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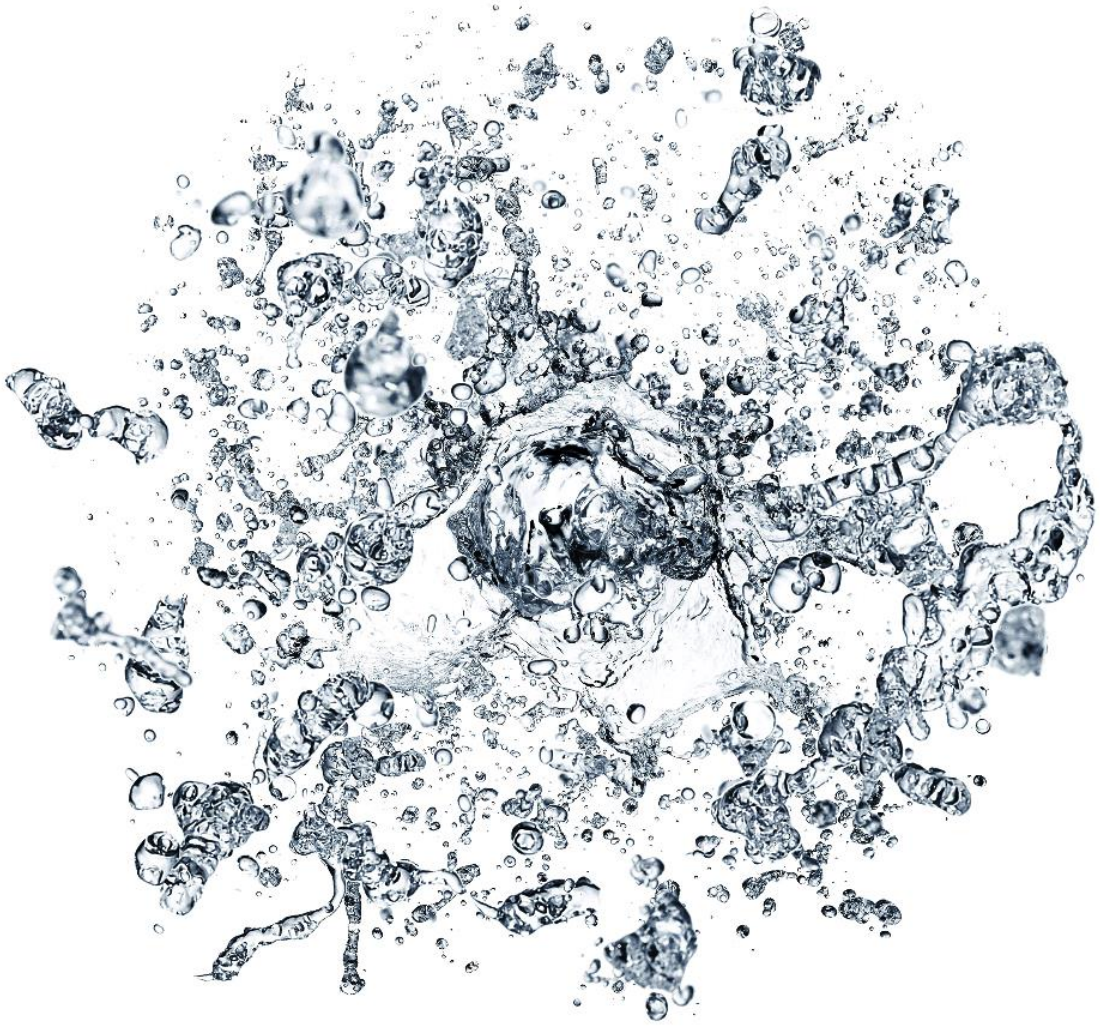

Central Highlands Water – expenditure review for 2018 water price review

Report for the Essential Services Commission – FINAL REPORT

February 2018

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Executive Summary

The Essential Services Commission (ESC) is currently conducting a review of the proposed prices to be charged by Victoria's water businesses for the period 1 July 2018 to 30 June 2023. Deloitte has been engaged by the ESC to review the expenditure forecasts made by the metropolitan businesses and regional urban water businesses. In undertaking this review, Deloitte's key responsibilities are to:

- Assess the appropriateness of the expenditure forecasts in relation to the key objectives of the review
- Provide independent advice to the ESC regarding the appropriateness of the forecasts
- Where Deloitte's advice indicates that a proposed expenditure level is not appropriate, propose to the ESC a revised expenditure level.

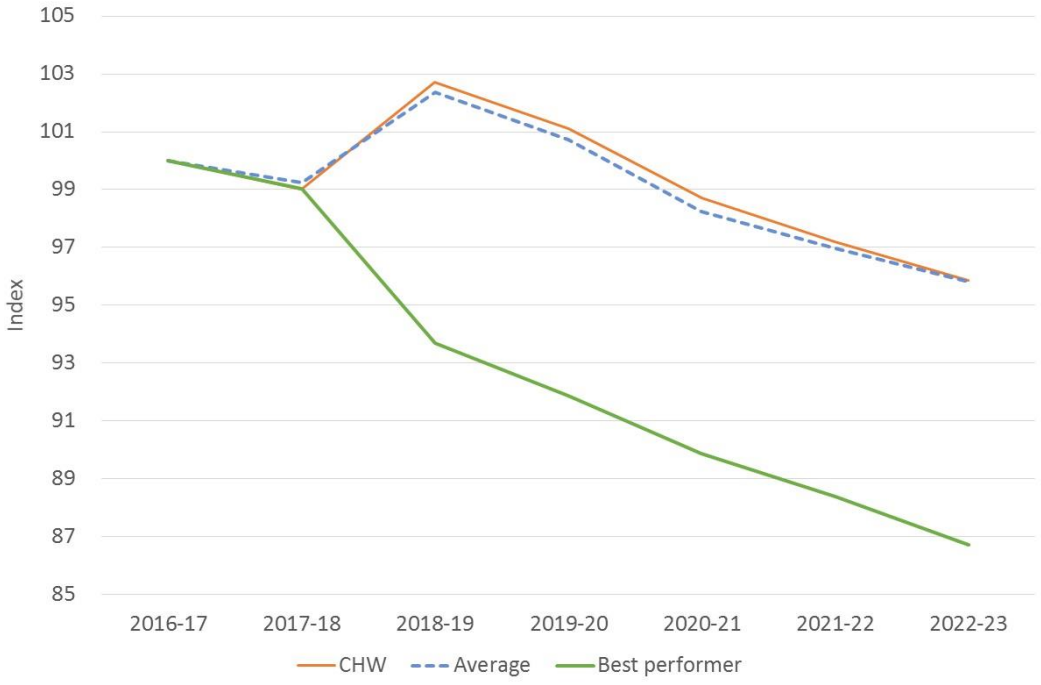
Operating expenditure (opex)

The key features of Central Highlands Water's opex forecast include:

- A baseline 2016-17 of $50.4m, which is less than the benchmark set by the ESC in 2013 ($52.5m)
- A forecast average customer growth rate of 1.6% per annum (on average)
- A cost efficiency improvement rate that is equivalent to growth in each year of RP4, averaging 1.6% per annum
- $12.7m of additional expenditure above the baseline – the sixth highest of any Victorian water business
- An improvement in controllable opex per connection of 0.6% per annum, after factoring in the additional expenditure.

The chart below shows that changes in Central Highlands Water's controllable opex per connection for RP4 are roughly equivalent to the average of the regional urban businesses.

Figure 0-1 Change in controllable opex per connection – index



We have recommended a reduction of **$7.40m** to Central Highlands Water's RP4 forecast controllable opex, with the cuts relating to labour ($3.80m), electricity ($2.50m) and some new initiatives ($1.10m). The key reasons for these recommendations are outlined in Chapter 3.

Capital expenditure (capex)

Central Highlands Water proposed capex is increasing by 22% for the RP4 period over RP3. Key aspects of the capex forecast include:

- Significant reduction in project size from RP3 period with similar decrease in number of identified projects and programs
- A large increase in renewals expenditure. Renewals represents greater than 45% of the capex program.
- Full rollout of a digital metering project following on from a trial project
- Focus on improvements / compliance projects including the Ballarat South Trunk Sewer Duplication.

We have reviewed Central Highlands Water's proposed capital expenditure for RP4 and made no adjustments to the forecasts for RP4.

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1 Introduction

1.1 Introduction

The Essential Services Commission (ESC) is currently conducting a review of the proposed prices to be charged by Victoria's water businesses for the period 1 July 2018 to 30 June 2023, referred to in this document as 'the next regulatory period' or fourth price submission period (RP4).

The businesses have submitted price submissions to the ESC for the RP4 period. The price submissions include forecasts of operating expenditure (opex), capital expenditure (capex) and demand, proposed service standards and prices.

1.2 PREMO framework

In RP4, the ESC is applying a new regulatory framework Performance, Risk, Engagement, Management and Outcomes (PREMO) for the first time. PREMO aims to put customer engagement at the centre of water corporation's proposals whereby service levels and expenditure must reflect outcomes that customers' value. The standard expectation here is that water corporations engage early and then re-test proposals in pricing submissions.

PREMO also provides a range of incentives on a number of levels to encourage businesses to:

- Reveal their efficient costs (and knowledge of efficiency opportunities), by rewarding businesses for both setting and achieving ambitious targets
- Avoid making ambit expenditure claims, as higher financial rewards are available for more ambitious proposals
- Prepare submissions of a high standard, to open the door for a fast-tracked regulatory process (and receive recognition for having done so).

The PREMO model incentivises businesses to self-select appropriate targets for operating parameters that make up the building block calculation. The ESC incentivises and rewards based on the relationship between the quality of the proposal and the return on equity – businesses have the flexibility to prepare their own combinations of service levels and expenditure, as long as these are fundamentally driven by delivering outcomes of value to customers.

The ESC's model also includes a fast-track process whereby the higher quality proposals are not subjected to a detailed review of expenditure (and other key items) but are instead fast-tracked to an early draft decision. In addition, of the businesses that were not fast-tracked, there is further differentiation on those businesses that only require a review on some elements of the proposal (e.g. specific items where expenditure is increasing) and those businesses that require a detailed review.

The expectations of water business proposals are further detailed in the ESC's guidance paper *2018 Water Price Review Guidance Paper November 2016* ('the Guidance Paper').

1.3 Scope of review

Deloitte has been engaged by the ESC to review the expenditure forecasts made by the metropolitan businesses and regional urban water businesses. In undertaking this review, Deloitte's key responsibilities are to:

- Assess the appropriateness of the expenditure forecasts in relation to the key objectives of the review
- Provide independent advice to the ESC regarding the appropriateness of the forecasts
- Where Deloitte's advice indicates that a proposed expenditure level is not appropriate, propose to the ESC a revised expenditure level.

In relation to opex, we have been asked to provide advice on whether the businesses are fulfilling their obligations and meeting customer service expectations as cost efficiently as possible and that forecast divergences can be readily explained. Although we have not been asked to review pricing outcomes,

which may be influenced by a number of factors in addition to expenditure, we have had regard to the factors outlined in the Commission's guidance for the level of PREMO rating that has been proposed by Central Highlands Water. Benchmarking has been mainly undertaken on the basis of changes from the baseline expenditure identified by businesses as prudent and efficient.

1.4 Overview of approach

1.4.1 Operating expenditure

Our approach to assessing opex for each business can be summarised as follows:

1. Determine an appropriate baseline year (2016-17) by examining the actual expenditure incurred by water businesses in 2016-17 and considering: 1) how it compares to the benchmark established by the ESC in the 2013 price review and 2) removing any abnormal items (that are not already accounted for)
2. Benchmark the overall opex package against peers in particular opex changes from the baseline and opex per connection. This benchmarking has regard to the net effect of efficiency targets, growth rates and adjustments for new opex initiatives.
3. Identify any individual items that are resulting in an increase in forecast expenditure from the 2016-17 baseline and assess the prudency and efficiency of these items. Any proposed expenditure that is above the baseline needs to be fully explained and justified. The types of expenditure that could be considered reasonable in terms of being above the baseline include:
   a. New obligations from regulators or government (such as changes to the Statement of Obligations, taxes, etc.)
   b. Customer preferences – where customers are willing to pay more for improved outcomes
   c. Significant increases in costs that cannot be managed by the business.

   In assessing prudency and efficiency for each business, we have also benchmarked individual expenditure items with other water businesses where possible.
4. Identify cuts consistent with prudent and efficient expenditure.

A more detailed explanation of our approach to opex is set out in Section 3.1.

1.4.2 Capital expenditure

In forming a view as to whether capex meets the requirements in the WIRO, and consistent with advice in the ESC's Guidance Paper, we have had regard to the following questions:

1. Does proposed capex reflect obligations imposed by Government (including technical regulators) or customers' service expectations?
2. Are proposed new major capital works consistent with efficient long-term expenditure on infrastructure services?
3. Does the business have appropriate asset planning procedures?
4. Does the business have appropriate asset management systems in place?
5. Does the business have appropriate project management procedures in place to enable effective delivery of capital works?
6. Has a risk-based approach been adopted to develop the capex program? Is there clear evidence that projects are prioritised?
7. Are major projects consistent with long-term strategies and planning?
8. Is the timing for the proposed new capex reasonable?
9. Are individual project cost forecasts reasonable and do not include undue contingencies or provisions, and reflect current efficient rates for undertaking capex in the Victorian water sector?
10. Is the capex program deliverable in the timeframes proposed?

With respect to individual capex projects or programs, the ESC has requested that there be a focus on two items in particular – renewals expenditure and digital metering.

- **Renewals expenditure**. There are significant increases in renewals expenditure for some businesses (these businesses have also proposed a price rise). In some cases, this is linked to

customer consultation, but for the most part this increase suggests that there are potential issues in asset management and planning. For these specific businesses, the focus of the expenditure review will be on decision making and decision-making tools.

- **Digital metering.** There are a number of proposals to roll out digital meters. Each proposal was reviewed in detail, particularly where businesses have proposed to undertake full rollouts. Each business case should have a sound basis and have undertaken adequate pilots or trials (e.g. non-residential or new developments first) to better understand costs and benefits.

In arriving at recommendations for reductions for each individual business' capital program, we have had regard to the following:

- Comparison of overall historical capex with that proposed for RP4. Where proposed capex exceeds historical projections, justification for these increases should be provided, namely in a requirement to meet new or expanded obligations or customer requests/engagement which has resulted in new service standards.
- Review of four of the Top 10 project business cases to provide an overview of the business case and project development process. It is expected that the business cases should also link to customer outcomes and service levels to justify the decision-making process and selection of individual projects. Further, where individual projects are not able to demonstrate suitable business cases, reductions to those projects will be recommended.
- A review of particular capex programs where increases above historical expenditure is proposed. Where this is not based on meeting new obligations, customer expectations, or rectifying declining performance of assets (evidenced by increased events such as spills, bursts and leaks), renewals programs will be proposed to be reduced to historical levels. Further, benchmarking of renewals programs will be used to review underlying costs for these programs across the businesses.

1.5 Process for review

Our review of opex and capex has involved the following key steps.

- Initial planning and workshop with the ESC
- An initial review of price submissions, financial model templates and associated documentation
- Benchmarking of water business submissions in relation to overall opex and capex and individual expenditure items
- A further workshop with ESC staff to identify and discuss key issues for the focus of the review
- Preparation of queries/areas for discussion which was subsequently provided to each water business prior to site visits
- A site visit of each water business with the key objective to discuss queries and gather information as required. Central Highlands Water's site visit was undertaken on 4 December 2017
- Detailed review and analysis of supporting information provided
- A Draft Report was prepared and provided to Central Highlands Water for comment.
- A Final Report (this report) provided to the ESC to inform the draft price determinations.

Through the process review, water businesses have been given some key opportunities to provide information to support their expenditure proposals. This included:

- Subsequent to final pricing submissions, and prior to our site visits, we wrote to each business identifying additional supporting information required
- During our site visits, businesses had the opportunity to present and provide information
- Following our site visits, there was the opportunity to provide further information on key aspects of expenditure
- All businesses were provided with draft versions of our reports and recommendations and provided with 10 business days to provide further supporting information.

1.6 Structure of this report

This report describes our approach and sets out our findings from the review of Central Highlands Water's price submission. It is structured as follows:

- Chapter 2 briefly summarises Central Highlands Water's price submission with respect to expenditure forecasts and outlines key drivers of expenditure such as government obligations, service standards and demand forecasts
- Chapter 3 provides our analysis, conclusions and recommendations on key issues with respect to Central Highlands Water's opex forecast
- Chapter 4 provides our analysis, conclusions and recommendations on key issues with respect to Central Highlands Water's capex forecast.

Note that unless stated otherwise, all dollar figures shown in this report exclude the impact of inflation and are expressed in $2017-18.

2 Summary of Central Highlands Water's forecast

This chapter provides a summary of Central Highlands Water's forecast expenditure including key underpinning assumptions such as efficiency, growth, service standards and demand.

2.1 PREMO rating

Central Highlands Water has rated its submission as 'Advanced' under the ESC's PREMO framework.

2.2 Key drivers of expenditure

2.2.1 Community expectations and service standards

Central Highlands Water is proposing an improvement in some of its services, predominantly those that are customer facing, particularly those that will be delivered digitally, as well as improving water quality in some areas.

Central Highlands Water is also proposing to significantly improve some of its more critical network performance measures.

2.2.2 Demand for services

Demand for services is increasing. This is as a result of customer growth which is 1.6% per annum over RP4 (based on *Victoria in Future 2016* population forecasts).

New capex is being proposed to meet increasing demand from customer growth and, as a result, there is new opex associated with this.

2.2.3 New obligations

Central Highlands Water has not identified any new obligations that require additional funding for this regulatory period.

2.2.4 Other drivers

In addition to the above, Central Highlands Water has identified the following as drivers of increased opex:

- Market forces impacting electricity tariffs
- Its Enterprise Agreement, which includes wage increases above assumed CPI
- A range of new initiatives that include digital metering, water efficiency programs and implementing the Water for Victoria policy.

2.3 Operating expenditure

2.3.1 Overview

The key features of Central Highlands Water's opex forecast include:

- A baseline 2016-17 of $50.4m, which is less than the benchmark set by the ESC in 2013 ($52.5m)
- A forecast average customer growth rate of 1.6% per annum (on average)
- A cost efficiency improvement rate that is equivalent to growth in each year of RP4, averaging 1.6% per annum
- $12.7m of additional expenditure above the baseline – the sixth highest of any Victorian water business
- An improvement in controllable opex per connection of 0.6% per annum, after factoring in the additional expenditure.

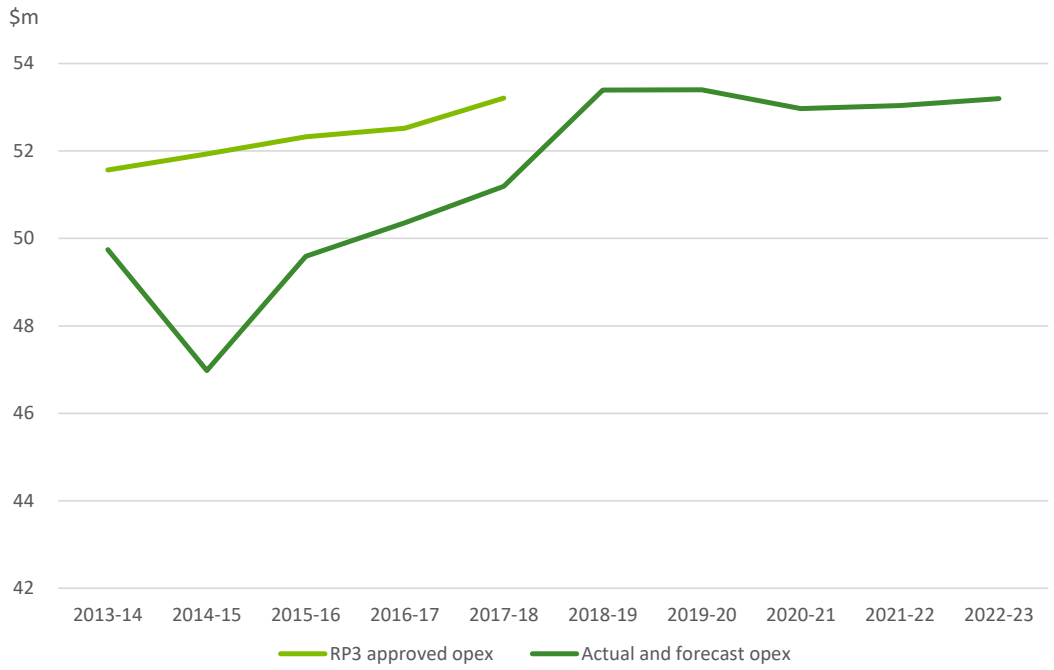
2.3.2 Controllable opex forecast

The chart below shows Central Highlands Water's total controllable opex across RP3 and RP4. After recording a significant reduction in 2014-15, there is a sustained increase in opex from 2015-16 to 2018-19.

Central Highlands Water's opex increase is the net effect its efficiency rate (1.6% p.a.), customer growth rate (1.6% p.a.) and $12.7m of opex above the baseline (total for the 5 years), which consists of the following items:

- A total of $3.8m over the five years in additional labour costs mostly in relation to increases in the enterprise agreement
- $5.5m in electricity cost increases (total over 5 years).
- $3.4m of additional costs associated with new initiatives.

Figure 2-1 Controllable opex – Central Highlands Water ($2017-18)



2.4 Capital expenditure

2.4.1 Overview

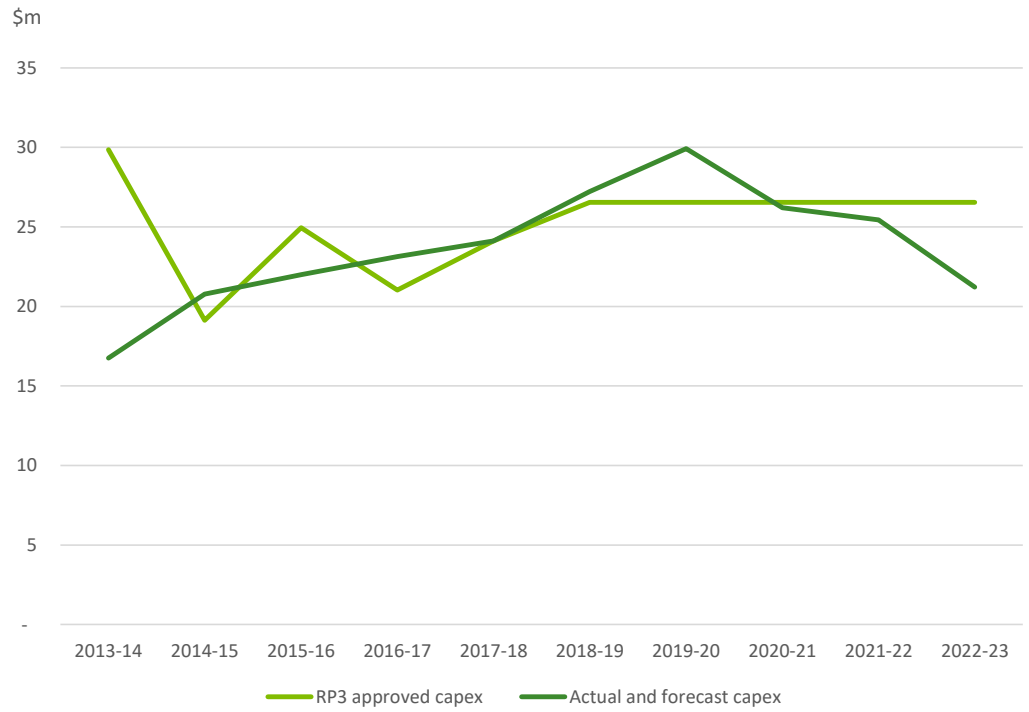
Central Highlands Water's proposed capex is increasing by 22% for the RP4 period over RP3. Key aspects of the capex forecast include:

- Significant reduction in average project size from RP3 with similar decrease in number of identified projects and programs
- A large increase in renewals expenditure. Renewals represents greater than 45% of the capex program.
- Full rollout of a digital metering project following on from a trial project
- Focus on improvements / compliance projects including the Ballarat South Trunk Sewer Duplication

2.4.2 Capex forecast

Central Highlands Water's actual and forecast water and sewerage capex is shown in Figure 2-2. Total capex for RP4 is forecast to be $130.0m which represents a 22% change compared to RP3 actual gross expenditure of $106.8m. The key drivers of capex are renewals and improvements / compliance expenditure.

Figure 2-2 Capex forecast – Central Highlands Water



3 Assessment of opex

This chapter assesses Central Highlands Water's forecast opex.

3.1 Overview of approach

With respect to opex forecasts, the ESC's Guidance Paper outlines that a prudent and efficient opex forecast would have the following characteristics:

- Baseline year expenditure is reflective of efficient operating costs and is used as a basis to forecast expenditure
- Forecast opex incorporates expectations for a reasonable rate of improvement in cost efficiency
- Expenditure requirements above the baseline year (adjusted for growth and efficiency improvements) are fully explained and justified.

Under the approach adopted by the ESC, opex is disaggregated into four separate elements. The elements are:

- **Baseline expenditure** – operating expenditure incurred in 2016-17, adjusted upwards or downwards to reflect any specific factors that mean that expenditure 2016-17 is not representative.
- An adjustment for **customer growth** – the ESC generally considers that increases in opex in line with customer growth are reasonable. This is a conservative assumption, and arguably generous to the water businesses, as many costs of operating water and sewerage systems are fixed or would be expected to grow at a lower rate than customer growth.
- An **efficiency improvement factor –** reflecting general productivity improvements across the economy, the ESC expects water businesses to achieve year-on-year productivity improvements. Businesses are free to propose their own individual improvements.
- **Cost increases** – for example those arising from new obligations imposed by regulators or government, major increases in costs which it is not reasonable to expect the business to absorb or manage within the ebb and flows of expenditure from year to year, or new initiatives that customers seek and are willing to pay for.

Our task is primarily to review both the baseline expenditure and the cost increases, and then to consider these in the context of the net impact of all the above factors. For example, we are more likely to consider an opex forecast to be reasonable for a business with a low efficiency improvement factor, but an intention to absorb additional expenditure items within its overall expenditure budget, rather than a business with a higher efficiency factor but cost increases for a large range of items that are not being required by regulators or sought by customers.

The concept of baseline expenditure is that it is the level of expenditure necessary to provide a defined level of service. Implicit is the assumption that the actual activities undertaken by a business from year to year to deliver services will change and there will be a number of once-off areas of expenditure in any one year that are not required every year. For example, a business may prepare a sewerage strategy in one year, prepare a water supply demand strategy in another, and do a number of once-off repairs in another year. That is, there will be a number of minor inclusions and exclusions from year to year associated with the normal ebb and flow of work requirements and changes in the industry and wider business environment. Given this, and the additional allowance provided for customer growth, it is therefore not the case that businesses should simply be able to recover increases in all opex line items. An efficient business would be expected to absorb many of these increases within their baseline and growth allowance.

Figure 3-1 below provides a hypothetical and simplified example of the above. Data is only shown for a single year, but the same principle applies across all five years of the RP4 period. Under the example

below, and all other things being equal, we would be more likely to recommend reductions to Business A's expenditure, despite it having a nominally higher efficiency factor.

Figure 3-1 Example of adjustments to baseline expenditure in ESC template

	Business A	Business B
Customer growth (%)	2.0%	1.0%
Proposed efficiency factor (%)	3.0%	1.5%
Growth-efficiency factor (%)	-1.0%	-0.5%
Cost increases ($m)	4	0.3

	Business A ($m)	Business B ($m)
2016-17 Expenditure	100.0	100.0
2016-17 Adjustments	1.0	-2.0
Baseline expenditure	101.0	98.0
Growth-efficiency adjustment	-1.0	-0.5
Growth adjusted expenditure	100.0	97.5
Cost increases	4.0	0.3
Proposed expenditure	104.0	97.8
Change compared to baseline	3.0	-0.2

The tools and approaches we have applied to consider each of the elements and the overall proposed opex package include:

- Benchmarking – of both the level of costs, and changes in costs, against historic and peer expenditure
- Comparing business forecasts to independent forecasts of changes in key expenditure items (for example labour and energy)
- Reflecting government and regulator policies and requirements
- Considering information on current service levels, customer preferences and willingness to pay
- Reviewing individual items of expenditure on a case-by-case basis.

There are a range of systemic opex issues that are material for all businesses. Regardless of whether there are cost increases for these items, they have been reviewed for each business:

- **Labour costs.** Given labour costs are a significant component of opex, each businesses labour forecast has been reviewed, in particular how EBAs have been treated, Victorian Government wages policy, salary progressions, vacancy rates and other expectations from the government.
- **Energy costs.** Energy costs are expected to increase for all businesses particularly in the first year or two of RP4, however the magnitude of the increase is presently uncertain. Given this inherent uncertainty, our review provides indicative adjustments only. Final adjustments will be made by the ESC between its draft and final reports based on actual contract quotes.
- **Emission reduction programs.** Businesses have been asked by the Victorian government to reduce emissions from energy use via various means and most have proposed to do so. We have reviewed these proposals and checked that reductions in energy use are accounted for (capex and opex must be aligned), appropriate feed in tariffs are used, and any Government funding support is reflected.
- **Savings in RP3**. A number of businesses appear to have made temporary savings in RP3, but have not maintained them through the end of RP3, and are not forecasting to maintain them for RP4. We have identified where this is the case.

3.2 Errors and adjustments to the submitted template

We note that Central Highlands Water resubmitted the original excel template to the ESC. This resulted in no material changes to proposed opex.

3.3 Assessment of baseline expenditure

As outlined above, our approach to assessing baseline expenditure is to define efficient expenditure in the base year of 2016-17.

Central Highlands Water's actual expenditure was $50.4m in 2016-17.

In its 2013 price review, the ESC set a benchmark of $52.5m for 2016-17. Central Highlands Water's baseline expenditure is significantly lower than this benchmark, and has been achieved by introducing efficiency measures as part of the government's water rebate program.

We have assessed Central Highlands Water's 2016-17 baseline and we believe that it reflects an efficient baseline and therefore consider no further adjustment is necessary.

3.4 Benchmarking opex to other water businesses

A key component of our methodology is to benchmark the opex outcomes of the water businesses. Figure 3-2 below compares the regional urban water businesses change in controllable opex per connection over RP4.

This figure below shows that Central Highlands Water (CHW in the chart) is forecasting opex changes similar to the average for regional businesses. Table 3-1 compares all of the Victorian water businesses and shows that Central Highlands Water is forecasting a reduction in controllable opex per connection 0.6% per annum.

Figure 3-2 Change in controllable opex per connection – index

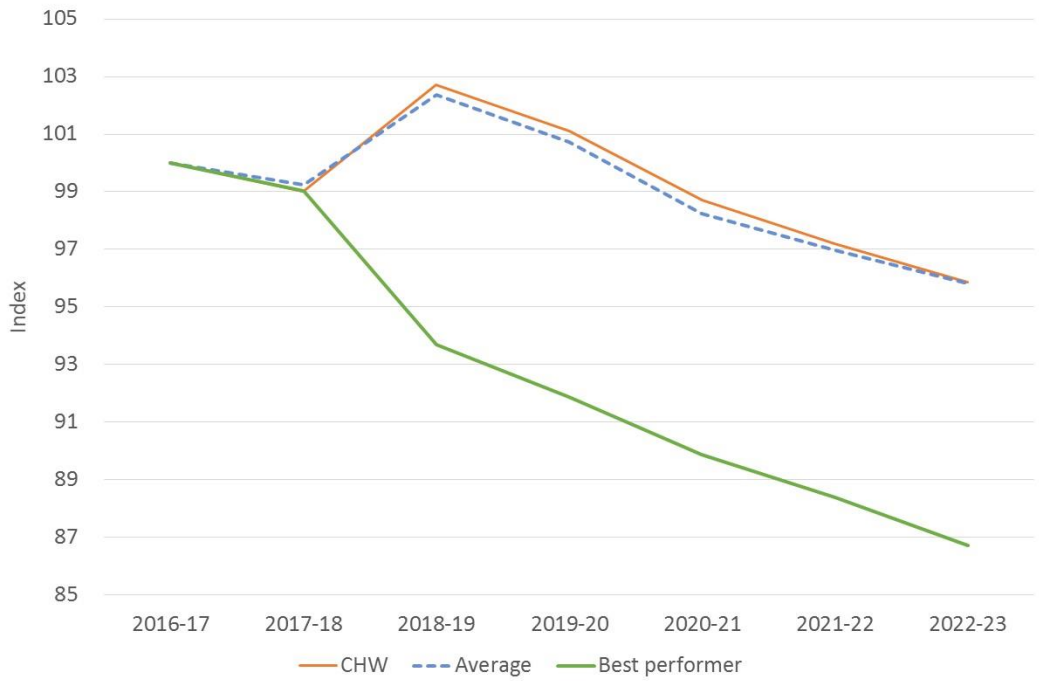


Table 3-1 Comparison of Victorian water businesses change in controllable opex

Water business	Efficiency target	Growth rate (% per annum)	Forecast variations to baseline	Reduction in controllable opex per connection
	(avg. % per annum)		(total RP4 $m)	(avg. % per annum)
Westernport	2.7%	1.9%	0.00	2.6%
Yarra Valley	2.5%	1.7%	8.61	2.2%
South East	2.3%	2.3%	9.58	1.8%
Goulburn Valley	3.1%	1.3%	10.12	1.5%
Barwon	2.3%	1.6%	22.67	1.3%
Lower Murray – urban	1.0%	1.1%	0.26	1.2%
City West	2.0%	2.6%	20.66	1.1%
Coliban	1.5%	1.7%	8.55	1.0%
North East	1.2%	1.2%	6.24	0.9%
East Gippsland	1.2%	1.3%	1.91	0.9%
GWMWater – urban	1.5%	0.5%	8.73	0.8%
Central Highlands	1.6%	1.6%	12.71	0.6%
South Gippsland	1.5%	1.5%	7.03	0.0%
Gippsland	1.0%	1.2%	16.78	-0.2%
Wannon	1.0%	0.8%	25.41	-1.8%

Note: GVW forecast variations are adjusted for its $2.3m p.a. efficiency dividend

3.5 Individual opex items

The previous section identified the changes to opex above baseline expenditure. Central Highlands Water has identified $12.71m of expenditure in RP4 above the baseline. Key items to be reviewed as part of that increase include:

- Labour ($3.8m)
- Electricity ($5.5m)
- New initiatives ($3.4m).

These items are explored further in this section.

3.5.1 Labour

Central Highlands Water has forecast labour cost increases above the baseline of $3.8m over RP4. Central Highlands Water has outlined that the reason that this additional expenditure is required is because its enterprise agreement includes increases of 3.0% for all of RP4, as well as salary progression during this period of a further 0.5%.

A comparison of Central Highlands Water's labour forecast to other water businesses shows that Central Highlands Water is one of seven businesses forecasting material changes to labour

Table 3-2 Comparison of labour forecast for RP4 of the Victorian water businesses

Water business	Forecast variations to baseline opex (total RP4 $m)	Total controllable opex (total RP4 $m)	Labour variations as a % of total controllable opex
Wannon	11.85	201.8	5.9%
Gippsland	10.59	364.2	2.9%
Goulburn Valley	5.90	220.2	2.7%
North East	3.62	196.6	1.8%
GWMWater	2.85	161.1	1.8%
Barwon	7.90	453.3	1.7%
Central Highlands	3.80	266.0	1.4%
East Gippsland	0.32	90.4	0.4%
South Gippsland	0.12	95.8	0.1%
City West	-	534.7	0.0%
South East	-	622.6	0.0%
Yarra Valley	-	674.4	0.0%
Coliban	-	301.3	0.0%
Westernport	-	66.5	0.0%
Lower Murray – urban	- 0.37	103.2	-0.4%

As outlined above, proposed expenditure should only be added to the baseline where the water business can demonstrate that it is required (e.g. new obligation, customer preference or cost that cannot be managed). All Victorian water businesses are owned by the State Government and are subject to the same wages policy, which is overseen by DELWP and DTF. We would therefore expect to see a similar application of this wages policy across all water businesses.

We note that for most if not all water businesses, wage increases established under current EBAs (which are typically in the range of 2.5% to 3.25%) are well above inflation, and are also higher than average growth in wages across the economy. While commentators (including Deloitte Access Economics' own forecasts) expect wages growth to slowly increase over time, most businesses forecasts of wages growth are higher than those projected for the broader economy for the next few years.

We accept that water businesses are legally obliged to comply with wage increases set out in EBAs. At the same time, our view is that passing through to customer prices wage increases which, it appears, will for several years be well above wage increases in the broader economy, is unlikely to be prudent and efficient. We also consider that pass through of these costs to customers would be inconsistent with the PREMO framework, which requires businesses to demonstrate that they have actively sought to reprioritise expenditure to mitigate the cost and price impacts of any new obligations. There are a range of factors that we consider could mitigate EBA increases, for example:

- EBAs don't necessarily cover all staff in the business
- Businesses have options for delivering services that can reduce the cost impact of EBAs, such as contracting or outsourcing
- We understand that EBAs often have provisions that require increases above inflation to be accompanied by improvements in productivity.

We also note that most businesses have effectively 'absorbed' their above-CPI wage increases within their overall opex forecasts through productivity increases or other cost reductions, meaning that these increases are not passed on to customers. We believe this is a prudent and efficient approach and accordingly we have generally recommended reductions in opex forecasts for those businesses that have proposed wage-driven variations above their growth-adjusted baseline.

3.5.2 Electricity and carbon neutrality program

Central Highlands Water has forecast expenditure for electricity to increase by a net amount of $5.49m in RP4 compared to the 2016-17 baseline. This is made up of:

- Increase of $7.50m due to higher retail electricity prices
- Decrease of $2.01m due to reduction in electricity consumption.

Overall, this reflects an increase of 2.1% of total proposed controllable opex. The table below presents a comparison of Central Highlands Water forecast energy variations relative to the baseline to the other water businesses over RP4.

Table 3-3 Comparison of energy forecast for RP4 of the Victorian water businesses

Water business	Energy costs as a % of 2016-17 controllable opex ($m)	Forecast variations to baseline opex (total RP4 $m)	Total controllable opex (total RP4 $m)	Energy variations as a % of total controllable opex
Wannon	7.6%	5.1	201.8	2.5%
Central Highlands	7.4%	5.5	266.0	2.1%
Coliban	6.6%	5.5	301.3	1.8%
Gippsland	4.7%	6.2	364.2	1.7%
Lower Murray – urban	8.3%	1.6	103.2	1.6%
Barwon	4.7%	5.0	453.3	1.1%
Goulburn Valley	9.6%	1.7	220.2	0.8%
North East	10.1%	1.3	196.6	0.7%
City West	1.5%	3.0	534.7	0.6%
GWMWater	7.9%	0.8	161.1	0.5%
South Gippsland	4.5%	0.2	95.8	0.2%
East Gippsland	5.1%	0.1	90.4	0.1%
South East	3.3%	-	622.6	0.0%
Yarra Valley	4.0%	-	674.4	0.0%
Westernport	4.2%	-	66.5	0.0%

Some key aspects the electricity forecast are outlined below.

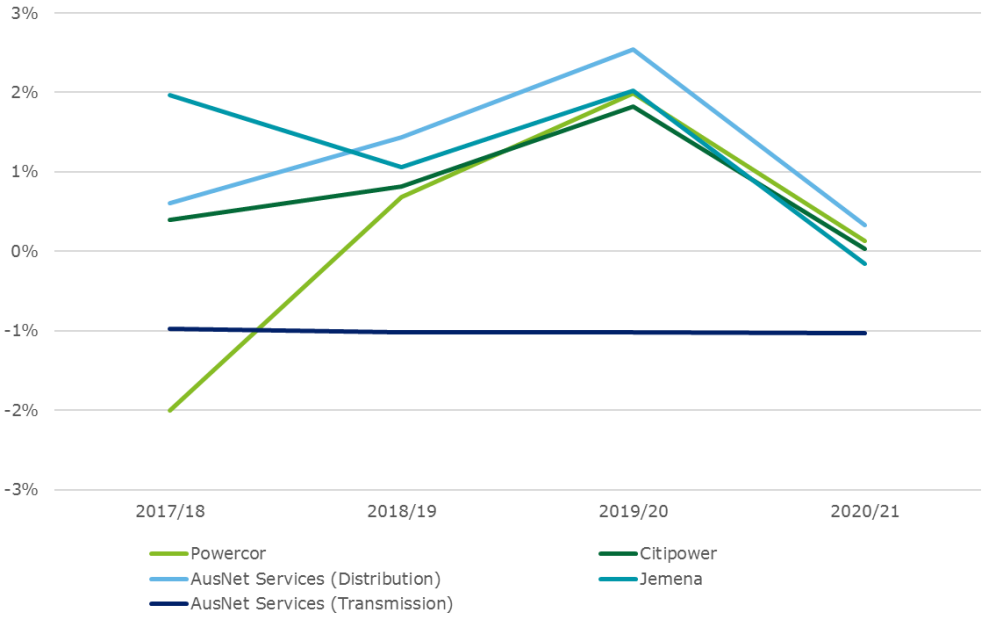
- Central Highlands Water's current electricity contract expires in July 2018.
- Central Highlands Water forecasts retail electricity prices to increase by 40% from 2016-17 to 2018-19 on average across all sites. This is based on the VicWater's Supply Chain Excellence Program 5-Year Electricity Price Forecast Report June 2017 which provides retail electricity price forecasts for the Victorian Water Corporations. This report estimated a significant increase in retail electricity prices in 2017, followed by relatively flat prices in real terms under the base case scenario, and real decreases under policy change scenarios (such as the introduction of an emissions intensity scheme or similar policy). Central Highlands Water assumes that retail electricity prices remain constant in real terms for the remainder of RP4.
- The proposed variation relative to the baseline of 2.1% of controllable opex is the second highest of the Victorian water businesses, behind Wannon Water.
- Central Highlands Water has proposed to install behind-the-meter solar capacity at three large sites: the Ballarat South WWTP, Ballarat North WWTP, and White Swan Water Treatment Plant. This involves a total expenditure of $4.69m over RP4, with the majority occurring in 2019-20.

Electricity prices in Victoria have risen significantly over the last year, driven largely by increases in wholesale electricity prices. There is considerable uncertainty around how prices will change over RP4, due to a range of factors including policy uncertainty, fuel prices including coal and natural gas, and the potential entry and exit of generation capacity. This makes it difficult to accurately forecast electricity prices for the purposes of the price submission.

In Victoria, transmission network services are provided by AusNet Services, and distribution network services are provided by one of the five distribution network service providers (DNSPs, AusNet Services, CitiPower, Powercor, Jemena and United Energy) in different parts of the state. Network prices are determined by the Australian Energy Regulator (AER). The AER made final decisions on revenue allowances for the five DNSPs in May 2016 for the 2016-20 period[1], and made a final decision for AusNet Services (transmission) in April 2017 for the 2017-22 period. The annual change in smoothed revenue allowances for each of the network businesses is presented in Figure 3-3 below.

[1] The AER made a mathematical error in the inflation calculation in these decisions. It has proposed to revoke the decisions and substitute new determinations correcting the error by March 1 2018. We don't expect this to have a material impact on electricity prices.

Figure 3-3 Annual change in expected revenue (smoothed, real $2017-18)



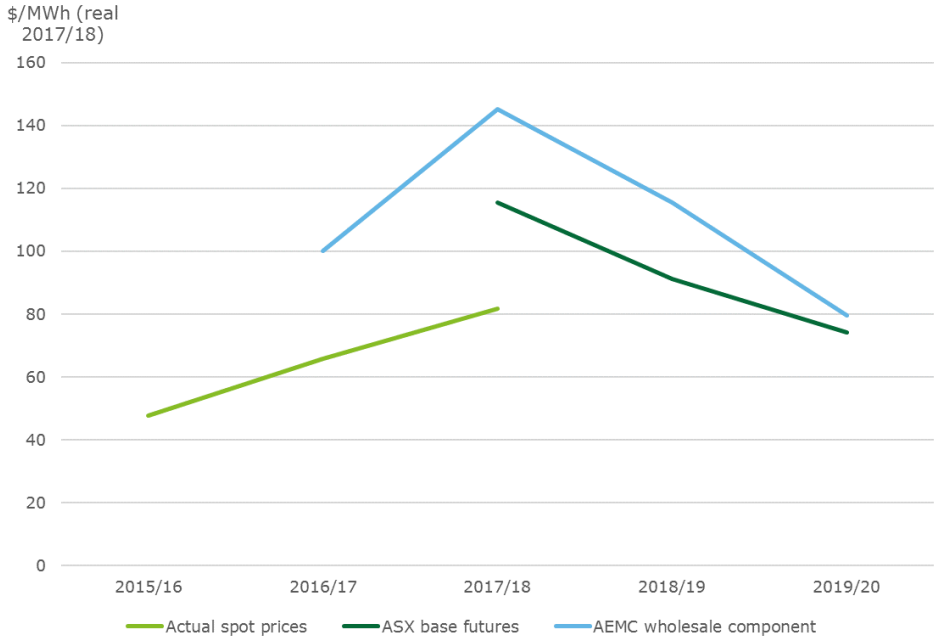
Source: Deloitte analysis of AER decisions

Overall, the revenue allowances for the network business is relatively flat, with small real increases for most of the DNSPs, and a small real decrease for AusNet Services Transmission. Central Highlands Water is in the Powercor distribution network, which has small real revenue increases from 2018-19 onwards (less than 1% average). The change in price for particular customer types may differ from this overall trend, however this does not provide strong evidence of real price increases in the network component of prices.

Wholesale prices are harder to forecast accurately, with a wide range of forecasts produced by different bodies over the past year. The Australian Energy Market Commission (AEMC) recently published a wholesale electricity price forecast (including spot prices, hedging, ancillary services and market fees) in its annual report on residential electricity price trends, based on analysis prepared by Frontier Economics.[2] It forecasts wholesale prices to peak in 2017-18, before decreasing, falling below the real 2016-17 price by 2019-20. This forecast movement in wholesale electricity prices is broadly in line with the price of Victorian ASX base energy futures which are approximately $115 for the remainder of 2017-18, decreasing to $74.2 by 2019-20. These values are presented in Figure 3-4, along with actual average spot prices up to 31 December 2018.

[2] AEMC, 18 December 2017, *Final Report 2017 Residential Electricity Price Trends*

Figure 3-4 Wholesale electricity prices and electricity futures in Victoria



Source: Deloitte analysis of: AEMO data collected through NEOExpress, AEMC 2017 Residential Electricity Price Trends data, and ASX energy futures data accessed 17/01/2018

However, some publicly available reports provide quite different outlooks from the AEMC report. A September 2017 report prepared for the Australian Energy Market Operator (AEMO) by Jacobs forecast wholesale market prices to continue to increase to a peak in 2019-20, with retail prices following a similar trajectory.[3] The divergence of views on wholesale costs reflects the overall uncertainty in the market, as well as quickly changing market conditions and expectations. In our analysis, we have placed more weight on the AEMC outlook as this is the more recent analysis.

In reviewing Central Highland Water's proposal, we have considered the evidence provided by Central Highlands Water and recent forecasts of network and wholesale price movements. We consider that Central Highland's proposed electricity expenditure variations for 2018-19 and 2019-20 (which reflect an effective price increase of 40% on 2016-17 prices in each year) is within a reasonable range. However, the VicWater forecast that formed the basis for this forecast on was based on an average across the Victorian water sector, rather than the specific energy requirements and profile of Central Highlands Water. Our preliminary recommendation is that these be approved, subject to being updated for actual contract offers for Central Highlands Water before the final decision.

For 2020-21 onwards, we do not consider there is strong evidence to support a continued price increase that could not be managed considering the investment Central Highlands Water has proposed for electricity and emissions reductions. We note that the majority of proposed capex is for 2018-19 or 2019-20, coming in to effect in 2020-21 when Central Highlands Water proposes a downwards variation in energy consumption.

Given this proposed expenditure, and recent evidence regarding electricity price forecasts, we recommend that a net variation (considering electricity price increases and electricity consumption decreases together) should not be approved for the remainder of RP4. This results in a reduction of $2.5m in total for RP4 from Central Highland Water's proposal. We note that the ESC intends to make a decision on allowable energy cost increases using updated contract offers post the finalisation of our reports. Therefore, our recommendations are indicative only.

[3] Jacobs, 21 September 2017, *Retail electricity price history and projected trends*

3.5.3 New initiatives

Central Highlands Water has proposed $3.4m above baseline expenditure for new initiatives. These initiatives include the following:

- Additional operating expenditure to support increased capacity of recycled water plant at Ballarat North ($0.25m)
- Additional net costs in the early years of the digital metering program ($0.85m)
- Water efficiency programs ($2.0m).

We have assessed each of these initiatives against the ESC's PREMO framework, which states that expenditure must meet one of the following categories to be accepted as a variation from baseline expenditure:

- New obligations from regulators or government
- Improved outcomes, supported by customer willingness to pay for those outcomes
- Increases in costs that are not able to be managed within a growth-adjusted baseline.

Central Highlands Water contends that the additional opex for the recycled water plant at Ballarat North is a cost increase that cannot be managed within a growth-adjusted baseline. Based on the information provided by Central Highlands Water, this appears to be reasonable. For more details on the assessment of this project, refer to section 4.6 of this report.

The additional net costs in the early years of the digital metering program are unchanged, consistent with our recommendations for this expenditure in the capital program in Section 4.4.

The additional $2.0m of proposed expenditure identified by Central Highlands Water for water efficiency programs is made up:

- $0.9m for tank rebates, with a forecast of 100 rebates per annum at a cost of $1,800 each
- $0.7m for a behavioural change program, which includes 8 residential and 5 non-residential initiatives and
- $0.4m for community rebates that provide plumbing work and water efficiency fittings for customers.

Central Highlands Water has consulted explicitly with its customers on the tank rebate program during the development of its pricing submission. It received strong support through its customer reference group, with 75% fully supportive, and the remaining 25% somewhat supportive. Based on this strong customer support we recommend no change to this expenditure.

However we do not consider that the information provided by Central Highlands Water for the behavioural change program and community rebates meets any of the PREMO criteria outlined above. Rather, the approach taken by Central Highlands Water reflects a bottom-up approach to identifying opex requirements, and is not consistent with the incentive-based approach under PREMO. We therefore consider that these costs should be able to be managed within a growth-adjusted baseline, and should be removed from Central Highlands Water's controllable opex.

Therefore, of the new initiatives, we propose a reduction of $1.10m. These adjustments are summarised in Table 3-4.

3.6 Recommended changes to forecast opex

This table below summarises the changes to opex above baseline expenditure. We have recommended a reduction of $7.40m to Central Highlands Water's RP4 forecast controllable opex as per the table below.

Table 3-4 Central Highlands Water forecast controllable opex and recommended adjustments

Opex item	Actual	Price submission forecast					Total
	Baseline 2016-17	2018-19	2019-20	2020-21	2021-22	2022-23	RP4
Proposed controllable operating expenditure ($m, original proposal)	50.36	53.39	53.40	52.97	53.04	53.20	**266.01**
Recommended adjustments							
Labour		-0.25	-0.51	-0.76	-1.01	-1.27	**-3.80**
Electricity				-0.83	-0.83	-0.83	**-2.50**
New initiatives – water efficiency programs		-0.22	-0.22	-0.22	-0.22	-0.22	**-1.10**
Total recommended adjustments		**-1.62**	**-0.73**	**-1.81**	**-2.06**	**-2.32**	**-7.40**
Recommended operating expenditure		**52.49**	**52.25**	**51.16**	**50.98**	**50.89**	**258.61**

Notes: Controllable opex excludes licence fees, environmental contribution and bulk water costs.

4 Assessment of capex

This chapter of the report sets out our assessment of Central Highlands Water's capex proposal for RP4 including:

- An overall assessment of capital planning and asset management approach
- A summary of major projects with a significant impact on the capex proposal (top four by total expenditure) and assessment of each project
- A summary of our recommendations.

Our approach to assessing capex is set out in Section 1.4.2.

4.1 Overall assessment of capital planning and asset management

4.1.1 Previous Review of Expenditure 2012-13

Central Highlands Water's key capital planning systems and processes were reviewed at a high level as part of the assessment of expenditure forecasts for regional urban businesses in 2012-13 for RP3. This assessment looked at generic issues that might have impacted on the prudency, efficiency and deliverability of proposed expenditure. The 2012-13 review highlighted:

- Central Highlands Water is moving into a formal 10 year capital planning cycle with an annual review process and a specific process for the commencement of each regulatory period
- Capital planning is supported by a Project Management Handbook (May 2011) and a 10 Year CapEx Program Annual Development Procedure
- All projects must have a 'Project Definition Document' which, once reviewed and approved, is then risk assessed and ranked relative to the capital program
- The majority of projects are sent to the preferred engineering services provider to undertake options assessment and concept / detailed design.
- Central Highlands Water's asset management systems are less system focused and more action focused
- Asset management processes are not well documented but actions are in place to address this
- General maintenance and renewal strategies are in place and working robustly
- Network Plans produced for water and wastewater outline management processes.

4.2 Major projects

Table 4-1 provides an overview of the top ten projects (as identified by Central Highlands Water in its Price Review Template), showing the primary driver and forecast expenditure over RP4.

The table also identifies the proposed capital allocations for large programs of work (defined as being over $2m in total expenditure over the five year regulatory period) and minor programs of work (being under $2m in expenditure over the five year period). The criteria for defining the major and minor programs of work have been developed by Deloitte based on Central Highlands Water's regulatory submission.

The highlighted projects were selected for more detailed review and commentary on these projects can be found in Sections 4.4 to 4.6.

Table 4-1 Central Highlands Water forecast capex for Top 10 Projects

Capex item	Primary Driver	Water Plan forecast expenditure						
		2018-19	2019-20	2020-21	2021-22	2022-23	Total WP4	% of total
Ballarat South Trunk Sewer Duplication	Improvement / Compliance	0.00	0.00	3.98	6.25	1.14	**11.36**	19.7%

Capex item	Primary Driver	Water Plan forecast expenditure						
		2018-19	2019-20	2020-21	2021-22	2022-23	Total WP4	% of total
Daylesford Water Supply Upgrade	Improvement / Compliance	0.92	4.61	3.69	0.00	0.00	**9.22**	16.0%
Ballarat South Wastewater Treatment Plant - Inlet Works Upgrade	Growth	0.28	5.25	3.68	0.00	0.00	**9.20**	15.9%
Ballarat East Sewer Duplication and Flow Storage #	Improvement / Compliance	0.00	0.57	0.00	3.62	2.91	**7.09**	12.3%
Ballan Wastewater Treatment Plant - Recycled Water Storage Capacity Upgrade	Improvement / Compliance	3.33	0.83	0.00	0.00	0.00	**4.16**	7.2%
Fellmongers Siphon Raw Water Upgrade	Renewals	3.23	0.81	0.00	0.00	0.00	**4.03**	7.0%
Maryborough Wastewater Reuse Scheme Improvements	Improvement / Compliance	0.00	1.35	2.02	0.00	0.00	**3.36**	5.8%
Ballarat South Wastewater Treatment Plant - Lagoon Pipework Upgrade	Improvement / Compliance	3.20	0.00	0.00	0.00	0.00	**3.20**	5.5%
Evansford Raw Water Pipeline	Renewals	3.20	0.00	0.00	0.00	0.00	**3.20**	5.5%
Ring Road Trunk Water Main Duplication	Growth	0.00	0.00	0.00	1.18	1.77	**2.96**	5.1%
Subtotal - Top 10 Projects		**14.15**	**13.41**	**13.36**	**11.05**	**5.82**	**57.79**	44.5%
Other large projects/programs		12.54	16.51	12.84	14.40	14.16	**70.44**	54.2%
Other minor projects/programs		0.53	0.00	0.00	0.00	1.24	**1.77**	1.4%
Total		**27.22**	**29.92**	**26.20**	**25.45**	**21.22**	**130.00**	
Top 10 proportion of annual expenditure		52.0%	44.8%	51.0%	43.4%	27.4%	44.5%	

4.3 Renewals expenditure

Renewals is a significant program for Central Highlands Water with total expenditure representing over 45% of the total capex for RP4. The renewals program has three key categories:

- Water renewals – pipelines/network, headworks, treatment and corporate ($33.97m)
- Wastewater renewals – pipelines/network and corporate ($11.33m)

The water and sewer main (pipeline/network) renewals programs are the largest individually identified programs in the overall renewals program. For water mains, the program seeks to renew mains based on a criticality and likelihood risk assessment incorporating actual failure rates. The water mains program is experiencing a decrease in performance resulting from a cohort of asbestos cement (AC) mains which were installed from the 1950s. For sewer mains, the program is responding to the

progressive deterioration of concrete and vitrified clay (VC) which make up the gravity system originally installed from the 1920s. A key focus for sewer main renewals is the identification of high criticality and poorly performing mains for inclusion in the capital program.

Both renewals programs are supported by long term asset management plans and renewals forecasts with joint tendering processes in place with other water utilities to drive efficiencies in the delivery of the program. A 2.5% efficiency factor has been applied to the unit rates used to estimate program expenditure for both the water and sewer mains programs.

Project Justification Reports were provided for Water Main renewals and Sewer Mains renewals programs with each report providing detail on age profiles, recent network performance, analysis of failure curves for key mains materials, options analysis for current, reduced and increased funding scenarios, and details of the preferred approaches (maintaining current funding for water and increase funding for sewer mains) along with cost estimates.

4.3.1 Analysis

Central Highlands Water is proposing a significantly increased renewals program in RP4 over what is being delivered in the current regulatory period. For RP3, Central Highlands Water proposed a combined water and sewer main renewals expenditure allocation of around $10.8m (escalated to $2017) compared to the combined total for the next regulatory period of over $18.2m (a 69% increase). The level of renewals expenditure adopted at the time for RP3 was consistent with the level of expenditure adopted in the previous RP2 period so the proposed expenditure for the next period is significantly different to historical levels.

Central Highlands Water provided supporting information for these two renewals program in the Pricing Submission along with Project Justification Reports (funding approval requests) which provided explanations around the water mains age profiles, analysis of failure curves for AC and PVC mains, current condition gradings by material highlighting mains which are nearing or past their expected life, and details of projected increases in renewals for the next 30 years (from 2018). Central Highlands Water has identified that further increases in renewals expenditure are required over the long term forecast period to ensure that service performance levels are maintained.

Whilst it is recognised by Central Highlands Water that less than 10% of the sewer network has been inspected, approximately 21% of the mains actually inspected were identified as being in condition grade 4 or 5 (poor condition / close to failure). High risk sewer mains are prioritised for inspections to improve condition grading for the network.

4.3.2 Recommendation

Central Highlands Water's renewals program approach is sound and while there is a significant (69%) increase in the combined water and sewer main renewals program, the increase is reasonably well supported by a combination of age profiles, failure analysis, and condition inspections. Having reviewed the supporting information, we are satisfied that it provides adequate justification for the proposed increases, and we therefore propose no adjustments to the renewals expenditure.

4.4 Digital metering project

Central Highlands Water is aiming to become a digital utility, a move which appears to be supported by customers (represented by proxy through the Customer Reference Group). Central Highlands Water is proposing to install digital meters across the entire water supply network. These meters will provide customers with direct access to their water usage history and immediate alerts for high water use and potential water leaks. It will also reduce meter reading costs. The project will cost $7.65m.

A six month proof of concept trial has been undertaken using 600 devices in three locations across Ballarat and a number of benefits were identified.

Following on from the proof of concept trial, Central Highlands Water now proposes a five year rollout of digital meters to 69,500 existing connections plus all new connections. Central Highlands Water originally prepared a business case to support the implementation of the trial project and follow on to the full rollout and a more recent Project Justification Report (an internal funding approval request) was provided for this review, including an excel-based NPV analysis. This analysis compares the

financial impact of the proposed project against a 'do nothing' base case, from Central Highlands Water's financial perspective. It does not consider any other options.

4.4.1 Analysis

Central Highlands Water has identified a number of benefits from the rollout of smart metering, including:

- Much improved ability to identify customer water leaks
- Savings from reduced meter reading costs
- Reduced OHS and other risks associated with manual meter reading
- The ability to move to more frequent billing

As noted above, Central Highlands Water has indicated its customer reference group unanimously endorsed the rollout of smart metering.

The NPV model provided by Central Highlands Water shows an NPV, from Central Highlands Water's perspective, of close to zero over 20 years. This means that in the longer term customer's bills should be largely unaffected by the rollout. In the short to medium term the NPV is negative due to the initial start-up costs of the system. A negative NPV in the early years is not unusual and Central Highlands Water has indicated that it has structured its overall pricing submission to ensure that the net outcome for customers is an overall reduction in prices.

Being close to zero, the NPV is sensitive to changes in assumptions including metering costs, wage increases for meter readers and the number of connections. We also note that the NPV analysis does not assume any change in the frequency of meter reading (although this was cited as one of the key benefits of the roll out) or factor in the net impact of reduced revenue for Central Highlands Water if customer usage falls due to increased debt collection.

On the other hand, the NPV assessment does not reflect the broader benefits that may be received by customers, including the ability to better monitor their usage and reduce wastage and leaks. Central Highlands Water has also identified some benefits that it will receive but which it has not been able to quantify.

In our view the cost assumptions used by Central Highlands Water, particularly around data management seem quite low. However Central Highlands Water has noted that the small-scale rollout it has already undertaken, plus the 'tried and tested' approach to data management to be applied by its partner MiWater, mean that it has a strong confidence in the cost estimates.

In summary, we have some reservations about the project and the level of detail in the supporting project justification report and model. However, we also note:

- Strong customer support for moving to be a 'digital business'
- On Central Highlands Water's figures the project will have limited impact on customer bills
- Central Highlands Water has expressed strong confidence in project costings
- Central Highlands Water has undertaken extensive trials of digital metering.

4.4.2 Recommendation

For the reasons set out above, we have made no adjustments to proposed expenditure for this project.

4.5 Maryborough Wastewater Reuse Scheme

Maryborough is supplied with water from a number of sources including reservoirs and bore fields including the Moolort Groundwater Bore. The Moolort bore has a high salt content but is required to supplement supplies from other sources. A salt reduction plant was recently installed at the Maryborough Water Treatment Plant with the brine from the plant being directed to the Maryborough Wastewater Treatment Plant. The additional salt in the effluent from the wastewater treatment plant requires the careful management of effluent reuse (mainly through irrigation) to avoid concentrating salt. A proportion of the current effluent reuse scheme is privately managed however the increased salt loads are putting a strain on the efficient management of the overall scheme.

This project represents the most appropriate land management solution and involves Central Highlands Water assuming full ownership and control of the effluent irrigation reuse scheme. The higher salt loads require moving away from higher value privately operated schemes towards lower value but more salt tolerant crops and the implementation of more stringent management techniques to manage the risk of salt build up in the irrigation areas. The project requires the purchase of additional land near the current Bet Bet lagoons with a total of 90 hectares required to meeting 90th percentile compliance (as the EPA standard). Effluent will still be available to some private locations including golf course and football ovals but with strict salinity thresholds set.

4.5.1 Analysis

The requirement for this project is a result of the capital works undertaken for the Maryborough Water Quality Improvement Project which has increased the security and quality of potable supply to Maryborough customers but which has increased the salt load on the wastewater network. There are few alternative options for this project with current restrictions on effluent discharge. The majority of expenditure for the project relates to the purchase of additional land to support the irrigation of effluent. The identification of potential sites and land valuations were completed to inform the required capital cost of this project. The project is well supported by documentation including and external consultant's options assessment for the management of effluent. The consultant's report recommended Central Highlands Water take more direct control over effluent management rather than act in partnership with other stakeholders.

4.5.2 Recommendation

We have made no adjustments to proposed expenditure for this project.

4.6 Integrated Water Management / Recycled Water program

Central Highlands Water, in conjunction with the City of Ballarat and the Corangamite Catchment Management Authority, has developed a Ballarat City Integrated Water Management (IWM) Plan which aligns with and supports the key themes of the Water for Victoria (2016) policy document. Five key projects were identified in a consultant's report which focussed on three timeframes – short term 0-5 years, medium term 5-15 years and long term 15-50 years.

The five key projects identified would be delivered in the first five years and would support fit for purpose supplies to industrial / commercial customers, lakes and wetlands, public recreational open space, key sporting precincts and connections to school sporting ovals. Central Highlands Water is proposing to deliver two of the five projects, supply alternative water to the Ballarat West Employment Zone (BWEZ) and the upgrade of the Class A treatment facility at Ballarat North Wastewater Treatment Plant (WWTP) and supporting pumps and pipelines to convey the flows into the existing alternative water network.

4.6.1 Analysis

These projects are well supported by the community and the Ballarat City Integrated Water Management Plan and are consistent with the Victorian Government's Water for Victoria policy. The program is a good example of collaboration between multiple stakeholders to achieve a good outcome for the community. The collaboration also shares the cost of undertaking projects between the stakeholders and provides access to alternative water sources to organisations who might not normally get such access. Central Highlands Water, as a key producer of water, including alternative water, is a key partner in this broader program of works undertaken in conjunction with the City of Ballarat and the Corangamite Catchment Management Authority.

4.6.2 Recommendation

This program of works is relatively well supported by the community, Government and other stakeholders and is relatively well supported by appropriate documentation.

We have made no adjustments to proposed expenditure for this project.

4.7 Summary of recommendations

We have assessed Central Highlands Water's capex forecast over RP4 and have not recommended any adjustments to the proposed expenditure.

Table 4-2 Central Highlands Water forecast capex

Capex item		RP4 forecast					
		2018-19	2019-20	2020-21	2021-22	2022-23	Total WP4
Digital Water Metering	Proposed	1.19	1.19	1.80	1.74	1.74	7.65
	Recommended	1.19	1.19	1.80	1.74	1.74	7.65
	Net change	0.00	0.00	0.00	0.00	0.00	0.00
Renewals (Water and Sewer Mains)	Proposed	14.64	9.40	6.49	7.49	7.28	45.30
	Recommended	14.64	9.40	6.49	7.49	7.28	45.30
	Net change	0.00	0.00	0.00	0.00	0.00	0.00
Maryborough Wastewater Reuse Scheme Improvements	Proposed	0.00	1.35	2.02	0.00	0.00	3.36
	Recommended	0.00	1.35	2.02	0.00	0.00	3.36
	Net change	0.00	0.00	0.00	0.00	0.00	0.00
Integrated Water Management	Proposed	0.33	0.66	0.66	1.31	0.77	3.72
	Recommended	0.33	0.66	0.66	1.31	0.77	3.72
	Net change	0.00	0.00	0.00	0.00	0.00	0.00
Other capital expenditure	Proposed	11.07	17.33	15.24	14.90	11.43	69.96
	Recommended	11.07	17.33	15.24	14.90	11.43	69.96
	Net change	0.00	0.00	0.00	0.00	0.00	0.00
Total proposed		27.22	29.92	26.20	25.45	21.22	130.00
Recommended capital expenditure		**27.22**	**29.92**	**26.20**	**25.45**	**21.22**	**130.00**
Recommended adjustments from proposed		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Limitation of our work

General use restriction

This report is prepared solely for the internal use of the Essential Services Commission. This report is not intended to and should not be used or relied upon by anyone else and we accept no duty of care to any other person or entity. The report has been prepared for the purpose of reviewing the prudency and efficiency of expenditure forecasts of Victorian metropolitan and regional urban water businesses. You should not refer to or use our name or the advice for any other purpose.

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