

7 OPERATING EXPENDITURE

Operating expenditure (opex) refers to TasWater's costs of operating and maintaining its water and sewerage systems, together with any associated administrative costs.

The Economic Regulator expects that TasWater's opex will be efficient and relevant to customer and regulatory requirements. Opex is a key building block component and the calculation of TasWater's MARR for the third regulatory period will include an allowance for reasonable and efficient opex (see Chapter 11).

7.1 Economic Regulator's requirements

To allow the determination of appropriate opex values for the third regulatory period, the Economic Regulator required TasWater to report its actual and forecast opex during the second regulatory period, and its forecast opex for the third regulatory period, according to the framework set out in the Ring Fencing Guideline.

Relevant to opex, the Economic Regulator required TasWater's proposed PSP for the third regulatory period to:

- report all opex in accordance with the framework outlined in the Ring Fencing Guideline;
- provide actual annual opex for past years and annual forecasts for opex for the third regulatory period;
- clearly identify and justify the basis for allocating opex between regulated water and sewerage services and between labour and non-labour components;
- detail the net savings derived from, or the net costs incurred in, providing re-use water to external parties;
- identify and justify the value of the proposed annual labour productivity factor;
- identify, quantify and justify any forecast significant changes in labour or non-labour opex (for example, due to additional facilities or functions) in the context of the drivers for those changes;
- outline the fixed and variable costs of delivering water to customers' properties;
- identify and justify the basis for excluding (unregulated assets) expenditure in determining the value of the assets excluded from the RAB;
- explain the trend in forecast opex having regard to:
 - historic opex;
 - changes in service obligations and targets;
 - scope for efficiency improvement;
 - changes in opex by cost category;
 - trends in input prices;

- forecast demand;
- proposed capital works; and
- highlight any other relevant factors including key assumptions underlying the opex forecasts, any risks to those forecasts and how these uncertainties have been addressed.

7.2 Approach to opex review

Following TasWater's submission of its proposed PSP for the third regulatory period, the Economic Regulator analysed TasWater's actual and forecast opex to determine whether it was appropriate and efficient. The Economic Regulator engaged Arup to conduct an independent analysis and provide an opinion on the efficiency of TasWater's opex.

Arup reviewed TasWater's actual, forecast and proposed opex and decided to examine, by value, the top six opex items:

- Salaries;
- Materials and Services;
- Electricity;
- Chemicals;
- Facility Management; and
- Information Systems.

Together, these items make up almost 85 per cent of TasWater's annual opex.

Readers should note that the figures in Arup's Draft Report relate to total opex (regulated opex plus unregulated opex) whereas the Economic Regulator's decisions relate only to regulated opex (regulated opex is approximately 96 per cent of total opex).

7.3 Review of second regulatory period opex

Across the second regulatory period, TasWater forecasts an opex overspend, relative to the Economic Regulator's calculation of TasWater's regulated opex, of between nine and 12 per cent. TasWater expected its second regulatory period opex to benefit from a number of productivity gains following the merger of the three regional water and sewerage corporations and completion of several additional projects aiming to improve TasWater's overall business efficiency. The primary reasons offered by TasWater for its second regulatory period opex overspend are unforeseen increases in staff numbers and chemical costs.

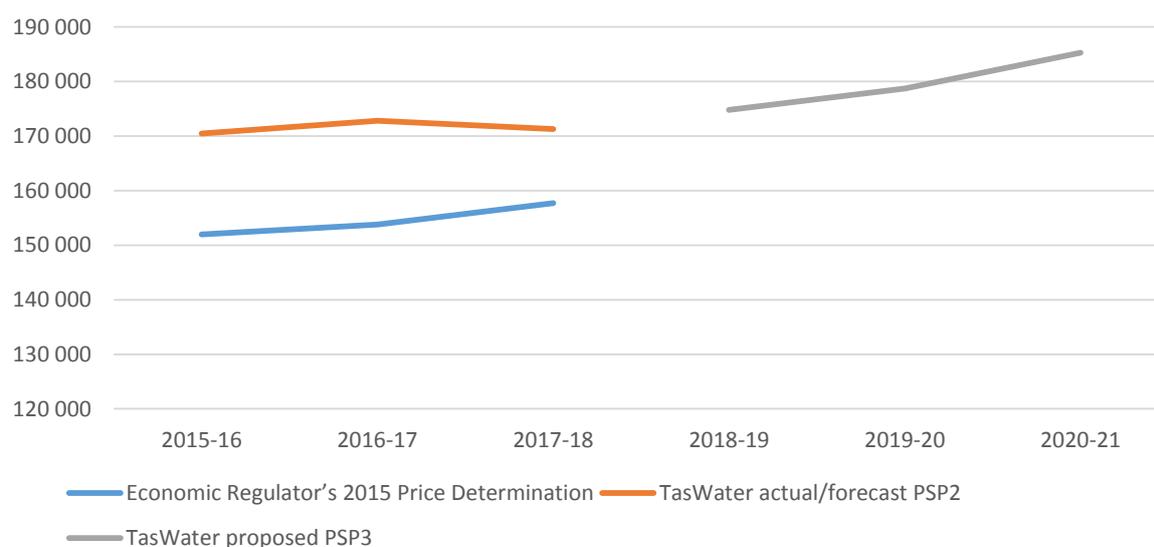
Table 7.1 and Figure 7.1 below compare TasWater's actual (2015-16) and forecast (2016-17 and 2017-18) opex for the second regulatory period with:

- the opex approved by the Economic Regulator for the second regulatory period; and
- TasWater's proposed opex for the third regulatory period.

Table 7.1 TasWater's regulated opex (\$000s) (nominal)

Opex	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
	Second regulatory period			Third regulatory period		
Economic Regulator's 2015 Price Determination	151 992	153 820	157 700			
TasWater actual/forecast	170 462	172 816	171 268			
Overspend	18 470	18 996	13 568			
TasWater proposed				174 781	178 691	185 260

Figure 7.1 Comparison of TasWater's opex for the second and third regulatory period (\$000s)



Arup's analysis concluded that the size of TasWater's opex overspend has fallen marginally in 2016-17 and will likely continue to fall in 2017-18. Arup suggested that the Economic Regulator treat these reductions in overspend as minimum levels of productivity improvement when calculating TasWater's opex for the third regulatory period.³⁵

Arup noted that the 2015 Water Services Association of Australia Benchmarking Report clearly indicated that TasWater's operating costs are significantly higher than are those of its interstate counterparts. In this regard, Arup commented that:

TasWater anticipates that its opex will increase as it tries to improve compliance levels, however this can have a magnified effect on opex if TasWater is seeking to improve compliance across the large number of assets it owns and operates. This poor performance in comparison to its counterparts as well as the necessity to improve compliance suggests that a consolidation of assets is essential to reduce TasWater's opex average costs and improve its benchmarks against its peers.³⁶

Chapters 3 and 6 of this Final Report include further discussion of TasWater's need to pursue efficiencies through means such as asset consolidation.

³⁵ Based on the information contained in TasWater's Statutory Financial Statements, TasWater's regulated opex for 2016-17 was approximately \$171.5 million compared to a forecast of \$172.816 million. This indicates that TasWater was delivering productivity savings through to 30 June 2017 as suggested by Arup.

³⁶ Arup Draft Report, 2017, page 79.

Relevant to TasWater's opex overspend for the second regulatory period, Arup's Draft Report recognised that the Economic Regulator based TasWater's approved opex on opex levels from the first regulatory period and factored in a number of productivity initiatives expected to arise from the merging of the regional water and sewerage corporations. The Economic Regulator also expected efficiencies to be realised from a range of other initiatives including processes and systems improvements. In summary, due to issues with data quality at that time, the derivation of these past opex allowances involved various assumptions and judgement calls, and were not as robust as the Economic Regulator would have liked.

Arup concluded that TasWater's opex during the second regulatory period was prudent, noting TasWater's hiring of 17 temporary staff, rather than employing permanent staff, during implementation of the Maximo³⁷ system and contractor safety training during 2015-16 as an example. Arup viewed this as prudent opex because the temporary roles ceased on completion of their particular tasks, leaving TasWater with a reduced salary burden as well as the benefits of increased productivity. Arup raised some concerns that TasWater's approach of hiring temporary staff to deliver key projects does not yet appear to be delivering the opex savings it should, but noted that many of the projects in question are ongoing or only recently completed. Evidence of continuing reductions in TasWater's temporary FTEs following the completion of productivity improvement projects would confirm the prudence of this approach.

Arup did not propose any adjustments related to TasWater's second regulatory period opex and accepted the rebasing of opex for the third regulatory period based on TasWater's proposed PSP.

Considering Arup's analysis and acknowledging the concerns about the robustness of past opex allowances as explained above, the Economic Regulator has not adjusted TasWater's proposed opex for the third regulatory period based on its opex during the second regulatory period.

The Economic Regulator accepts TasWater's rebasing of its opex for the third regulatory period. The Economic Regulator has however proposed reductions in TasWater's opex and imposed further opex efficiencies for the third regulatory period (see Sections 7.6 and 7.8 below).

The Economic Regulator has not adjusted TasWater's proposed opex for the third regulatory period based on its opex during the second regulatory period.

The Economic Regulator accepts TasWater's rebasing of its opex for the third regulatory period.

7.4 Base year for third regulatory period opex forecasting

The establishment of TasWater's base year opex for the third regulatory period allows the Economic Regulator to assess the accuracy of TasWater's opex forecasting, and provides a reference point against which to measure any proposed changes to TasWater's future opex.

TasWater has used 2016-17 as the base year for its opex forecasting, as required by the Economic Regulator's PSP Guideline. At the time of submitting its proposed PSP for the third regulatory period, TasWater did not have actual opex figures for the full 2016-17 year. TasWater has therefore established its base year opex values by taking actual opex from 2015-16 and applying it to 2016-17 opex spending patterns. This involved:

- removing any one-off or non-recurring opex from 2015-16, but including any one-off or new opex for 2016-17;
- removing any costs related to productivity improvements between 2015-16 and 2016-17;

³⁷ Maximo is a software package designed by IBM that businesses can use to track the operation, maintenance and disposal of assets.

- increasing those costs that tend to increase predictably in line with demand;
- adjusting opex to account for maintenance of any New Assets added through the capex program; and
- applying appropriate escalation factors to each component of the 2015-16 opex.

At a high level, the Economic Regulator considers TasWater's approach to be sound.

Table 7.2 below summarises TasWater's calculation of its base year opex for the third regulatory period.

Table 7.2 TasWater's base year total opex³⁸ (\$'000s)

Opex category	2015-16 actuals	One-off Adjustments	Productivity savings	Change in demand	New capex	Escalation	2016-17 base year
Salaries	86 643	-	-991	158	-	1 716	87 526
Materials and services	31 371	-	-732	137	-	-576	30 200
Chemicals	7 890	700	-56	53	-	431	9 018
Power	11 908	-	-1 168	57	-	3 429	14 226
Royalties	2 527	-	-	-	-	32	2 559
Facility management	7 074	-	-	2	-	50	7 125
Information systems	4 426	89	-	1	-	-14	4 502
Administration other	5 063	-	-513	1	-	118	4 670
Motor vehicle	3 661	-	-	4	-	23	3 689
Water sampling	3 524	-754	-	1	-	19	2 790
Consultancy	5 465	-	-	2	-	38	5 505
Regulatory costs	2 573	-	-	-	-	45	2 618
Customer collection	2 750	-	-	17	-	19	2 787
Insurance	1 500	-	-	-	-	35	1 535
Governance	1 076	-41	-	1	-	7	1 044
Community relations	309	106	-	0	-	3	418
Total	177 762	100	-3 460	434	-	5 377	180 212

As Table 7.2 shows, TasWater's forecast its base year total opex to be approximately \$180.2 million. The Economic Regulator has reviewed TasWater's 2016-17 Annual Report and notes that TasWater did incur this approximate level of opex. As TasWater's method of calculating its base year opex is similar to the method used by other Australian water and sewerage utility providers, and as TasWater's actual opex for 2016-17 was similar to its proposed base year opex, the Economic Regulator accepts TasWater's proposed base year opex.

³⁸ Total opex is comprised of regulated opex plus unregulated opex.

The Economic Regulator accepts TasWater's proposed base year opex for the third regulatory period.

7.5 Forecast opex for the third regulatory period

Using 2016-17 as a base year, and applying similar adjustments for escalations, one-off costs, productivity improvements, changes in demand, capex changes and changes to service standards, TasWater's proposed PSP forecast that its regulated opex would increase from \$170.5 million in 2015-16 to \$185.3 million in 2020-21, the final year of the third regulatory period. TasWater noted that this equated to an average annual increase in opex of roughly 2.4 per cent, below the Reserve Bank of Australia (RBA) mid-range CPI target.

Table 7.3 below shows TasWater's actual and forecast total regulated opex for the second and third regulatory periods.

Table 7.3 TasWater's total regulated opex for the second and third regulatory periods (\$'000s)

Opex category	Second regulatory period			Third regulatory period		
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
Salaries	83 068	83 914	82 651	82 552	84 273	86 279
Materials and services	30 059	28 937	26 990	28 865	30 258	32 108
Chemicals	7 574	8 657	9 146	9 726	10 274	10 853
Power	11 431	13 657	14 315	13 629	12 502	13 407
Royalties	2 426	2 456	2 506	2 562	2 620	2 685
Facility management	6 769	6 819	6 417	6 537	6 670	6 847
Information systems	4 249	4 322	4 395	4 468	4 540	4 611
Administration other	4 861	4 483	4 269	4 390	4 515	4 652
Motor vehicle	3 515	3 541	3 746	3 959	3 989	4 019
Water sampling	3 383	2 678	2 421	2 466	2 517	2 583
Consultancy	5 247	5 285	5 355	5 454	5 565	5 713
Regulatory costs	2 470	2 514	3 170	2 628	2 687	3 397
Customer collection	2 640	2 675	2 528	2 606	2 674	2 760
Insurance	1 440	1 474	1 508	1 541	1 574	1,606
Governance	1 033	1 002	1 055	1 116	1 098	1,127
Community relations	296	401	797	775	768	782
Change in capex	-	-	-	1 507	2 170	1 831
Total	170 462	172 816	171 268	174 781	178 691	185 260

In general, Arup noted that TasWater's opex forecasts for the third regulatory period showed positive signs of improving productivity and service delivery, although these improvements are very gradual.

7.6 Review of opex for the third regulatory period

In its review of TasWater's forecast opex for the third regulatory period, Arup concentrated on TasWater's major opex categories in terms of their respective contributions to TasWater's total opex.

In addition to this analysis, the Economic Regulator considered the likely impact of TasWater's capex program on its opex and reviewed TasWater's allocation of costs.

In this section of the Report, and in Arup's Draft Report, the Economic Regulator notes that there are minor variations between the regulated opex figures in Table 54 of TasWater's proposed PSP (reproduced in Table 7.3) and the result of multiplying TasWater's total opex by 96 per cent. TasWater's response to the Economic Regulator's Draft Report explained that while its proposed PSP implied that the proportion of opex spent on regulated activities is approximately 96 per cent, this is a rounded value. To calculate the figures in its proposed PSP, TasWater used a more specific allocation factor of 95.87 per cent.

In its final decisions relating to TasWater's opex, the Economic Regulator has used this revised opex allocation factor.

7.6.1 Salaries

TasWater forecasts that its salary costs, its largest single expenditure item, will remain relatively constant in real terms throughout the third regulatory period. The primary driver for salary cost increases, according to TasWater's calculation method, is escalation of 2.25 per cent per annum based on the Wage Price Index and TasWater's Enterprise Bargaining Agreement (EBA). In TasWater's view, although changes in staff numbers obviously affect salary costs, they do not constitute the primary driver.

TasWater's forecast salary costs over the third regulatory period factor in a one-off adjustment saving of \$1.0 million in 2017-18 due to the cessation of several temporary staffing roles. The forecasts also account for actual and forecast productivity improvement savings of roughly \$5.5 million between 2016-17 and 2019-20 due to plant optimisation and better use of technology to improve business processes.

Arup suggested that TasWater could further reduce its forecast salary costs for the third regulatory period by adopting an escalation factor of 2.00 per cent per annum, rather than 2.25 per cent. This would mirror the annual fixed wage increase in TasWater's current EBA. Arup noted that, although this EBA is due to expire at the end of the second regulatory period, analysis done by Deloitte Access Economics forecast that utilities' labour prices will continue to increase by roughly 2.00 per cent per annum during the third regulatory period.

In relation to salaries and salary on-costs, Arup also recommended that:

...the Regulator require the development of and delivery of a Labour Force Plan. This plan updated on a 3 yearly cycle, should have a 5-year horizon which spells out the management plan for the number and skill sets of the FTE's within TasWater. It should itemise the role and utilisation of insourced and outsourced FTE resources and plans for skill development and productivity improvements.

The Economic Regulator considered that such a plan would help it assess the appropriateness and efficiency of TasWater's actual and forecast salary opex. It would also help TasWater to better plan and manage the number of FTEs and the skillsets of its workforce, and identify opportunities for productivity improvements.

7.6.1.1 Economic Regulator's Draft Report proposals

In its Draft Report to the Economic Regulator, Arup therefore recommended that TasWater adjust its forecast salary costs for the third regulatory period, as shown in Table 7.4. The Economic Regulator accepted Arup's recommendation in its Draft Report.

Table 7.4 TasWater's and Arup's forecast salary costs for the third regulatory period (\$'000s) - Draft Report

Salaries	2018-19	2019-20	2020-21	Total
TasWater	82 662	84 385	86 394	253 441
Arup	81 088	82 714	84 667	248 468
Proposed adjustment	-1 574	-1 671	-1 728	-4 973

The Economic Regulator also proposed requiring TasWater to develop a Labour Force Plan as Arup had recommended.

7.6.1.2 Issues raised during consultation on the Economic Regulator's Draft Report

In response to the Economic Regulator's Draft Report, TasWater provided updated national and State wage growth predictions for the utilities sector, and reported that it is negotiating a new EBA with an annual salary increase of 2.30 per cent. It also identified and corrected a minor error in its original salaries opex calculation. Arup reviewed TasWater's arguments against the relevant data and concluded that average wage growth in the Tasmanian utilities sector during the third regulatory period will likely be closer to 2.25 per cent than 2.00 per cent.

In its Final Report to the Economic Regulator, Arup agrees with TasWater's proposed salaries opex escalation factor of 2.25 per cent for the third regulatory period, and rescinds its earlier recommendation that TasWater reduce this factor to 2.00 per cent.

In its response to the Economic Regulator's Draft Report, TasWater also supported the development of a Labour Force Plan. TasWater was however concerned about the publication of insourcing and outsourcing information given the sensitivity of that information.

7.6.1.3 Economic Regulator's decisions

The Economic Regulator accepts Arup's revised recommendations in relation to TasWater's forecast salary costs.

Table 7.5 shows the resultant change to TasWater's proposed salaries opex. Note that the Draft Report figures in this table represent the correction of errors identified by both TasWater and Arup which the Economic Regulator published in its Draft Report.

Table 7.5 TasWater's and Arup's forecast salary costs for the third regulatory period (\$'000s) - Final

Salaries	2018-19	2019-20	2020-21	Total
TasWater (proposed PSP)	82 552	84 273	86 279	253 104
Arup (Draft Report)	82 574	84 137	85 959	252 670
TasWater (Draft Report submission)	82 592	84 355	86 406	253 353
Arup (Final Report)	82 592	84 355	86 406	253 353
Change from Draft Report	18	218	447	683

The Economic Regulator maintains its Draft Report proposal with respect to TasWater developing a Labour Force Plan. The Economic Regulator acknowledges that the development of a Labour Force Plan will need some lead time. By raising this issue in this Final Report, the Economic Regulator's objective is to ensure TasWater is aware of the requirement and can start developing this Plan during the third

regulatory period. The Economic Regulator will require the development of this Plan through other regulatory mechanisms and expects that TasWater will justify its proposed salaries opex for the fourth regulatory period in terms of its Labour Force Plan. To maintain confidentiality around TasWater's staffing arrangements the Economic Regulator will not require TasWater to make its Labour Force Plan publically available, and will use the Plan only as a tool for assessing TasWater's future salary opex.

The Economic Regulator accepts TasWater's forecast salary costs for the third regulatory period, as shown in Table 7.5.

The Economic Regulator intends to require TasWater to develop, during the third regulatory period, a five-year Labour Force Plan.

The Economic Regulator will not require TasWater to publish its Labour Force Plan.

7.6.2 Materials and services

TasWater forecasts that its overall materials and services costs will slowly increase over the third regulatory period. This forecast accounts for actual and forecast productivity improvement savings of \$0.7 million in 2016-17 and \$2.6 million in 2017-18. However, the primary driver of these costs is an escalation factor based on the Australian producer prices index (PPI) for engineering and construction. The Australian Bureau of Statistics has forecast that this index will roughly triple over the duration of the second and third regulatory periods, which will offset much of the productivity gains.

Arup noted that TasWater's actual and forecast materials and services costs indicate changes in the way it spends this opex, as TasWater improves its proactive maintenance practices based on more and better data. This suggests both ongoing improvements in service delivery and the potential for further efficiency gains. In its Draft Report to the Economic Regulator, Arup recommended that TasWater adopt a lower escalation rate than that prescribed by the PPI, unless TasWater could demonstrate a strong need and rationale for using the higher value. Arup suggested that TasWater use an escalation value that would result in a step change of 1.7 per cent between the second and third regulatory periods, rather than the 4.6 per cent currently forecast, and adjust its forecast materials and services costs as shown in Table 7.6.

7.6.2.1 Economic Regulator's Draft Report proposals

In its Draft Report, the Economic Regulator accepted Arup's recommendation, and required that TasWater adjust its forecast materials and services costs for the third regulatory period, as outlined in Table 7.6.

Table 7.6 TasWater's and Arup's forecast materials and services costs for the third regulatory period (\$'000s) - Draft Report

Materials & Services	2018-19	2019-20	2020-21	Total
TasWater	28 918	30 314	32 167	91 399
Arup	28 117	29 676	31 300	89 093
Proposed reduction	-801	-638	-866	-2 306

7.6.2.2 Issues raised during consultation on the Economic Regulator's Draft Report

In response to the Economic Regulator's Draft Report, TasWater agreed to use the Economic Regulator's recommended materials and services opex escalation factor but pointed out a minor error in the calculation that Arup had used to estimate TasWater's total materials and services opex for the third regulatory period. Arup corrected this error in its Final Report to the

Economic Regulator. Table 7.7 shows revised adjustments to TasWater's materials and services opex for the third regulatory period, correcting for the errors present in the Draft Report.

Table 7.7 TasWater's and Arup's forecast materials and services costs for the third regulatory period (\$'000s) - Final

Materials & Services	2018-19	2019-20	2020-21	Total
TasWater (proposed PSP)	28 865	30 258	32 108	91 231
Arup (Draft Report)	28 133	29 098	30 093	87 324
TasWater (Draft Report submission)	28 079	29 046	30 046	87 171
Arup (Final Report)	28 079	29 046	30 046	87 171
Change from Draft Report	-54	-52	-47	-153

7.6.2.3 Economic Regulator's decisions

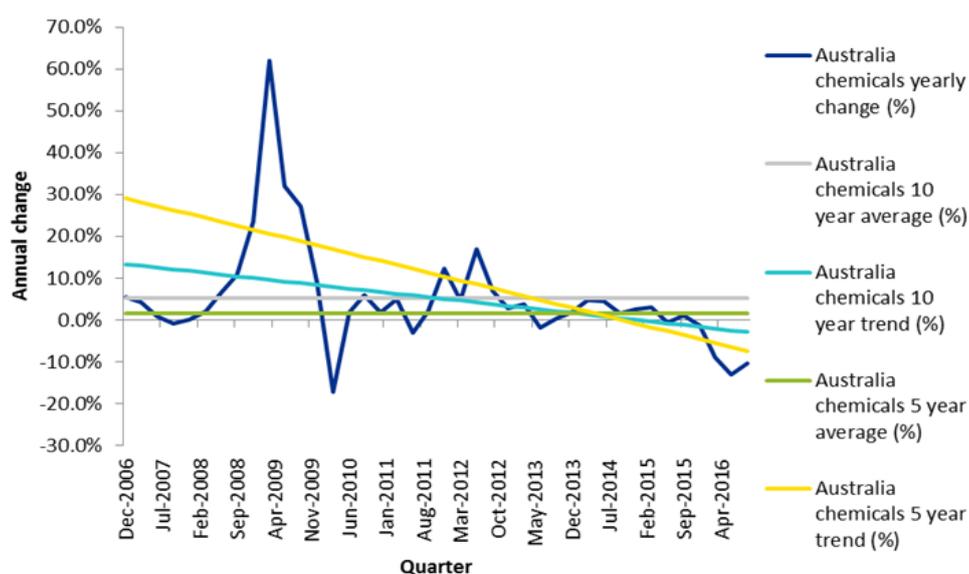
The Economic Regulator accepts the revised adjustments to TasWater's materials and services opex for the third regulatory period, as provided by TasWater and Arup.

The Economic Regulator requires that TasWater adjust its forecast materials and services costs for the third regulatory period, as shown in Table 7.7.

7.6.3 Chemicals

TasWater has steadily increased its expenditure on chemicals during the second regulatory period and forecasts that this increase will continue through the third regulatory period. In particular, TasWater notes its increased expenditure on activated carbon, which it uses to address taste and odour issues in water caused by algal blooms in reservoirs producing geosmin and methylisoborneol. Arup noted that TasWater is obliged to treat water and sewerage to an appropriate standard through chemical treatment.

In TasWater's opex forecasts for the third regulatory period, the primary driver for chemicals costs is an escalation factor based on the PPI for chemical manufacturing. Arup noted that TasWater has based the escalation figure used in its forecasts (5.02 per cent) on an historical ten-year average of chemicals prices in Australia, which includes a significant price spike in 2009, as shown in Figure 7.2.

Figure 7.2 Historical chemical price changes in Australia³⁹

Arup suggested that the chemical price spike in 2009 was likely due to the impacts of the global financial crisis (GFC), and noted that since that time, and especially since 2015, chemical prices have been trending down. Although Figure 7.2 shows evidence of a small price increase in 2016, there is no evidence suggesting a return to annual five per cent price increases in the near future. Arup's opinion was that it would be prudent for TasWater to lock in long-term chemical supply contracts while prices are relatively low to ensure price certainty. In its Draft Report to the Economic Regulator, Arup recommended that TasWater adopt an escalation factor based on the historical five-year average of Australian chemicals prices, rather than the ten-year average, which would reduce the escalation factor to roughly 1.50 per cent per annum. This would require TasWater to adjust its forecast chemical costs for the third regulatory period, as shown in Table 7.8.

7.6.3.1 Economic Regulator's Draft Report proposals

In its Draft Report, the Economic Regulator accepted Arup's recommendation and required TasWater to adjust its chemical costs forecasts as shown in Table 7.8.

Table 7.8 TasWater's and Arup's forecast chemicals costs for the third regulatory period (\$'000s) - Draft Report

Chemicals	2018-19	2019-20	2020-21	Total
TasWater	9 726	10 274	10 853	30 853
Arup	9 259	9 785	10 333	29 377
Proposed reduction	-467	-489	-520	-1 476

³⁹ Arup Draft Report, 2017, page 67.

7.6.3.2 Issues raised during consultation on the Economic Regulator's Draft Report

In its response to the Economic Regulator's Draft Report, TasWater agreed with Arup's reasoning for using the five-year average rather than the ten-year average, but argued that the five-year average was 1.97 per cent rather than 1.50 per cent.

TasWater provided the data and calculation methods it used to arrive at an escalation factor of 1.97 per cent. Arup subsequently analysed a variety of methods for calculating the five-year average and found that TasWater's proposed escalation factor of 1.97 per cent was at the upper end of the range of results (1.39 per cent to 1.97 per cent).

Arup concluded that its initial recommended escalation factor of 1.50 per cent likely represents an efficient level of chemical cost increase based on the available information. In its Final Report to the Economic Regulator, Arup reiterated its recommendation that TasWater use a chemicals opex escalation factor of 1.50 per cent for the third regulatory period. Table 7.9 shows the Economic Regulator's decision on TasWater's chemicals opex and shows that no changes have been made from the Economic Regulator's Draft Report proposals.

Table 7.9 TasWater's and Arup's forecast chemicals costs for the third regulatory period (\$'000s) - Final

Chemicals	2018-19	2019-20	2020-21	Total
TasWater (proposed PSP)	9 726	10 274	10 853	30 853
Arup (Draft Report)	9 389	9 580	9 774	28 743
TasWater (Draft Report submission)	9 444	9 686	9 934	29 064
Arup (Final Report)	9 389	9 580	9 774	28 743
Change from Draft Report	0	0	0	0

7.6.3.3 Economic Regulator's decisions

The Economic Regulator accepts Arup's conclusion and recommendations on this matter, noting that its own analysis of historical Australian chemicals prices produced similar results to Arup.

The Economic Regulator requires that TasWater adjust its forecast chemicals costs for the third regulatory period, as shown in Table 7.9.

7.6.4 Electricity

Electricity costs make up roughly 7.3 per cent of TasWater's proposed opex for the third regulatory period, the third largest component of overall opex. The majority of TasWater's electricity use relates to pumping and water treatment, therefore increases in customer demand will likely lead to increases in electricity costs.

Arup noted that despite a forecast increase in customer demand, TasWater has forecast that electricity costs will decrease during the third regulatory period, from almost \$14.5 million in 2017-18 to around \$13.5 million in 2020-21. TasWater is forecasting this decrease in electricity costs based on the continuing and expected benefits of its efficiency and productivity initiatives, particularly those that will monitor and optimise the timing of pumping and water treatment operations.

Although TasWater has forecast considerable year-to-year volatility in electricity costs during the third regulatory period, Arup considers that the proposed overall reduction in TasWater's electricity costs is a positive result and represents an efficient outcome.

Based on Arup's analysis, in its Draft Report the Economic Regulator accepted TasWater's forecast electricity costs for the third regulatory period, as shown in Table 7.10.

Table 7.10 TasWater's and Arup's forecast electricity costs for the third regulatory period (\$'000s) - Draft Report

Electricity	2018-19	2019-20	2020-21	Total
TasWater	13 629	12 502	13 407	39 538
Arup	13 629	12 502	13 407	39 538
Proposed adjustment	-	-	-	-

The Economic Regulator has not made any changes to its Draft Report decision on TasWater's forecast electricity costs for the third regulatory period.

The Economic Regulator accepts TasWater's forecast electricity costs for the third regulatory period, as shown in Table 7.10.

7.6.5 Facility management

Considering the age and number of facilities managed by TasWater, its spending on facility management is between 12 and 15 per cent lower than expected based on benchmarking against other Australian water and sewerage utilities. TasWater has stated that this does not necessarily indicate efficiency in its facility management practices, but is more to do with ongoing shortfalls in the funding required to conduct facility management opex (and capex).

Arup noted that TasWater forecasts a one-off productivity improvement saving of \$0.5 million in 2017-18 due to a move from having multiple site cleaning contracts to a single state-wide contract. TasWater is currently working to secure single state-wide contracts for facilities and grounds maintenance services as well. Despite the productivity improvement savings, TasWater forecasts its facility management costs to remain relatively constant during the third regulatory period, as shown in Table 7.11, due to a combination of factors including increased base spend, demand and general cost escalation.

Table 7.11 TasWater's and Arup's forecast facility management costs for the third regulatory period (\$'000s) - Draft Report

Facility management	2018-19	2019-20	2020-21	Total
TasWater	6 557	6 690	6 869	20 116
Arup	6 557	6 690	6 869	20 116
Proposed adjustment	-	-	-	-

Based on Arup's analysis and recommendations, in its Draft Report the Economic Regulator accepted TasWater's facility management costs forecasts for the third regulatory period.

The Economic Regulator has not made any changes to its Draft Report decision on TasWater's forecast facility management costs for the third regulatory period. However, the facility management costs reported in the Economic Regulator's Draft Report contained minor errors. Table 7.12 shows the corrected figures.

Table 7.12 TasWater's and Arup's forecast facility management costs for the third regulatory period (\$'000s) - Final

Facility management	2018-19	2019-20	2020-21	Total
TasWater	6 537	6 670	6 847	20 054
Arup	6 537	6 670	6 847	20 054
Proposed adjustment	-	-	-	-

The Economic Regulator accepts TasWater's forecast facility management costs for the third regulatory period, as shown in Table 7.12.

7.6.6 Information systems

Arup found that TasWater has significantly underinvested in its information systems since its formation in 2014, continuing a trend begun by the three regional water and sewerage corporations. Although TasWater more than doubled its opex relating to information systems during the second regulatory period, its level of investment is still very low compared to other Australian water and sewerage utility providers.⁴⁰

For the third regulatory period, TasWater forecasts that its information systems costs will increase at an annual rate of less than the CPI, resulting in a small reduction in real opex. Arup noted that while increased expenditure on information systems should typically lead to productivity gains, there are also costs to consider in terms of staff training and maintenance. As such, TasWater's past and forecast information systems costs are not necessarily inefficient or imprudent.

Arup highlighted TasWater's ongoing investment in supervisory control and data acquisition (SCADA) systems and cloud services with the aim of improving operational efficiency. This will likely lead to increases in the ratio of opex to capex information systems costs for TasWater in the future. In Arup's opinion, there appears to be considerable scope for TasWater to increase its expenditure on information systems with the goal of increasing productivity and reducing opex (and capex) in other areas.

TasWater is forecasting a constant annual increase in its information systems costs of \$88 528 (two per cent per annum) during the third regulatory period, to account for the increasing use of these systems and its historical underinvestment in IT. Arup has noted that "... while the base opex increase through the constant one-off adjustment is accepted for the PSP3 period, its continued existence cannot necessarily be accepted without robust justification."⁴¹

Noting Arup's recommendation and the immaterial nature (in the context of TasWater's opex) of TasWater's annual increase in IT costs, the Economic Regulator does intend to seek further justification from TasWater for its forecast annual increase in its information systems base cost.

In its Draft Report, the Economic Regulator therefore accepted TasWater's information systems costs forecasts for the third regulatory period, as shown in Table 7.13.

40 Water Services Association of Australia, 2014/15 Opex Benchmarking Study, Industry Report, December 2015 (version 0.17).

41 Arup Draft Report, 2017, page 76.

Table 7.13 TasWater's and Arup's forecast information management costs for the third regulatory period (\$'000s) - Draft Report

Information systems	2018-19	2019-20	2020-21	Total
TasWater	4 468	4 540	4 611	13 619
Arup	4 468	4 540	4 611	13 619
Proposed adjustment	-	-	-	-

The Economic Regulator has not made any changes to its Draft Report decision on TasWater's forecast information management costs for the third regulatory period.

The Economic Regulator accepts TasWater's forecast information management costs for the third regulatory period, as shown in Table 7.13.

7.6.7 Motor vehicle costs

As noted in Section 6.3.1.2 of this Final Report, in its Draft Report to the Economic Regulator Arup recommended reductions in TasWater's vehicle fleet capex. Flowing on from this recommendation, Arup also recommended reductions in TasWater's motor vehicle opex.

7.6.7.1 Economic Regulator's Draft Report proposals

In its Draft Report, the Economic Regulator accepted Arup's recommended reductions to TasWater's vehicle fleet capex and the associated reductions to TasWater's motor vehicle costs, and required that TasWater adjust its forecast motor vehicle costs as shown in Table 7.14.

Table 7.14 TasWater's and Arup's forecast motor vehicle costs for the third regulatory period (\$'000s) - Draft Report

Motor vehicle	2018-19	2019-20	2020-21	Total
TasWater	3 959	3 989	4 019	11 967
Arup	3 389	3 414	3 440	10 243
Proposed reduction	-570	-575	-579	-1 724

7.6.7.2 Issues raised during consultation on the Economic Regulator's Draft Report

Section 6.3.1.2 of this Final Report contains details of TasWater's response to the Economic Regulator's Draft Report proposals relating to its vehicle fleet capex, and Arup's revised recommendations. Having now recommended a 17 per cent reduction in TasWater's vehicle fleet capex over the third regulatory period, Arup also recommends a similar reduction of 17 per cent in the variable component of TasWater's proposed motor vehicle opex. This recommendation translates to a seven per cent reduction in TasWater's proposed motor vehicle opex as shown in Table 7.15.

Table 7.15 TasWater's and Arup's forecast motor vehicle costs for the third regulatory period (\$'000s) - Final

Motor vehicle	2018-19	2019-20	2020-21	Total
TasWater (proposed PSP)	3 959	3 989	4 019	11 967
Arup (Draft Report)	3 389	3 414	3 440	10 243
TasWater (Draft Report submission)	3 959	3 989	4 019	11 967
Arup (Final Report)	3 959	3 569	3 606	11 134
Change from Draft Report	570	155	166	891

7.6.7.3 Economic Regulator's decisions

The Economic Regulator accepts Arup's revised recommendation in relation to motor vehicle costs.

The Economic Regulator requires that TasWater adjust its forecast motor vehicles costs for the third regulatory period, as shown in Table 7.15.

7.6.8 Impact of capex on opex

In its proposed PSP for the third regulatory period, TasWater stated that new capex investment often results in opex changes. New Assets commonly incur new operating and maintenance costs, particularly when those assets are necessary to improve compliance levels. Since TasWater has realigned its capex program during the second regulatory period to focus on compliance improvements, expenditure on New Assets over the remaining years of the second regulatory period, and through the third regulatory period, will generally add to overall opex.

TasWater has reviewed the capex projects it expects to complete during the third regulatory period and determined how much its opex is likely to increase due to this expenditure. Although some capex projects will result in opex decreases due to productivity gains, TasWater estimates that its opex will increase by roughly \$2.7 million by 2020-21 due to New Assets from its capex program. Table 7.16 below contains a selection of capex projects that TasWater forecasts will lead to increases in its opex during the third regulatory period.

Table 7.16 Impact of selected TasWater capex projects on opex during the third regulatory period (\$'000s)

Project name	2018-19	2019-20	2020-21
Kingborough Sewerage Strategy	-	-	500
Rosebery Water Treatment Plant	326	326	326
King Island Water Treatment Plant	-	278	278
Mathinna water supply system	175	175	175
Flinders Island water supply project	144	144	144
Bronte Park water supply system	123	123	123
Gladstone water supply system	120	120	120
Rossarden water supply system	100	100	100
Wayatinah water supply system	100	100	100
Cornwall water supply system	-	100	100
Colebrook water supply system	82	82	82
Gormanston water supply system	-	65	65
Judbury water supply upgrade	52	52	52
Gretna water supply system	40	40	40
Epping water supply system	-	28	28
Rocky Creek Water Treatment Plant	-	24	24
Conara water supply system	24	24	24
Herrick water supply system	-	13	13
TOTAL ^{Note}	1 507	2 170	2 720

Note: The total includes the impact on opex of several smaller capex projects not listed in Table 7.16.

7.6.8.1 Economic Regulator's Draft Report proposals

In its Draft Report, the Economic Regulator flagged its intention to reduce TasWater's forecast opex for the third regulatory period by the additional opex TasWater had identified as flowing from its proposed capex program. The aim of this decision was to incentivise TasWater to improve its productivity by requiring it to fund those additional costs through business efficiencies. This would have resulted in TasWater's forecast annual opex reducing by between \$1.5 million and \$2.7 million over the third regulatory period.

7.6.8.2 Issues raised during consultation on the Economic Regulator's Draft Report

TasWater's response to the Economic Regulator's Draft Report expressed the view that the Economic Regulator should assess productivity as a standalone issue and not relate it to specific expenditure types. TasWater argued that disallowing opex from new capex was not an appropriate method of implementing productivity savings, and pointed out that it could lead to TasWater prioritising those capex projects forecast to have the smallest impact on opex, rather than those that would most benefit customers.

7.6.8.3 Economic Regulator's decisions

The Economic Regulator accepts TasWater's arguments that disallowing opex from new capex during the third regulatory period is an imprecise method of encouraging productivity improvements, and could lead to unsatisfactory outcomes. The Economic Regulator has therefore researched an alternative method of imposing a productivity dividend on TasWater, as discussed in Section 7.8 of this Final Report. With regard to opex arising from new capex, the Economic Regulator accepts the figures forecast by TasWater in its proposed PSP.

The Economic Regulator accepts TasWater's forecast opex arising from new capex for the third regulatory period, as shown in Table 7.16.

7.7 Cost allocation

Not all of TasWater's opex goes towards maintaining regulated assets or providing regulated services, as a proportion of TasWater's business activities are unregulated. The Economic Regulator consequently requires TasWater to deduct its unregulated opex from its total opex to provide a regulated opex, which the Economic Regulator uses in calculating TasWater's MARR.

As noted in Section 1.9 of this Final Report, the Economic Regulator requires TasWater to prepare and submit annual regulatory financial statements. Relevant to cost allocation, the Economic Regulator's Ring Fencing Guideline contains the following requirements:

Expenditure, assets, liabilities and revenue recorded in a regulated entity's statutory financial statements must be allocated (using the Allocation Principles set out in clause 4.3 of the Guidelines) into headings that correspond to:

- (a) operating expenditure activity areas set out in Appendix B.3
- (b) capital expenditure cost drivers and asset categories set out in Appendices C.4 and C.5
- (c) revenue sources set out in Appendix D.3.

The items referred to in clause 4.2.2 of the Guidelines must then be allocated using the relevant worksheet in Appendix A and by using the Allocation Principles set out in clause 4.3 between:

- (a) regulated water services
- (b) regulated sewerage services
- (c) unregulated services
- (d) other (ie not allocated to any of the services listed in clauses 4.2.3(a) to (c) inclusive of this Guideline, to provide disaggregated statements of income and financial position for each regulated and unregulated business segment.

The allocation of statutory account amounts to regulated business segments, cost drivers, asset categories, activity areas and revenue sources must be based on the principle that:

- (a) amounts which are directly attributable to a business segment, cost driver, asset category, activity area or revenue source are assigned to that business segment, cost driver, asset category, activity area or revenue source
- (b) amounts which are not directly attributable to a business segment, cost driver, asset category, activity area or revenue source must be allocated on a causation basis, except where a causal relationship cannot be reasonably established, for example, where the cost

of deriving the causal allocation outweighs the benefits of allocating items on that basis, items may be allocated on a non-causal basis provided that:

- (i) the regulated entity must provide a detailed justification that there is likely to be a strong positive correlation between the non-causal basis and the actual cause of resource or service consumption or utilisation that those expenditure represent
- (ii) the aggregate of all amounts allocated on a non-causal basis is not material to the regulatory financial statements.

An account item must be either:

- (a) directly attributed; or
- (b) allocated using a single basis of allocation.⁴²

The audit of TasWater's Regulatory Financial Statements for 2015-16 identified concerns about TasWater's cost allocation approach. Specifically, the Tasmanian Audit Office (TAO) noted that:

From our review of the basis of, and justification for, the allocation of indirect costs we recommended that TasWater review its approach to the allocation of indirect costs and adopt a basis that meets the definition of 'causal'. This would require a move away from the use of revenue as an allocation base and the adoption of approaches that better reflect the most significant trigger of consumption or utilisation of the resources or services represented by the expenditure.⁴³

In response to this finding the Economic Regulator required TasWater to allocate indirect costs other than on the basis of revenue to address this issue in its 2016-17 Regulatory Financial Statements and, as relevant, in its proposed PSP for the third regulatory period.

For the second regulatory period, after allocating its direct unregulated opex against individual assets wherever possible, and calculating its remaining unregulated opex based on the percentage of its total revenue that came from unregulated services, TasWater allocated its regulated opex between water and sewerage services. Again, wherever possible TasWater directly budgeted regulated opex to individual assets. Where this was not possible, TasWater allocated its regulated opex based on its ratio of water revenue to sewerage revenue, 53 per cent to 47 per cent.

TasWater has indicated its preference to continue directly budgeting its opex to regulated and unregulated services, and to water and sewerage services, wherever possible in its proposed PSP for the third regulatory period. The Economic Regulator agrees that this is an appropriate approach to cost allocation.

TasWater's Regulatory Financial Statements for 2015-16 showed \$77.4 million of regulated opex, split roughly 49.5 per cent to 50.5 per cent between water and sewerage services. The accounts showed a further \$0.189 million of unregulated opex assigned to sewerage services. This left \$100.2 million, or 56 per cent of TasWater's total opex for 2015-16, requiring allocation to either regulated or unregulated services, and water and sewerage services.

In its proposed PSP for the third regulatory period, TasWater provided details of the revenue it received during 2015-16 that related to the provision of unregulated services. Table 7.17 reproduces those details.

42 Tasmanian Audit Office, Examination of the Tasmanian Water and Sewerage Corporation Pty Ltd's 2015-16 Regulatory Financial Statements, 17 March 2017, page 19.

43 Tasmanian Audit Office, Examination of the Tasmanian Water and Sewerage Corporation Pty Ltd's 2015-16 Regulatory Financial Statements, 17 March 2017, page 25.

TasWater noted that the unregulated revenue total of \$12.5 million comprises roughly 4.0 per cent of its total revenue for 2015-16 (\$313 million). TasWater has therefore assumed that it spent 4.0 per cent, or \$7.3 million, of its total opex during 2015-16 on unregulated services.

Table 7.17 TasWater's unregulated revenue for 2015-16 (\$'000s)

Revenue item	Revenue collected
Trade Waste Categories 3 and 4 – Volumetric	5 780
Trade Waste Categories 3 and 4 – Fixed	1 215
Biosolids Sales	1 713
Irrigation – Volumetric	1 081
Irrigation – Fixed	96
Consulting Income	1 427
Tankered Waste	693
Rent	445
Government Training Funding	70
Total	12 521

TasWater justifies this approach to cost allocation on the basis that, in general, the prices it charges for unregulated services are cost reflective, and therefore the revenue it receives for these services should closely mirror the costs involved in providing the services. The Economic Regulator notes that 4.0 per cent is similar to the percentage of opex excluded from TasWater's cost build up for the second regulatory period.

However, the Economic Regulator subsequently identified that TasWater received \$1.48 million from the Launceston City Council in 2016-17 in relation to services TasWater provided in operating the unregulated stormwater component of the Launceston Combined System. Including this revenue results in unregulated revenue of \$13.99 million and an unregulated revenue to total revenue percentage of 4.5 per cent (compared to TasWater's 4.0 per cent). Noting that changing this percentage would not have a material impact on TasWater's opex, the Economic Regulator accepts TasWater's apportionment of total opex between regulated and unregulated components.

Using a similar cost allocation method to the one it used for the second regulatory period, TasWater has directly attributed its regulated opex costs to individual assets wherever possible. This is not possible for all opex, as some of it goes towards supporting the operation of the entire business. TasWater considered allocating this remaining opex based on its revenue split between water and sewerage services, but noting the TAO's recommendations from its review of TasWater's 2015-16 Regulatory Financial Statements, concedes that its regulated revenues are not as cost reflective as its unregulated revenues so this method is not always appropriate. TasWater therefore investigated several alternative cost allocation methods in its proposed PSP for the third regulatory period. For example, in instances where a large portion of a particular opex category was directly attributable, TasWater has allocated the balance of that opex category based on the same water to sewerage costs ratio as the attributable opex.

Applying its revised cost allocation method to its 2015-16 opex, TasWater arrived at a water to sewerage ratio for its regulated opex of 51.2 per cent to 48.8 per cent. TasWater notes that it expects its cost allocation accuracy to improve in the future as it collects more cost data through its asset management information system (AMIS).

TasWater's rationale for this methodology and the reasoning behind the cost allocation ratios it has adopted for each opex category appear sound and, subject to the outcomes of future audits of TasWater's regulatory financial statements, appear to address the concerns raised by the TAO about the basis for the allocation of TasWater's indirect costs. In particular, TasWater has allocated its indirect costs on a basis other than revenue with the exception of customer collection costs, which TasWater has continued to allocate based on revenue. The Economic Regulator considers this appropriate given that the costs of recovering revenue vary in accordance with the amount of revenue collected.

Having reviewed TasWater's cost allocation methodology, the Economic Regulator accepts TasWater's cost allocations as presented in its proposed PSP for the third regulatory period.

The Economic Regulator looks forward to TasWater being able to provide better quality data to support its cost allocations in future PSPs following the implementation of its AMIS.

The Economic Regulator accepts TasWater's proposed cost allocations for the third regulatory period.

7.8 Productivity improvements/efficiencies

In addition to Arup's recommendations for specific reductions in a number of TasWater's opex categories, the Economic Regulator notes that Arup found:

- TasWater has identified significant productivity savings in a number of opex categories during both the second and third regulatory periods.
- TasWater's identified productivity savings are forecast to occur within the next two financial years with minimal savings forecast thereafter.

On the latter point the Economic Regulator notes that Table 44 of TasWater's proposed PSP shows that TasWater expects to have implemented \$12 million of permanent annual opex reductions by 2020-21.

Table 7.18 Summary of TasWater's forecast productivity savings (\$000s)

	2016-17	2017-18	2018-19	2019-20	2020-21
Incremental productivity savings	3 460	5 004	2 171	483	889
Cumulative annual savings	3 460	8 464	10 635	11 118	12 007

In its Draft Report to the Economic Regulator, Arup observed that:

..... [it] would expect that consecutive regulatory years of opex overspend are reflected in improved compliance and benchmarked performance by the end of PSP2, and going forward, the spending levels must be rigidly maintained within the final regulated allowance in PSP3. Should this not occur during PSP3, the TER would likely be justified in imposing significant sanctions for non-compliance by TasWater.

The Economic Regulator shares Arup's concerns about TasWater's productivity savings falling away over the third regulatory period.

The Economic Regulator also remains mindful of the fact that, under a building block approach, it is unable to clawback opex that is subsequently found to be inefficient (in contrast, imprudent or inefficient capex is removed from the regulated asset base and TasWater does not receive a return on that expenditure).

7.8.1.1 Economic Regulator's Draft Report proposals

In its Draft Report, the Economic Regulator flagged its intention to require that TasWater achieve additional productivity savings for the third regulatory period by reducing its opex by the additional opex identified as flowing from its proposed capex program. This would have resulted in TasWater's annual opex reducing by between \$1.5 and \$2.7 million over the third regulatory period.

7.8.1.2 Issues raised during consultation on the Economic Regulator's Draft Report

As noted in Section 7.6.8 of this Final Report, TasWater's response to the Economic Regulator's Draft Report argued strongly against the proposed disallowance of opex arising from new capex as a productivity incentive.

However, in its Final Report to the Economic Regulator, Arup reiterated its comments relating to the strong potential and scope for productivity improvements in TasWater. In both its Draft Report and Final Report to the Economic Regulator, Arup states:

... of primary concern for the PSP3 period will be a need and expectation from its (TasWater's) customers and stakeholders for a significant lift in measured staff productivity. This should be achievable as the benefits of the integrated asset management systems, and a capex project focus of integrating treatment plants and updating technology provide the opportunity for staff to be re-deployed to undertake other roles to speed the capex and maintenance programs, leading to much improved compliance to technical standards and regulatory requirements.

Arup noted that TasWater inherited from its predecessors a relatively large number of water and sewerage assets when compared to utilities in other jurisdictions. The smaller service areas and limited economies of scale available to TasWater's predecessors mean that many of these legacy assets are no longer optimal for a utility the size of TasWater. Continuing to operate and maintain such a diverse and widely distributed asset base arguably has a large negative impact on TasWater's business efficiency and productivity.

In considering how TasWater might increase its productivity during the third regulatory period and in the longer term, Arup discussed how opportunities to replace several small treatment plants with a single larger plant, interconnect isolated pipe and pumping networks, and move to larger-scale operational planning could lead to reduced operating and maintenance costs for TasWater over time. Arup's view is that it is reasonable for TasWater's customers and stakeholders to expect that such productivity improvements be included in TasWater's opex forecasts for each pricing investigation.

7.8.1.3 Economic Regulator's decisions

While Arup did not provide any specific recommendations as to how the Economic Regulator might incentivise TasWater to improve its productivity, the Economic Regulator researched the nature of productivity and efficiency dividends that regulators in other jurisdictions have recently placed on water and sewerage utilities. Based on this research, and Arup's comments relating to the scope for productivity improvements in TasWater, the Economic Regulator concluded that it would be reasonable to impose a 1.50 per cent per annum reduction in TasWater's forecast regulated opex for the third regulatory period as an efficiency dividend/productivity incentive. This figure is within the range of productivity targets currently applied to TasWater's peers including Sydney Water, SA Water, the Victorian urban water utilities, the Water Corporation of WA, and Icon Water. Figure 7.3, from a recent report prepared by KPMG for the Queensland Competition Authority's investigation of Seqwater's pricing, demonstrates this.

Figure 7.3 Efficiency targets imposed by other jurisdictional Regulators on water and sewerage utilities⁴⁴

Table 86: Recent efficiency targets % per annum

Sydney Water	2017	2018	2019	2020			
Continuing efficiency	0.3%	0.5%	0.8%	1.0%			
Catch up efficiency	0.5%	0.8%	2.0%	2.0%			
SA Water	2016-17	2018-18	2018-19	2019-20			
Continuing efficiency	1.0%	1.0%	1.5%	1.5%			
Victorian Urban Water	2013-14	2014-15	2015-16	2016-17			
Continuing efficiency	1.0%	1.0%	1.0%	1.0%			
Water Corporation	2018-19	2019-20	2020-21	2021-22			
Continuing efficiency	2.5%	2.5%	2.5%	2.5%			
Icon Water	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Continuing efficiency	1.75%	1.75%	1.75%	1.75%	1.75%	1.75%	1.75%

Source: Atkins Cardno 2015 Expenditure Review Final Report (Sydney Water), Cardno Atkins Review of Capital Expenditure Plans of SA Water (2016), ESC Water Price Review 2013-18. ERA 2017 The efficient costs and tariffs of the Water Corporation, Aqwest and Busselton Water Draft Report. ICON Water 2017 2018–23 Water and Sewerage Price Proposal.

Arup agreed that a 1.50 per cent per annum target should be achievable for TasWater and was consistent with the approaches of other jurisdictions, while noting that it had not done any in depth analysis on this matter. The Economic Regulator has therefore decided to impose a 1.50 per cent per annum reduction on TasWater's forecast regulated opex for the third regulatory period. This reduction will apply to all opex categories except motor vehicle costs, as the Economic Regulator believes that the reductions already imposed on TasWater's proposed motor vehicle costs for the third regulatory period (see Section 7.6.7) represent an appropriate productivity saving.

Imposing a 1.50 per cent per annum target to all of TasWater's opex categories other than motor vehicle costs will result in reductions of approximately \$2.55 million, \$2.59 million and \$2.67 million respectively from TasWater's forecast opex over the third regulatory period.

The Economic Regulator requires TasWater to achieve productivity savings above those it has proposed for the third regulatory period by reducing TasWater's forecast opex, for all categories other than motor vehicle costs, by 1.50 per cent per annum.

7.9 Re-use water

As noted in Section 7.1 of this Final Report, TasWater was required to provide details about the net savings derived from, or the net costs incurred in, providing re-use water to external parties. This information does not appear in TasWater's proposed PSP and, in response to a request from the Economic Regulator, TasWater advised that:

Reuse and/or recycled water schemes vary between unregulated services and least cost waste water disposal solutions. We consider reuse on a case by case basis when developing possible solutions for addressing non-compliant systems or treatment plants. The EPA requires that an assessment be undertaken for all waste water treatment plant improvement plans of opportunities to divert water from treated effluent for beneficial purposes including irrigation of agricultural, forestry or public land. The sensitivity of receiving environments is an important consideration; however the underlying premise is one of identifying the least cost solution for customers.⁴⁵

⁴⁴ KPMG, 2017, Seqwater expenditure review - Report for the Queensland Competition Authority, page 185.

⁴⁵ TasWater, Response to OTTER questions received on 9 August 2017, page 19.

TasWater advised that it cost \$0.634 million and \$0.837 million in 2014-15 and 2015-16 respectively to provide re-use water to external parties.

Table 7.19 TasWater's costs of providing re-use water to external parties (\$000s)

Revenue and expenditure	2014-15	2015-16
Revenue received	85	109
Depreciation	-502	-653
Operations and maintenance	-226	-293
Net savings derived/(costs incurred) in providing reuse water	-643	-837

7.10 Economic Regulator's decisions

In its Draft Report, the Economic Regulator proposed the adjustments to TasWater's opex for the third regulatory period as set out in Table 7.20.

Table 7.20 TasWater's opex for the third regulatory period (\$'000s) - Draft Report

	2018-19	2019-20	2020-21	Total
TasWater's proposed opex	174 781	178 691	185 260	538 732
Arup's adjustments	-3 412	-3 373	-3 692	-10 477
Economic Regulator's efficiency adjustment	-1 507	-2 170	-2 720	-6 397
Economic Regulator's opex	169 862	173 149	178 848	521 858
Total opex reductions	-4 919	-5 543	-6 412	-16 874

Following corrections to errors and accounting for changes to the Economic Regulator's proposals in the Draft Report, the Economic Regulator has decided that TasWater's opex for the third regulatory period should be adjusted as shown in Table 7.21.

Table 7.21 TasWater's opex for the third regulatory period (\$'000s) - Final ^{Note}

	2018-19	2019-20	2020-21	Total
TasWater's proposed opex (PSP)	174 781	178 691	185 260	538 732
Economic Regulator's opex (Draft Report - corrected)	171 420	173 675	178 199	523 294
TasWater's revised proposed opex (Draft Report submission)	173 754	176 974	182 406	533 133
Arup's adjustments	-55	-526	-573	-1 154
Economic Regulator's efficiency adjustment	-2 546	-2 593	-2 673	-7 813
Economic Regulator's opex	171 153	173 855	179 160	524 167
Change from Draft Report	-267	180	961	873
Total opex reductions	-2 601	-3 119	-3 246	-8 966

Note:

The difference of \$7.908 million between the Draft Report total opex reductions from Table 7.20 (\$16.874 million) and the Final Report total opex reductions from Table 7.21 (\$8.966 million) can be reconciled as follows:

- a) Arup's recommended reductions dropping from \$10.477 million to \$1.154 million (-\$9.323 million); and
- b) Reductions due to efficiency adjustments increasing from \$6.397 million to \$7.812 million (+\$1.415 million).

The Economic Regulator requires TasWater to adjust its forecast opex for the third regulatory period by the amounts set out in Table 7.21.