecast capital expenditure for the Eastern Treatment Plant by 20 per cent and for the Western Treatment Plant by 30 per cent. Melbourne Water advised that these adjustments reflect an 'optimistic scenario' developed to lower volumetric sewerage tariffs in response to retailer concerns about the tariff increases. Melbourne

⁵¹ Essential Service Commission 2016, *Melbourne Water Price Review 2016 – draft decision*, pp. 89.

⁵² Essential Service Commission 2016, *Melbourne Water Price Review 2016 – draft decision*, pp. 86–7.

Water proposed higher fixed sewerage tariffs to offset the lower revenue from volumetric tariffs.

We consider Melbourne Water's substantial changes to the capital expenditure assumptions underpinning its LRMC models (changed between the 2016 price submission and its response to the draft decision) suggest a lack of robustness in Melbourne Water's assumptions about the contribution of sewage volume and sewerage load to its capital costs. We accounted for this in the Commission's decision on Melbourne Water's capital forecasts in chapter 4.

Melbourne Water provided the following information to further support the ITDS tariff for the Eastern Treatment Plant:

- A 6 per cent increase in salt concentration at the Eastern Treatment Plant would decrease recycled water quality, increasing the sodium absorption ratio. The risk of soil sodicity⁵³ would rise from 'low to moderate risk' to 'high risk' (as defined by the Australian Guidelines for Water Recycling).
- The removal of the tariff would reduce Melbourne Water's ability to manage its risk of incurring costs to manage soil impacts or reduce the salinity of recycled water.

Melbourne Water reiterated that it is working with metropolitan water retailers to assess potential alternative approaches to regulating salinity — for example, pricing, cleaner production, desalination and sewer rehabilitation. It considered removing the ITDS tariff at the Eastern Treatment Plant before knowing the assessment outcomes would be premature.

We consider Melbourne Water has not provided sufficient support for the ITDS tariff at the Eastern Treatment Plant. We note:

- Melbourne Water does not incur any cost for treating ITDS
- no EPA Victoria ITDS standard applies to the Eastern Treatment Plant
- South East Water, which is the main retailer for the Eastern Treatment Plant, does not pass on Melbourne Water's ITDS prices to its customers.

⁵³ Soil sodicity is the level of sodium held in soil, which increases waterlogging.

The Commission maintains its draft decision that it is no longer appropriate for Melbourne Water to impose an ITDS tariff for the Eastern Treatment Plant. Going forward, the Commission will review its decision to remove the tariff if EPA Victoria imposes an ITDS standard at the Eastern Treatment Plant, or if ITDS levels at the plant rise enough to require a price signal.

Tables 7.6 and 7.7 outline the Commission's final decisions on expenditure and bulk sewage volume and sewerage load tariff structures. For 2017-18 to 2020-21, prices will be held constant in real terms, consistent with Melbourne Water's proposal.

7.4 FINAL DECISION ON BULK SEWERAGE TARIFFS

The Commission's final decision on Melbourne Water's bulk sewage volume and sewerage load tariffs for 2016-17 is set out in tables 7.6 and 7.7. The approved prescribed price movements are set out in the Commission's final determination.

The Commission's final decision is not to approve a tariff for ITDS at the Eastern Treatment Plant.

TABLE 7.6 FINAL DECISION ON MELBOURNE WATER'S BULK SEWERAGE TARIFFS
2015-16 \$/ML and \$/month

Third regulatory period		Fourth regulatory period
2015-16		2016-17 (final decision)
Bulk sewage variable charge – treatment (\$/ML)		
Western System	342.74	268.65
Eastern System	595.43	72.17
Bulk sewage variable charge – transfer (\$/ML)		
Western System	–	36.75
Eastern System	–	5.25
Bulk sewerage load fixed charge – (\$/month)		
City West Water	8 653 394	5 169 010
South East Water	11 244 398	12 045 097
Yarra Valley Water	12 277 963	10 316 382

Source: Melbourne Water's price submission

TABLE 7.7 FINAL DECISION ON MELBOURNE WATER'S LOAD TARIFFS
2015-16\$/tonne

Third regulatory period		Fourth regulatory period
2015-16		2016-17 (final decision)
Western Treatment Plant		
Biological oxygen demand	17.10	178.80
Suspended solids	3.42	103.88
Total Kjeldahl nitrogen	285.82	246.93
Inorganic total dissolved solids	29.28	29.28
Eastern Treatment Plant		
Biological oxygen demand	585.35	336.76
Suspended solids	323.48	552.95
Total Kjeldahl nitrogen	1 210.06	192.66
Inorganic total dissolved solids	29.28	0.00

Source: Melbourne Water's price submission

8 WATERWAYS AND DRAINAGE, DIVERSIONS, MISCELLANEOUS SERVICES AND DEVELOPER CONTRIBUTIONS

8.1 INTRODUCTION

This chapter sets out the Commission's final decision on Melbourne Water's proposed waterways and drainage tariff structure, miscellaneous service and diversion tariffs, and developer contributions.

In its 2016 price submission, Melbourne Water proposed significant changes to the structure and level of its non-residential waterways and drainage tariffs for 2016-17 to 2020-21.

8.2 WATERWAYS AND DRAINAGE TARIFFS

8.2.1 COMMISSION'S DRAFT DECISION ON WATERWAYS AND DRAINAGE TARIFFS

In our draft decision, we proposed to approve Melbourne Water's proposed waterways and drainage tariffs for residential and rural customers, including the proposed approach to calculating tariffs for the Koo Wee Rup Longwarry Flood Protection

District. However, we did not approve Melbourne Water’s proposed non-residential tariff structure.⁵⁴

In its 2016 price submission, Melbourne Water proposed to transition the majority of non-residential customers to a fixed tariff equal to 1.5 times the residential waterways and drainage tariff. It proposed to isolate the 50 largest revenue paying customers from this reform, and transition these 50 largest customers to a property impact charge using high level pricing principles over the period 2016-17 to 2020-21.

The Commission did not approve this proposal, because Melbourne Water had not proposed how it would determine prices for the 50 largest customers (by revenue), and it had not proposed a maximum price for those customers as required by clause 10(a) of the Water Industry Regulatory Order (WIRO). Approving the proposal was thus beyond the Commission’s power.

The Commission required Melbourne Water to resubmit a proposal that meets the WIRO requirement. The proposal had to:

- estimate proposed maximum tariffs for each customer, or clearly outline an approach to calculating a tariff for each customer, based on cost-reflective principles, methods and data
- explain how Melbourne Water would transition customers between tariffs, based on cost-reflective principles.⁵⁵

8.2.2 COMMISSION’S REVIEW OF WATERWAYS AND DRAINAGE TARIFFS

In response to our draft decision, Melbourne Water accepted our decisions on the approach to calculating tariffs for residential, rural and Koo Wee Rup Longwarry Flood Protection District customers. Melbourne Water revised its approach to reforming waterways and drainage tariffs for non-residential customers.

⁵⁴ Essential Services Commission 2016, *Melbourne Water Price Review 2016 – draft decision*, p. 96.

⁵⁵ Essential Services Commission 2016, *Melbourne Water Price Review 2016 – draft decision*, p. 96.

Instead of isolating the 50 largest customers from the reform (as proposed in its 2016 price submission), Melbourne Water proposed to transition all non-residential customers on a property based tariff (net annual value, or NAV) to the flat minimum tariff equal to 1.5 times the residential tariff, over two regulatory periods. Melbourne Water indicated that the 1.5 times differential between residential and non-residential customer fixed tariffs reflects the average run-off ratio between these customer groups, and thus the contribution to overall waterways and drainage costs.

Consistent with its 2016 price submission, Melbourne Water indicated the proposed 10 year transition for customers on the property based tariff would allow appropriate revenue recovery, while also allowing time to further research and develop an impervious surface area charge for high impact customers. At the end of the 2020-21, an additional 34 000 non-residential customers will have transferred to the flat minimum tariff, leaving approximately 47 000 customers on the property based tariff at the start of the fifth regulatory period. Melbourne Water proposed that during the fifth regulatory period, the remaining customers on the property based tariff will either shift to the flat minimum tariff, or move to an alternative cost reflective tariff arrangement, to be developed between now and Melbourne Water's next price submission.

The Commission approves Melbourne Water's revised reform for non-residential customers, for the following reasons:

- The tariff structure will be more cost reflective, moving away from a property based tariff to a tariff that reflects the average contribution of non-residential customers to waterways and drainage costs.
- The 10 year transition allows time for Melbourne Water to develop an impervious surface area charge to submit in the next price review. It also reduces the risk of tariff instability for high impact customers.
- The tariff structure is consistent with feedback that Melbourne Water received in its research forums on waterways and drainage charges.

8.2.3 FINAL DECISION ON WATERWAYS AND DRAINAGE TARIFFS

The Commission's final decision on Melbourne Water's waterways and drainage tariffs is set out in table 8.1.

The approved prescribed price movements are set out in the Commission's final determination.

TABLE 8.1 FINAL DECISION ON ANNUAL WATERWAYS AND DRAINAGE TARIFFS

2015-16 \$ and \$ net asset value and cents per annum

Fixed tariffs	2015-16	2016-17
Residential customer	95.58	95.58
Rural customer	52.52	52.52
Non-residential customer currently on minimum charge	109.90	115.90
Non-residential customer currently above minimum charge (\$net asset value) cents per annum	1.1692	0.8795
Koo Wee Rup - Longwarry Flood Protection District	Continuation of the pricing reform commenced in 2013 and concluding in 2021 which will see Divisions A and B replaced with a single cost-reflective price. Unique price paths apply for all individual properties to transition to the single cost-reflective price. During this period, the cost of service will be subject to annual CPI adjustments less 1% for service efficiency targets.	

8.3 PATTERSON LAKES AND QUIET LAKES

8.3.1 COMMISSION'S DRAFT DECISION ON PATTERSON LAKES MARINA TARIFFS

In its draft decision, the Commission proposed to approve Melbourne Water's proposed tariffs for Patterson Lakes jetty replacement and maintenance, but it proposed not to approve Melbourne Water's proposed tariffs for the Patterson Lakes Marina because:

- the maintenance costs are the subject of a private contract, so a regulated tariff is unnecessary
- the proposed recovery of capital costs for the tidal gate via a single customer tariff is inconsistent with the findings of the independent review, which Melbourne Water publicly accepted.

Melbourne Water’s 2016 price submission had indicated the potential for a Water Quality tariff from 2016-17, based on ongoing consultations with customers, after a bore flushing trial during 2012–2015. However the submission had not proposed a tariff structure.⁵⁶ As such, our draft decision did not approve a Quiet Lakes Water Quality tariff.

8.3.2 SUBMISSIONS AND COMMISSION’S REVIEW OF PATTERSON LAKES AND QUIET LAKES TARIFFS

In its response to our draft decision, Melbourne Water agreed to the Commission’s decision:

- to approve Melbourne Water’s proposed tariff for Patterson Lakes jetty replacement and maintenance
- not to approve the Patterson Lakes Marina charges and to recover both the capital and maintenance costs for the marina from the waterways and drainage charge.

However, Melbourne Water also proposed to introduce a new water quality tariff applicable to the Quiet Lakes residents, which had not been proposed in its initial proposal.

We sought legal advice on the Commission’s ability to approve new tariffs that are not subject of the initial proposal, but submitted after a draft decision. The advice confirmed the Commission has discretion to consider variations to Melbourne Water’s 2016 price submission, if practical and feasible to do so — taking into account the need to allow for appropriate customer and stakeholder consultation.

⁵⁶ Melbourne Water 2016, *2016 Price Submission*, p. 80.

To facilitate consultation on the late proposal, we published an advertisement in the Mordialloc Chelsea Leader on Wednesday 4 May, notifying readers of the proposed new tariff and inviting submissions. Only three public submissions were received on the Water Quality Tariff, to which Melbourne Water provided a further response. At the submitting parties' request, Commission staff met with some of the parties that provided submissions, to provide a further opportunity for consultation.

The proposed Quiet Lakes Water Quality tariff consists of a fixed annual fee of \$156 for 251 residential properties that border three small lakes within the Patterson Lakes precinct. It is designed to recover the annual costs of groundwater flushing of the lakes, and of weekly blue-green algae monitoring from October to March.

The new tariff was developed following Melbourne Water's three year trial of groundwater flushing in Quiet Lakes, which ended in March 2015. Melbourne Water reported that the trial results suggested groundwater flushing had a positive impact on water quality, by 'maintaining algae blooms well below the guidelines for primary contact — a standard suitable for swimming'.⁵⁷ Melbourne Water is not required to provide water quality suitable for primary contact recreation, and considers the improvements are above the minimum service levels. An independent review commissioned by Melbourne Water and the Patterson Lakes community in 2013 recommended a user pays approach to the Quiet Lakes residents' demand for higher water quality services.⁵⁸

Subsequently, in December 2015, Melbourne Water arranged for an independent ballot of all Quiet Lakes residents to determine willingness to pay for ongoing groundwater flushing and blue-green algae monitoring. The ballot results suggested 75 per cent of residents support the proposed Quiet Lakes Water Quality tariff, indicating there is a broad willingness to pay for the bore flushing service.

The three public submissions on the Quiet Lakes Water Quality Tariff raised a number of concerns with Melbourne Water's proposed new tariff, ultimately arguing that the proposed bore flushing should continue but that it should be funded through the

⁵⁷ Melbourne Water 2015, *Community Bulletin – Latest News for Quiet Lakes residents*, September.

⁵⁸ Patterson Lakes Independent Review 2013, *Management of Patterson Lakes tidal waterways & Quiet Lakes*, March.

general Waterways and Drainage tariffs rather than a separate tariff borne only by Quiet Lakes residents. Specifically, reasons in support included the following:

- Blue-green algae in the Quiet Lakes makes the waterways unsafe, and affects outflows into other waterways. Therefore Melbourne Water should be managing it as part of its normal waterways management function.⁵⁹
- Quiet Lakes residents have not specifically requested Melbourne Water to increase water quality to a primary contact standard.
- In any case, the proposed bore flushing will only bring the water quality to a secondary contact standard.⁶⁰ While Melbourne Water is required to maintain the lakes to a secondary contact standard in accordance with its normal waterways management function, the submissions suggest that Melbourne Water is not meeting the minimum standards.⁶¹

Accordingly, a separate charge would lead to Quiet Lakes residents paying twice for the maintenance of a secondary contact water quality via the general waterways and drainage charge and the proposed new tariff.

- Melbourne Water's independent ballot of Quiet Lakes residents was misleading and the results as reported by Melbourne Water are not reliable.⁶² Therefore, the independent ballot cannot be relied upon to support a user-pays approach in this case.

Melbourne Water's response to these submissions sets out alternative views:

- Bore flushing of the Quiet Lakes at the level proposed (1.5 megalitres per day during October – March) would not have a positive impact on downstream areas, as the level of flushing will only represent 1 per cent of the flow of the downstream waterway (Kananook Creek). Further, the inaccessibility of the Quiet Lakes to the

⁵⁹ Andrew Meehan 2016, Submission – Draft water plan decision as it relates to Patterson Lakes, 17 May.

⁶⁰ Anthony Moffat 2016, Submission – Melbourne Water's 2016 Water Price Review, 13 May.

⁶¹ Anthony Moffat 2016, Submission – Melbourne Water's 2016 Water Price Review, 13 May.

⁶² Anthony Moffat 2016, Submission – Melbourne Water's 2016 Water Price Review, 13 May; Alison Yates 2016, Submission – Melbourne Water's 2016 Water Price Review, May 20, p. 4.

public means that Quiet Lakes residents would be the primary beneficiary of the bore flushing, meaning a separate tariff is appropriate.⁶³

- Melbourne Water has met the required standard of water quality at the Quiet Lakes over the past six summers, and followed relevant guidelines on blue-green algae management, which was confirmed by the Department of Environment, Land Water and Planning (DELWP).⁶⁴
- The services that Melbourne Water provides in the Quiet Lakes, which is funded by the Waterways and Drainage charge, already exceeds the level of service that is provided to the broader waterways and drainage customers, in recognition of the unique circumstances of the Quiet Lakes.⁶⁵

The Commission has considered the issues raised in submissions, and Melbourne Water's response to these submissions.

In these circumstances, the Commission has decided that it would not be appropriate to approve the Quiet Lakes Water Quality tariff. Specifically, in the Commission's view, there are a number of relevant issues which have been raised during this short consultation process, which have not been capable of being fully considered and resolved. In particular:

- the distribution of the benefits associated with the bore flushing
- the quality of water with and without the bore flushing.

Accordingly, the Commission considers it appropriate for Melbourne Water to:

- Continue the bore flushing program it has proposed, which will be funded from the general Waterways and Drainage charge until a final decision on the Water Quality tariff is made in 2017. Our final decision on Waterways and Drainage revenue incorporates an additional \$40 000 for 2016-17 operating costs to account for Melbourne Water's forecast costs in the interim period.

⁶³ Melbourne Water 2016, Submission – Quiet Lakes Water Quality Tariff: Melbourne Water's response to ESC resident submissions, June 1, p.4.

⁶⁴ Melbourne Water 2016, Submission – Quiet Lakes Water Quality Tariff: Melbourne Water's response to ESC resident submissions, June 1, pp. 2-4.

⁶⁵ Melbourne Water 2016, Submission – Quiet Lakes Water Quality Tariff: Melbourne Water's response to ESC resident submissions, June 1, p.3.

- By 1 December 2016, provide a detailed proposal to the Commission in support of the proposed Water Quality tariff.

The Commission will consider Melbourne Water's proposal in December and provide a draft decision by February 2017, for full consultation by customers and other stakeholders. It is proposed that the final decision will take effect from 1 July 2017.

8.4 FINAL DECISION ON PATTERSON LAKES AND QUIET LAKES TARIFFS

The Commission approves Melbourne Water's proposed tariffs for Patterson Lakes jetty replacement and maintenance.

The Commission has not approved Melbourne Water's proposed Quiet Lakes Water Quality tariff.

The Commission considers that it would be appropriate that Melbourne Water:

- Continue the bore flushing program it has proposed, which will be funded from the general Waterways and Drainage charge until a final decision on the Water Quality tariff is made in 2017. Our final decision on Waterways and Drainage revenue incorporates an additional \$40 000 for 2016-17 operating costs to account for Melbourne Water's forecast costs in the interim period.
- By 1 December 2016, provide a proposal to the Commission in support of the proposed Water Quality Tariff. The Commission will consider Melbourne Water's revised proposal and release its draft decision in February 2017 for consultation, with a final decision to take effect from 1 July 2017.

8.5 MISCELLANEOUS SERVICES TARIFFS, DEVELOPER CHARGES AND DIVERSION TARIFFS

In our draft decision, we proposed to approve Melbourne Water's proposed miscellaneous services tariff structure, pricing principles for developer charges and diversion charges.

In response to our draft decision, Melbourne Water made no significant changes to these tariffs. For this reason, the Commission maintains its draft decision.

8.5.1 FINAL DECISION ON MISCELLANEOUS SERVICES TARIFFS, DEVELOPER CHARGES AND DIVERSION TARIFFS

The Commission approves Melbourne Water's proposed miscellaneous services tariff structure.

The Commission approves Melbourne Water's proposal to use the existing pricing principles to calculate developer charges for drainage infrastructure and stormwater quality for 2016-17 to 2020-21.

The Commission approves Melbourne Water's proposed diversion charges.

The approved price paths are set out in the Commission's final determination.

9 FORM OF PRICE CONTROL AND ADJUSTING PRICES

9.1 INTRODUCTION

This chapter sets out the Commission's final decision on Melbourne Water's proposed form of price control and annual price adjustment mechanism to apply from 2016-17 to 2020-21. Currently, Melbourne Water uses price adjustments to account for:

- 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.

In response to our draft decision, Melbourne Water proposed minor adjustments to its current price adjustment mechanisms, and a price cap form of price control for all of its services.

9.2 COMMISSION'S DRAFT DECISION ON FORM OF PRICE CONTROL AND ADJUSTING PRICES

In our draft decision, we proposed:

- to approve Melbourne Water's proposal to retain a price cap form of price control for water and sewerage services
- not to approve Melbourne Water's proposal for a revenue cap form of price control for waterways and drainage services, reflecting our draft decision on waterways and drainage tariffs for non-residential customers. The revenue cap form of price

control was part of Melbourne Water’s proposed transition to its proposed waterways and drainage charges

- to approve a price cap form of price control for all waterways and drainage services
- to approve a standalone variable tariff for desalination water order costs for transparency and to better reflect the WIRO principle to provide signals to water retailers and end-use customers about the efficient costs of providing services.

9.3 SUBMISSIONS AND COMMISSION’S REVIEW

In response to our draft decision, Melbourne Water:

- accepted a price cap form of price control for all services
- accepted a standalone variable tariff for desalination water order costs and proposed passing on the costs to retailers as they occur
- proposed modifications to its current price adjustment mechanism to reflect Melbourne Water’s proposed annual weighted average cost of capital (WACC) updates
- proposed modifications to its current uncertain and unforeseen events price adjustment mechanism to include:

... a reference to ‘policy changes in relation to renewable energy.’⁶⁶

...a reference to ‘changes to the Primary Retail Entitlement Holders or Primary Retail Entitlement Holdings (individual or collective) in any of the Melbourne Water supply systems in accordance with an Order made by the Minister under the relevant provisions of the Water Act.’⁶⁷

⁶⁶ Melbourne Water 2016, 2016 Price submission — response to ESC draft decision, p. 7.

⁶⁷ Melbourne Water 2016, 2016 Price submission — response to ESC draft decision, p. 49.

9.3.1 FORM OR PRICE CONTROL

We reviewed our draft decision and in its final decision, the Commission approves Melbourne Water continue with its current hybrid form of price control, that is:

- price cap form of price control for all services
- the business may propose a tariff basket at the time of the annual price review subject to consultation with customers prior to their applications as specified in their determination.

9.3.2 DESALINATION WATER ORDER COSTS

In our final decision, we accept Melbourne Water's proposal to pass on desalination water order costs as they occur, rather than adjust wholesale prices, because it is consistent with the approach in the current regulatory period and it sends appropriate price signals about the costs of desalinated water.

For 2016-17, Melbourne Water confirmed it included desalination water order costs.

9.3.3 ANNUAL PRICE ADJUSTMENT MECHANISM TO REFLECT WACC UPDATE

Our final decision approves Melbourne Water's proposed trailing average approach to estimating the cost of debt, including updating the weighted average cost of capital (WACC) each year (chapter 5).

We reviewed Melbourne Water's proposed annual price adjustment mechanism following an annual WACC update and found:

- the proposed annual price adjustment mechanism for all services reflects our final decision on Melbourne Water's proposed trailing average WACC (chapter 5)
- the proposed annual price adjustment mechanism for waterways and drainage tariffs (non-residential customers) following an annual WACC update is not transparent given the complexity of Melbourne Water's proposal
- some of Melbourne Water's proposed price adjustment mechanism tables had minor errors.

In response to our review of Melbourne Water's proposed price adjustment mechanism, Melbourne Water resubmitted a simplified annual adjustment mechanism for waterways and drainage non-residential tariffs following an annual WACC update, and corrected for minor errors.⁶⁸ We assessed that Melbourne Water's revised price adjustment mechanism is transparent and simple to implement.

We accept Melbourne Water's updated price adjustment mechanism and updated tables.

9.3.4 UNCERTAIN AND UNFORESEEN EVENTS

Melbourne Water's current uncertain and unforeseen events mechanism allows the water business to apply to amend its determination as a result of events that were uncertain or unforeseen when the determination was made.

We propose not to include specific references in Melbourne Water's current uncertain and unforeseen events mechanism to changes to renewable energy policy. The current mechanism allows for a re-opening based on any event that was uncertain or unforeseen at the time of review, and that the business cannot control or efficiently manage without undermining service delivery.

We approve the inclusion of a reference to the Primary Retail Entitlement Holders or Primary Retail Entitlement Holding (individual or collective) policy into the uncertain and unforeseen events mechanisms. This will allow a pass-through of its costs each year during our annual price review and not require a re-opening of the determination.

⁶⁸ Melbourne Water 2016, Response to the Commission questions, May.

9.4 FINAL DECISION

The Commission approves Melbourne Water continue with its current hybrid form of price control, that is:

- price cap form of price control for all services
- the business may propose a tariff basket at the time of the annual price review subject to consultation with customers prior to their applications as specified in their determination.

The Commission approves Melbourne Water's proposed annual price adjustment mechanism to reflect an annual update to its weighted average cost of capital.

The Commission approves including a reference to the Primary Retail Entitlement Holders or Primary Retail Entitlement Holding (individual or collective) policy into the uncertain and unforeseen events mechanisms.

The Commission approves Melbourne Water's proposed standalone variable tariff for desalination water orders.

APPENDIX A — SUBMISSIONS

The Commission held a forum in Melbourne on 19 April 2016. The forum was attended by representatives from water businesses, consumer advocacy groups and members of the public.

Table A1 lists the written submissions on our draft decision on Melbourne Water's 2016 price submission. Table A2 lists the written submissions on Melbourne Water's price submission. The submissions are available on our website: www.esc.vic.gov.au

TABLE A1 SUBMISSIONS RECEIVED ON THE COMMISSION'S DRAFT DECISION ON MELBOURNE WATER'S PRICE SUBMISSION

Name	Date received
Endeavour Owners Corporation	13 April 2016
The Consumer Utility Advocacy Centre and The Consumer Action Law Centre	22 April 2016
Port Phillip and Westernport CMA	26 April 2016
Melbourne Water	26 April 2016
Yarra Valley Water	28 April 2016
Stephen Cannon	28 April 2016
EPA Victoria	2 May 2016
City West Water	2 May 2016
Anthony Moffatt	13 May 2016
Andrew Meehan	17 May 2016
Alison Yates	20 May 2016
Melbourne Water	2 June 2016

TABLE A.2 SUBMISSIONS RECEIVED ON MELBOURNE WATER'S PRICE SUBMISSION

Name	Date Received
Port Phillip and Westernport CMA	12 October 2015
Jeremy Loftus-Hills	3 January 2016
Lawrence Cox	3 February 2016
Darryl John Hobby	5 February 2016
Stephen and Lorna Harrison	5 February 2016
Larry and Pauline Reed	5 February 2016
Greg Ellis and Rosemary Hughson	5 February 2016
Ian John Walton and Gillian Walton	5 February 2016
Wayne Anderson	5 February 2016
Mark Kenneth Nicholls	5 February 2016
Neil Bull	5 February 2016
Jason Quinn	5 February 2016
Cheryl Anne Murdoch	5 February 2016
Judith Baird	5 February 2016
Lindsay and Kim Johnson	5 February 2016
Mr and Mrs S Deriboklou	5 February 2016
John Shipston	5 February 2016
Kaitlin and Joshua Staley	6 February 2016
Peter Van Summeren and Leanne Nickolai	6 February 2016
David and Jan Brown	7 February 2016
Stephen Cannon	7 February 2016
Michael Nunn	7 February 2016
Frank and Melina Russo	7 February 2016
Anthony Dening and Graham Williams	8 February 2016
Christine Lohrey	8 February 2016
Christopher and Mary Lafferty	8 February 2016
Trevor and Denise Stanley	8 February 2016
Nigel Coulston	8 February 2016
Michelle Malley	8 February 2016
Frances Batt	8 February 2016
Ian Bevan	8 February 2016
Bruce Cook	8 February 2016
Jerome Eastwood	8 February 2016

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TABLE A.2 (CONTINUED)

Name	Date Received
Vedran Pezerovic	8 February 2016
Adam Zuchowski	8 February 2016
Heather Redpath	8 February 2016
Andrea Paice	8 February 2016
Daryl and Susan Davison	8 February 2016
Darren Wynne	9 February 2016
Linda and Frank Colcott	9 February 2016
Marcus Katalinic	9 February 2016
Gregory Brisbane	9 February 2016
Peter and Ann Johnson	9 February 2016
Kerrie Whitrod	9 February 2016
Mel Gaunson	9 February 2016
Paul Arnold	9 February 2016
Chris Bockisch	10 February 2016
Rod Meldrum	10 February 2016
Ivanka Klarica	10 February 2016
Sally Surgey	10 February 2016
Brian John and Diane Lorraine Boyce	10 February 2016
Jocelyn Clarke and Catherine Newton	10 February 2016
Stan Best	10 February 2016
Bo Sun	10 February 2016
Christine O'Connell	11 February 2016
Phillip and Jennifer Stevens	11 February 2016
Martin and Susan Lowe	11 February 2016
Kevin and Joy Billing	11 February 2016
Barry Gardiner	11 February 2016
Chris and Margaret Gough	11 February 2016
Michael Welsford	11 February 2016
John McCormick	11 February 2016
Lesley Yuill	11 February 2016
Paul Kingsbury	11 February 2016
Michael Rusham	11 February 2016
Darryl Lewis	12 February 2016
Stacy Ruffin	12 February 2016

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TABLE A.2 (CONTINUED)

Name	Date Received
Marc Roggero	12 February 2016
Lauren Daly — Southern Rural Water	12 February 2016
Helen Rushman	12 February 2016
Deanna Foong — Consumer Action Law Centre	12 February 2016
Caroline Johnson	12 February 2016
Anton Silvoe	12 February 2016
Louise Walsh	12 February 2016
Mary Katsigiannis	12 February 2016
Cheryl Stewart	12 February 2016
Alan Whittley	12 February 2016
B Davies	12 February 2016
Robin and Carol Wood	12 February 2016
Mr and Mrs A Moring	12 February 2016
Andrew Marcoora	12 February 2016
Mary Robson	13 February 2016
Michelle Dunn	13 February 2016
Robert Mizzi	13 February 2016
James Stone and Kelly Reynolds	14 February 2016
Denise Jansons	15 February 2016
John Ray	15 February 2016
Susan Hoffmeyer	15 February 2016
John Albert	15 February 2016
Kylie McAdam	15 February 2016
Liz Thomas	15 February 2016
Lawrence Cox — updated submission	15 February 2016
Leanne Nash	15 February 2016
Yarra Valley Water	15 February 2016
Peter and Maree Smyth	15 February 2016
Natalie Walsh	16 February 2016
Ewald and Geraldine Kaintz	16 February 2016
Bratislav Stamenovic	16 February 2016
Gerard Demaine	16 February 2016
Geoffrey Salter	16 February 2016
Barwon Water	16 February 2016

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TABLE A.2 (CONTINUED)

Name	Date Received
City West Water	24 February 2016
South East Water	24 February 2016
Raymond Skowronski	31 March 2016