

6 CAPITAL EXPENDITURE

Capex refers to the amount invested by TasWater in new regulated assets. Capex on unregulated assets is not taken into account for the purposes of calculating TasWater's maximum allowed regulated revenue.

Capex is a key building block component as it is an input into the calculation of both regulatory depreciation for new assets (see Chapter 8) and the RAB roll forward (see Chapter 10).

The Economic Regulator expects TasWater to develop and maintain a prudent and efficient capex program that allows it to cater for its customer base while improving its regulatory compliance and service delivery.

Although TasWater's proposed Price and Service Plan refers to a "capex allowance", the Economic Regulator does not impose a limit on TasWater's capex. Rather, based on its assessment of TasWater's proposed capex, the Economic Regulator arrives at an expected figure that it used to calculate TasWater's MARR for each financial year of the regulatory period. Recognising commitments made to the industry regulators (see Chapter 3), it is therefore up to TasWater to decide how much it should spend and which projects it should invest in. If TasWater spends more than the amount that the Economic Regulator expects, so long as the expenditure is found to be prudent and efficient, the amount expended is included in TasWater's RAB as part of future price determination investigations and TasWater can then receive a return on that expenditure.

To help determine whether TasWater's proposed capex program for the third regulatory period is prudent and efficient, the Economic Regulator considered the reasons and evidence that TasWater provided in support of its capex priorities, and whether TasWater's proposed timeframes for delivery of its capex program are reasonable considering its past capex delivery. This required the Economic Regulator to examine aspects of TasWater's capex program for the second regulatory period, focussing on:

- whether there was a need for TasWater to spend the amounts it did (was its capex prudent?);
- whether TasWater followed the most cost effective approach to achieving its desired outcomes (was its capex efficient?); and
- whether TasWater was able to deliver its capex program consistent with expected timeframes.

To allow it to make an informed judgement on the efficiency and prudence of TasWater's proposed capex program for the third regulatory period, the Economic Regulator required TasWater's proposed Price and Service Plan for the third regulatory period to provide information including:

- annual forecasts of capex for the third regulatory period;
- a breakdown of historical and forecast capex by cost driver;
- explanation and justification of the trend in forecast capex;
- the key assumptions underlying capex forecasts, including any risks; and
- identification of major capex projects proposed for the third regulatory period, providing for each:
 - the project name and scope (including specific outcomes to be delivered, number of customers impacted, and the risk/s being addressed);

- cost category and cost driver;
- estimated start and completion dates; and
- total capital cost and expenditure by year.

The Economic Regulator analysed TasWater's actual and forecast capex in its proposed Price and Service Plan for the third regulatory period to determine whether it was prudent and efficient. The Economic Regulator also engaged Arup to conduct an independent analysis and provide an opinion on TasWater's actual and forecast capex for the second regulatory period and its proposed capex for the third regulatory period. Arup's Draft Report is available on the Economic Regulator's website: www.economicregulator.tas.gov.au under Water/Pricing/Price Determination Investigations.

6.1 TasWater's asset management practices

Arup has noted in its Draft Report that:

TasWater has made significant progress in the development of its Asset Management Systems in PSP2. The introduction of the AMIP [Asset Management Improvement Plan] in PSP2 provides the organisation with the next steps in its asset management journey.⁷

TasWater's asset management practices are outlined in Sections 6.3.2.1 to 6.3.2.4 inclusive of its proposed Price and Service Plan and are also summarised in Section 2.5 of Arup's Draft Report.

Appendix 6 presents, in diagrammatic form, the various elements of TasWater's asset management system.

6.2 Review of capex for the second regulatory period

TasWater developed its capex program for the second regulatory period using a prioritisation process aligned with its project management framework. This was essentially a continuation of the capex planning practices used by the three regional water and sewerage corporations prior to the formation of TasWater.

Based on TasWater's proposed capex program, the Economic Regulator expected TasWater to spend capex of \$330 million during the second regulatory period. TasWater's actual and forecast⁸ capex for this period indicates that it will spend \$386.4 million, approximately \$56.4 million, or 17 per cent, above expectations. TasWater's proposed Price and Service Plan for the third regulatory period explains this additional spending as being due to an increasing need for renewal of assets to meet customer service standards and compliance requirements. Table 6.1 below shows TasWater's expected capex versus its actual and forecast capex for each of the three years of the second regulatory period.

Table 6.1 TasWater's expected and actual/forecast capex for the second regulatory period (\$'000s)

	2015-16	2016-17	2017-18	Total for the second regulatory period
TER expectation	100 000	110 000	120 000	330 000
Actual/forecast	130 877	121 805	133 697	386 379
Change	30 877	11 805	13 697	56 379
Change (%)	31%	11%	11%	17%

⁷ Arup, 2017, page 13.

⁸ Forecast capex for 2017-18.

TasWater also provided figures to the Economic Regulator demonstrating how the major cost drivers of its capex program changed during the second regulatory period and how its expected and actual capex programs related to its various service delivery areas, as shown in Tables 6.2 and 6.3.

Table 6.2 TasWater's expected and actual/forecast capex for the second regulatory period by cost driver (\$'000s)

Cost driver	Expected capex	Actual/forecast capex	Change
Compliance	188 260	166 733	-21 527
Improvement	62 858	32 510	-30 348
Renewal	55 231	71 938	16 707
Growth	23 651	115 198	91 547
Total	330 000	386 379	56 379

Table 6.3 TasWater's expected and actual/forecast capex for the second regulatory period by category (\$'000s)

Category	Expected capex	Actual/forecast capex	Change
Water	122 073	168 562	46 489
Sewerage	167 718	116 913	-51 805
Dual function	40 208	100 904	60 696
Total	330 000	386 379	56 379

In its review of TasWater's capex for the second regulatory period, Arup noted that TasWater will spend a significant proportion (\$100.9 million, or 26 per cent) of its capex on 'dual function' assets, which is 2.5 times more than TasWater originally proposed to spend on these assets. This asset category includes various assets with relatively short lives, including vehicles, supervisory control and data acquisition (SCADA) software, and TasWater's asset management information system (AMIS).

In contrast, TasWater will spend \$116.9 million on sewerage assets during the second regulatory period, which is 31 per cent less than proposed. This is due to TasWater deferring \$50.8 million sewerage capex in favour of drinking water projects and business systems improvements (including SCADA and AMIS).

In relation to TasWater's investment in SCADA and AMIS during the second regulatory period, while the Economic Regulator recognises that these assets will help to improve TasWater's internal processes and asset management practices, due to their relatively short lifespans they make a considerable impact on regulatory depreciation calculations. The Economic Regulator notes that sewerage assets generally have a much longer life than information technology systems, meaning that the outcome of TasWater's capex prioritisation decisions during the second regulatory period is a greater net increase in TasWater's regulatory depreciation allowance than would have been the case under TasWater's original capex allocation. Chapter 8 provides an analysis of TasWater's regulatory depreciation.

A full list of TasWater's capex projects for the second regulatory period is attached as Appendix 7.

6.2.1 Arup's approach

To analyse TasWater's capex, Arup reviewed five major projects from TasWater's second regulatory period capex program to assess their prudence and efficiency.

The second regulatory period capex projects that Arup reviewed were:

- Cambridge Sewer Emergency Storage;
- Direct to asset opex to capex programs;

- Kingborough Sewerage System Strategy;
- Small Towns Water Supply Strategy; and
- Tolosa Dam Water Supply Upgrade.

Descriptions of each of these projects are provided in sections 3.2.2 to 3.2.6 inclusive of Arup's Draft Report.

The following sections discuss Arup's findings in relation to these projects.

6.2.1.1 Cambridge Sewer Emergency Storage

Arup concluded that this project is prudent, and that there is a genuine need for the work that TasWater is proposing. However, Arup noted the lack of any regional wastewater strategy that includes the Cambridge area, and highlights the possibility that, if such a strategy existed, TasWater's proposed course of action on this project might appear less feasible and efficient. The Economic Regulator acknowledges this issue, while also noting Arup's aside that a regional wastewater strategy would not necessarily come to any different conclusion about how to proceed with the project.

Arup also noted that the timing of this project has changed since its inception, and that TasWater has deferred the proposed completion date for the project by three years.

6.2.1.2 Direct to asset opex to capex programs

Following its analysis of this project, Arup was comfortable that although the expenditure on these programs was relatively large, they have successfully achieved their intended outcomes. Arup noted that TasWater discontinued these programs after 2015-16, and stated that the issues they addressed are unlikely to occur again.

6.2.1.3 Kingborough Sewerage System Strategy

Arup's view is that the intention and rationale behind this project is sound, but noted ongoing delays in delivery of the project. TasWater inherited this project from the regional water and sewerage corporations, who first identified it as a priority in 2009. Arup noted that the preferred course of action for the project has remained essentially the same during both the first and second regulatory periods, apart from the addition of some minor works and regular increases in time and cost estimates.

Arup highlighted that certain aspects of this project have been met with significant community opposition, but that TasWater's proposed course of action appears both efficient and consistent with regulatory compliance expectations.

6.2.1.4 Small Towns Water Supply Strategy

This project is unquestionably important. Arup noted that TasWater needs to provide drinking water that meets relevant quality standards and guidelines in order to satisfy its minimum service obligations. Due to its urgency, TasWater has fast-tracked this project through its standard project planning processes. However, Arup noted that this urgency arises in part from TasWater's lack of investment and strategic planning in its water supply services prior to the second regulatory period.

Arup commented that there are significant variations in TasWater's cost estimates for this project, which could affect TasWater's expected capex for the third regulatory period. Given the obvious importance of the project though, Arup accepted the prudence and efficiency of TasWater's course of action, taking account of the project's overall urgency.

6.2.1.5 Tolosa Dam Water Supply Upgrade

Arup cited this project as a good example of TasWater identifying and implementing lower cost solutions than those proposed in its original project planning for the second regulatory period. TasWater's current expected total capex on this project is \$13.7 million, well below its original cost estimate of \$23.9 million.

Arup commented that it had difficulty determining how much of the work for this project TasWater has completed, due to contradictions between the documentation provided to them by TasWater and the information available on TasWater's public website. Arup suggests that TasWater take more care to keep its website up to date on major project progress to improve its public transparency. The Economic Regulator supports this suggestion.

6.2.1.6 Arup's findings - second regulatory period

Arup noted a number of capex governance improvements made by TasWater during the second regulatory period that led to prudent and efficient outcomes, including the development of its LTSP.

In general, Arup found that TasWater's capex during the second regulatory period appears to be prudent, but that it was hard to judge the efficiency of the projects without a better understanding of how each project fits into TasWater's long-term strategic planning and any relevant regional water and sewerage strategies. In addition to this issue, Arup noted that a significant proportion of TasWater's capex projects during the second regulatory period experienced delays and cost overruns. This again noted TasWater's project management practices. As outlined in Chapter 3, Tasmanian water and sewerage technical regulators are also concerned about TasWater's ability to deliver on its project commitments. In this regard, Arup noted that:

While [its] interview process identified a number of significant areas in which capex governance improvements during the early part of PSP2 have led to prudent and more efficient outcomes, improvements are needed by TasWater in timely project delivery, on budget and on time, and project status against targets needs to be clearly documented by TasWater to justify the ex-post review of actual capex outcomes for PSP3.⁹

As discussed in Chapter 3, the Economic Regulator therefore intends requiring TasWater to provide an annual report to all industry regulators detailing its progress and the expected completion dates for all current projects as a way of incentivising TasWater to improve its project delivery performance. For convenience, the Economic Regulator proposes adding this report to the annual *Tasmanian Water and Sewerage State of the Industry Report* and amending the *Tasmanian Water and Sewerage Industry Performance and Information Reporting Guideline* to include this reporting requirement in the future.

The Economic Regulator intends to accept that TasWater's capex during the second regulatory period was prudent and efficient.

⁹ Arup, *Review of the Tasmanian Water and Sewerage Corporation's Operating and Capital Expenditure, Draft Report*, 27 October 2017, page 16.

6.3 Review of proposed capex for the third regulatory period

TasWater has based its proposed capex program for the third regulatory period on the outcomes from its customer and stakeholder consultation process (discussed in Chapter 2) and the priorities identified in its LTSP. The Economic Regulator views this as a considerable improvement on the method and rationale that TasWater used to develop its capex program for the second regulatory period, noting that TasWater is making a greater effort to align its capex program with overall business priorities and customer expectations.

Figure 6.1 below summarises TasWater's proposed capex program for the third regulatory period, and compares it with the second regulatory period.

Figure 6.1 Comparison of TasWater's capex for the second and third regulatory periods (\$ million)

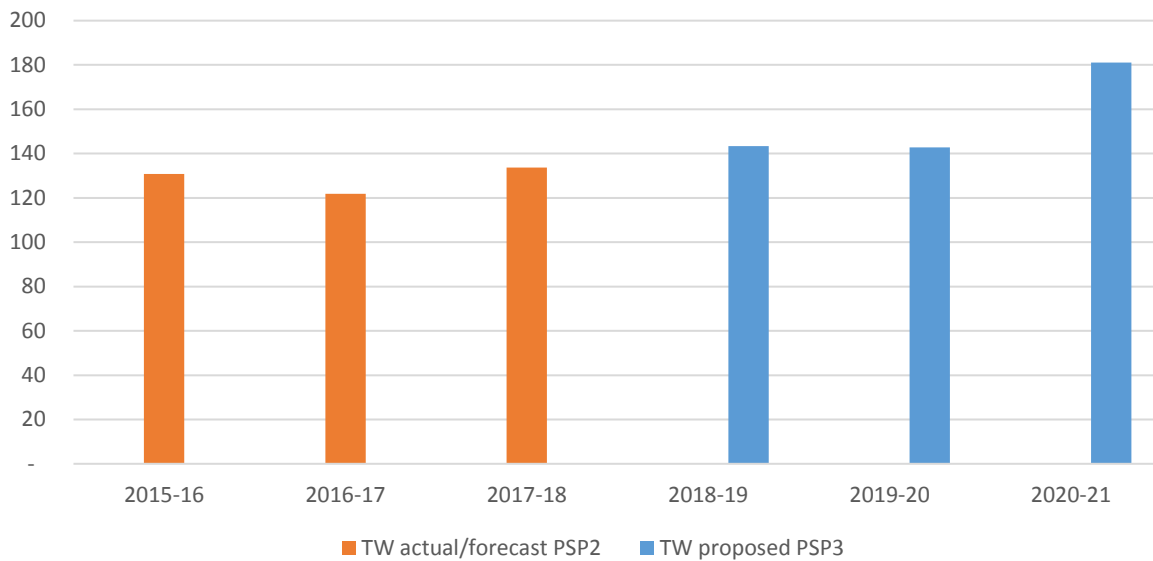


Table 6.4 provides a summary of TasWater's proposed capex for the third regulatory period by primary cost driver.

Table 6.4 TasWater's forecast capex for the third regulatory period by cost driver (\$'000s)

Year	2018-19	2019-20	2020-21	Total
Growth	1 078	-	-	1 078
Renewal	23 328	21 739	22 869	67 936
Compliance	96 881	103 367	142 051	342 299
Improvement	22 074	17 630	16 156	55 861
Capex total	143 362	142 736	181 076	467 175

A full list of TasWater's capex projects for the third regulatory period is attached as Appendix 8.

Arup highlights a significant change in TasWater's capex program focus between the second and third regulatory periods. This will lead to a much greater focus on projects aimed at improving TasWater's regulatory compliance, particularly in relation to wastewater, and a reduction in focus on asset growth and renewal projects (compare Table 6.4 and Table 6.2). As part of this change, TasWater has reprioritised several of the projects identified through its LTSP Optimisation Model. Arup noted that some historically low priority projects that have recently become high priority projects do not currently have sufficient concept designs, options analysis and business case development to allow them to progress prudently and efficiently. In Arup's view, this reinforces the urgency for TasWater to further improve its project planning and management practices.

6.3.1 Arup's approach - third regulatory period

Similar to its approach to analysing TasWater's capex for the second regulatory period, Arup reviewed nine major projects from TasWater's proposed third regulatory period capex program to assess their prudence and efficiency. The third regulatory period capex projects that Arup reviewed were:

- Bryn Estyn Water Treatment Plant Upgrade;
- Facility, Fleet and Plant Renewals;
- Forth Water Treatment Plant Upgrade;
- Non-network IT Upgrades;
- Pardoe Sewer;
- Pet Dam Upgrade;
- System Control and Data Acquisition Renewals Program;
- Sewage Treatment Plant Renewals Program; and
- Water Network Renewals Program.

Descriptions of each of these projects are provided in sections 3.3.2 to 3.3.10 inclusive of Arup's Draft Report.

The following sections discuss Arup's findings in relation to these projects.

6.3.1.1 Bryn Estyn Water Treatment Plant Upgrade

Arup noted that this project is at a relatively early stage of development, and that TasWater's progress on this project will depend on its long-term plans for water supply to the Greater Hobart area. Depending on TasWater's long-term strategic decisions, the current courses of action under consideration for the Bryn Estyn project could change considerably. The Economic Regulator notes that this is a very large project. TasWater estimates that it will cost over \$108 million, and it is not due for completion until the first year of the fourth regulatory period (2021-22). The size and timing of the project provide significant scope for TasWater to change its proposed course of action during the project's lifetime, lending strength to Arup's observation.

While acknowledging the level of uncertainty surrounding the timing and likely outcomes of this project, Arup notes that it is reasonable for the Economic Regulator to accept TasWater's current capex profile for the project, as outlined in its proposed Price and Service Plan for the third regulatory period.

6.3.1.2 Facility, Fleet and Plant Renewals

The only one of TasWater's proposed projects for the third regulatory period that Arup raised significant concerns about was the Facility, Fleet and Plant Renewals project. Arup noted that according to information provided by TasWater, it currently has one vehicle for every 1.2 FTE staff. The 2015 WSAA Benchmarking Study¹⁰ found that the average ratio of vehicles to staff in Australian water and sewerage utility providers is 1:3.

Arup therefore recommends that TasWater aim to reduce its vehicle to staff ratio to at least 1:2 during the third regulatory period. Arup estimates that reducing the actual size of the fleet by 40 per cent (from 760 vehicles to 456 vehicles) would result in a reduction in TasWater's capex by \$4.0 million during the period.

Table 6.5 shows Arup's recommended adjustments to TasWater's Facility, Fleet and Plant Renewals capex.¹¹

Table 6.5 Summary of facility, fleet and plant renewals capex for the third regulatory period (\$'000s)

Facility, Fleet and Plant Renewals	2018-19	2019-20	2020-21	Total
TasWater	4 686	4 369	4 480	13 535
Arup	2 999	2 796	2 867	8 662
Proposed adjustment	-1 687	-1 573	-1 613	-4 873

The Economic Regulator intends to accept Arup's recommendation. In relation to Facility, Fleet and Plant capex.

The Economic Regulator intends to require TasWater to reduce its proposed Facility, Fleet and Plant Renewals capex, as set out in Table 6.5.

6.3.1.3 Forth Water Treatment Plant Upgrade

Arup noted that this is a high priority project, and that although it is still in the planning stage TasWater has allocated significant resources to the project.

As with the Bryn Estyn project discussed in section 6.3.1.1, Arup is of the view that TasWater's progress on this project will depend on its long-term plans for water supply to the Greater Devonport and/or Greater Launceston areas. It is possible that once TasWater has decided on its strategic approach to water supply across the larger regions that it will reassess the Forth project, which could lead to deferment of works or to changes in costs and timing. This in turn could potentially affect the prudence and efficiency assessment for this project.

¹⁰ Water Services Association of Australia, 2014/15 Opex Benchmarking Study, Industry Report, December 2015 (version 0.17).

¹¹ Arup, 2017, page 43.

6.3.1.4 Non-network IT Upgrades

This project has the goal of both supporting TasWater's existing business operations and improving efficiency and productivity.

Arup noted that this project does not receive a high priority rating under TasWater's LTSP-based prioritisation model, as the LTSP model focuses primarily on improving drinking water quality and overall compliance. Arup also noted that will be difficult to assess the prudence and efficiency of this project until the fourth regulatory period, when its outcomes can be compared against the objectives of an IT strategy that TasWater intends to implement from December 2017 onward.

6.3.1.5 Pardoe Sewer

Arup noted that about 60 per cent of the effluent treated by the Pardoe plant comes from non-residential sources, including large trade waste customers, and that despite being in its early stages TasWater has given this project a high priority.

The project documentation that TasWater provided for this project is lacking in options analysis, with only one potential course of action properly assessed and costed. Arup commented that it is clear TasWater will need to conduct further options and costing analysis during the later stages of this project to refine the process and ensure that the capex is prudent and efficient.

6.3.1.6 Pet Dam Upgrade

The Pet Dam is a key component of the Burnie water supply system. Arup judges that this project is essential to ensure that the dam meets legislated safety requirements, and that since TasWater has identified the dam as a high-risk asset this capex appears to be prudent.

Arup noted that the capex appears efficient, as TasWater has decided to follow the lowest cost course of action to address the dam's safety issues.

6.3.1.7 System Control and Data Acquisition Renewals Program

Arup noted that TasWater has a long-term vision of creating a 'smart' water and sewerage network that is manageable using real-time data. TasWater's SCADA capex is an important component of realising this vision.

TasWater has prepared a thorough business case for this project that includes options and risk analyses as well as implementation strategies. Arup noted, however, that TasWater's current cost estimates for the project are unclear, as the figures in the business case do not match some of the figures that TasWater provided to Arup on request. Additionally, Arup noted that the business case includes cost breakdowns for the project but contains no information about the potential timing for TasWater's proposed capex delivery.

6.3.1.8 Sewage Treatment Plant Renewals Program

This project focuses on delivering ongoing environmental compliance improvements for TasWater and mitigating risks of customer service failure. Arup points to a problem in prioritising capex investment in this project, given that:

TasWater notes that its ability to identify projects based on LoS [Level of Service], asset criticality, asset condition or performance is limited by data accuracy and availability.¹²

The Economic Regulator therefore expects that TasWater's ability to identify capex priorities for this project will improve during the third regulatory period in line with the quantity and quality of data collected by its new AMIS and SCADA software.

6.3.1.9 Water Network Renewals Program

TasWater's has developed a budget for the ongoing project of repairing and replacing its water mains that allocates:

- 70 per cent of the budget to proactive water main renewal (ie repairing or replacing old or damaged water mains before they fail);
- 25 per cent to reactive water main renewal (ie repairing or replacing water mains in response to failures); and
- 5 per cent to water main condition assessment (ie determining the risk of failure for particular water mains).

Arup raises concerns about how TasWater has calculated this budget, and questions how closely TasWater can realistically adhere to the budget split given the minimal control it has over reactive maintenance capex.¹³

6.3.2 Arup's findings - third regulatory period

Arup found that TasWater's proposed capex for the third regulatory period largely appears prudent and mostly aligns with the priorities set out in TasWater's LTSP. However, Arup again commented on the difficulty of assessing the efficiency of certain projects without having any information about how they relate, or will relate, to TasWater's longer-term regional water and sewerage strategies. As discussed in Chapter 3, in response to the concerns of Arup and the Tasmanian water and sewerage technical regulators, the Economic Regulator intends to require TasWater to justify its proposed capex for the fourth regulatory period in the context of such long-term strategies that will allow it to achieve full regulatory compliance and operational efficiencies.

Arup also noted that much of TasWater's capex during the third regulatory period will be devoted to completing projects begun during the second regulatory period.¹⁴

To avoid repetition of this situation in future regulatory periods, Arup recommends that TasWater accelerate its capex project delivery through an intensive focus on its internal processes and project governance, and by engaging external contractors where appropriate to help reduce capex delivery times.

¹² Arup, 2017, page 57.

¹³ Arup, 2017, page 60.

¹⁴ Arup, 2017, page 16.

The Economic Regulator notes that TasWater has assigned 73 per cent of its proposed capex during the third regulatory period to compliance improvement projects, and therefore agrees it is critical that TasWater can deliver its capex program in a timely manner, with reference to long-term strategic planning and any related regional water and sewerage strategies.

6.4 Other matters

6.4.1 Capex constraints

In response to questions from the Economic Regulator, TasWater explained that, for the third regulatory period, it has placed a constraint on its capex based on the price increases that customers are willing to accept according to its customer engagement activities, and its decision on its interest cover ratio (ICR).¹⁵

In relation to its ICR, TasWater commissioned Bancorp Corporate Finance Limited to conduct:

...a benchmarking study of the Australian water utilities industry to assist in determining an appropriate level of borrowing to support growth as set out in the Company's long term financial management plan.¹⁶

Bancorp found that relative to comparable water and sewerage utilities (that is, those with greater than \$1 billion equity), while TasWater has a relatively low debt to equity, its revenue does not exceed its expenses by a very large margin, resulting in a comparable ICR to other providers.

In particular, the Economic Regulator notes that, for the last four financial years, TasWater's expenses have consistently made up about 80 per cent of its revenue. For comparison, Sydney Water's expenses made up about 60 per cent of its revenue in 2013-14 (TasWater: 78 per cent for 2013-14).

A comparison of revenue, expenses, borrowings, interest expense and ICR for TasWater and a selection of mainland water and sewerage service providers is shown in Table 6.6.

Table 6.6 Comparison of utilities' revenue, expenses, borrowings, interest expense and ICR for 2013-14

Entity	Revenue \$m	Other Expenses \$m	Expenses to revenue %	Revenue less expenses \$m	Interest Expense \$m	Borrowings \$m	ICR
TasWater	274	215	79	59	20	247	2.9
Barwon	198	148	75	50	39	534	1.3
Sydney	2 615	1 561	60	1 054	414	6 233	2.5
SA Water	1 382	872	63	510	225	3 677	2.3
Yarra Valley	989	803	81	186	120	1 702	1.5

TasWater has selected the median ICR (two) of the 29 utilities that were benchmarked in Bancorp's study. However, the Economic Regulator notes that the median ICR for those utilities with more than \$1 billion in equity was 2.2. Understanding that TasWater's Board has decided that TasWater's ICR should be maintained above two, the Economic Regulator notes that TasWater's ICR has ranged from 2.88 to 3.43 between 2013-14 and 2015-16 and, for 2016-17, was 2.79.¹⁷ The Economic Regulator

¹⁵ An entity's ICR (Revenue less expenses divided by net interest expense) measures whether the entity can meet the interest expenses on its borrowings. All other things being equal, a relatively higher ICR means that the entity can meet its commitments.

¹⁶ Bancorp Corporate Finance Limited, *TasWater Benchmarking Study*, August 2015, page 2.

¹⁷ TasWater's 2016-17 Annual Report.

further notes that the outputs from TasWater's LTSP Optimisation Model have been based on a target ICR assumption of 2.0.

The Economic Regulator recognises that its role does not extend to recommending changes to TasWater's ICR. However, as noted in Chapter 3, the Economic Regulator considers that the development of long-term strategies that will deliver efficiencies through plant rationalisation (as well as improve regulatory compliance outcomes) is one way of putting downward pressure on TasWater's expenses. This action, all other things being equal, would result in the gap between TasWater's revenue and expenses increasing.

In its recent performance audit, the Tasmanian Audit Office (TAO) found that:

- There has been an improved capacity to service debt and meet debt repayment requirements since 2009 as evidenced by:
 - a strong interest cover ratio exceeding the target set in corporate plans and the long-term 10-year financial plan
 - low debt to total assets and debt to equity ratios demonstrating capacity to increase borrowings and fund infrastructure investment
- An appropriate level of debt funding has not been utilised since 2009 as more capital expenditure could have been funded by debt to improve compliance with environmental standards for wastewater as outlined in Section 1.2
- There has been a better capacity to manage debt since 2013.¹⁸

The TAO recommended that "TasWater investigates the acceleration of infrastructure investment by utilising additional debt funding."¹⁹

In its draft report Arup noted that:

During the interview process TasWater indicated that it sought to operate within a capital constraint limited by its approved budget. The budget limits appear to be set through Board consideration of a balance of issues including, the large investment required to catch up with prior under investment (particularly related to meeting technical compliance requirements), the potential for adverse impacts on service price increases on customers, and the "*commercially prudent level of debt*" supported on its balance sheet for operation of the business.²⁰

and

While the prioritisation process is important in determining the range of projects that will be completed, the capital constraint adopted by the TasWater Board for the total capital expenditure level during the regulatory period, has more influence over the delivery of customer outcomes. Arup notes the Economic Regulator does not set a limit on the capital expenditure level during the regulatory period.²¹

¹⁸ Tasmanian Audit Office, *Water and sewerage in Tasmania: assessing the outcomes of industry reform*, 14 November 2017, page 87.

¹⁹ *Ibid*, page 87.

²⁰ Arup, 2017, page 4.

²¹ *Ibid*, page 12.

The Economic Regulator acknowledges that the lending criteria set by TasCorp, as TasWater's lender, ultimately determines how much TasWater is able to borrow. However, the internal constraint that TasWater's Board places on TasWater's borrowings via the ICR has an impact on TasWater's capex and, ultimately, pricing. Capex that improves regulatory compliance has the potential to increase TasWater's opex and decrease its ICR. If TasWater maintains its current levels of capex, this will place increased pressure on pricing.

The Economic Regulator's view is that to minimise future price increases, maintain capex levels and achieve its target ICR, TasWater will need to achieve opex savings through operational efficiencies and plant rationalisation. This means that TasWater should be prioritising capex that achieves both regulatory compliance improvements and operational efficiencies, and will require long-term strategies that identify such capex opportunities.

6.4.2 Gifted assets

TasWater's expected regulated capex for the third regulatory period is net of gifted assets²². TasWater confirmed that it does not expect to receive any gifted assets during the third regulatory period. The Economic Regulator queried the absence of gifted assets as, between 2013-14 and 2016-17, TasWater received gifted assets to the value of between \$9.1 and \$26.3 million a year. In response, TasWater explained that the value of gifted assets is highly variable from year to year and is therefore difficult to predict, and that TasWater's promotion of infill development will put downward pressure on the number of gifted assets over time.

The Economic Regulator acknowledges that, while promoting infill development over new subdivisions will reduce the value of gifted assets, this will not remove gifted assets altogether as there will continue to be gifted assets relating to subdivisions.

Based on information provided by TasWater, the Economic Regulator considers that it would be appropriate to base the value of gifted assets for the third regulatory period on the value of those assets for 2016-17, approximately \$10 million per annum. The Economic Regulator therefore intends to require that TasWater reduce its proposed capex for the third regulatory period by \$10 million per annum to account for gifted assets.

The Economic Regulator intends to reduce TasWater's expected capex for the third regulatory period by \$10 million per annum to account for gifted assets.

6.4.3 Recognition of capex in the RAB

Under the existing regulatory accounting arrangements, TasWater is able to roll any new capex assets into its RAB as soon as construction of those assets begins. This means that TasWater could be receiving a return on those assets and claiming a regulatory depreciation allowance on an asset for some time before it becomes operational. This arrangement provides little incentive for TasWater to complete capex projects, and particularly since Arup has observed "...improvements are needed by TasWater in timely project delivery, on budget and on time..."²³

²² Gifted assets relate to assets constructed by developers that are then "gifted" to TasWater once the development has been completed. TasWater is not permitted to receive a return on these assets as customers/developers have already paid for the asset.

²³ Arup, 2017, page 16.

To incentivise TasWater to complete its capex projects more quickly, the Economic Regulator is seeking stakeholder feedback on the concept of new capex not being added to TasWater's RAB until the asset has been commissioned. This would be consistent with current practice in some other jurisdictions and the current treatment of capex for statutory accounting purposes.

To provide a guide as to the likely impact on TasWater's if this concept was implemented, the Economic Regulator has analysed TasWater's proposed capex projects for the third regulatory period by removing annual capex scheduled on projects not expected to be completed in a particular year. For example, if TasWater expected to complete a project in 2019-20 any capex relating to that project for 2018-19 would be removed from the expected capex for 2018-19, and would not be taken into account for regulatory purposes until 2019-20 along with any additional 2019-20 capex. Further, all capex relating to a project not expected to be completed during the third regulatory period would be excluded from the Economic Regulator's expected capex for the period. Implementation of this change would also have an impact on TasWater's regulatory depreciation.

If this concept were implemented, the Economic Regulator would reissue its Ring Fencing Guideline to require TasWater's regulatory financial statements to recognise assets on commissioning for the purpose of those statements. The Economic Regulator realises that delaying the recognition of assets in the RAB until their commissioning would require the addition of an interest during construction (IDC) component to the value of the asset in the RAB.²⁴

The likely impact of this change on TasWater's expected capex and regulatory depreciation is shown in Tables 6.7 and 6.8 respectively. Readers should note that, as the Economic Regulator has not yet decided how it would recognise IDC under this scenario, the figures in these tables are based only on TasWater's unmodified proposed capex for the third regulatory period.

Table 6.7 Impact on capex of recognising capex on commissioning for the third regulatory period (\$'000s)

	2018-19	2019-20	2020-21	Total
TasWater proposed PSP	143 000	143 000	181 000	467 000
Economic Regulator	91 000	93 000	145 000	329 000
Indicative adjustment	-52 000	-50 000	-36 000	-138 000

Table 6.8 Impact on regulatory depreciation of recognising capex on commissioning for the third regulatory period (\$'000s)

	2018-19	2019-20	2020-21	Total
TasWater proposed PSP	37 000	42 000	47 000	126 000
Economic Regulator	36 000	39 000	43 000	118 000
Indicative adjustment	-1 000	-3 000	-4 000	-8 000

²⁴ Under Accounting Standard AASB 123 Borrowing Costs, borrowing costs that are directly attributable to the acquisition, construction or production of a qualifying asset form part of the cost of that asset. This compensates the entity for the opportunity cost of funds spent on a project that is not yet generating any revenue.

As shown in Table 6.7, recognising assets on commissioning significantly reduces TasWater's expected capex for the third regulatory period relative to TasWater's proposed capex. This, in turn, would reduce TasWater's maximum regulated revenue. This suggests that TasWater's customers could end up paying higher prices during the third regulatory period relative to the situation that would apply if assets were recognised on commissioning. Based on TasWater's past project delivery performance, it is also possible that the additional revenue that would flow from a higher expected level of capex, and associated higher revenue and prices, would not go towards delivering the regulatory compliance improvements that TasWater has agreed with the industry regulators. TasWater may instead use it for other purposes (including lower priority capex). It should be noted that, if assets were recognised on commissioning, this does not place a cap on TasWater's actual capex, as is currently the case. TasWater's capex expenditure is not constrained by the Economic Regulator and, provided the capex is found to be prudent and efficient, then TasWater is able to receive a return on that expenditure.

The Economic Regulator's recognition of assets concept, in conjunction with the associated proposal to expand reporting of the status of TasWater's capex program during the third regulatory period, would have the objective of incentivising TasWater to deliver agreed capex projects on time. It should also incentivise TasWater to deliver capex projects on budget, given that the price determination investigation for the fourth regulatory period will include a capex efficiency review.

6.5 Economic Regulator's draft proposals

The Economic Regulator intends to reduce TasWater's expected capex for the third regulatory period, as set out in Table 6.9.

Table 6.9 TasWater's capex for the third regulatory period (\$'000s)

	2018-19	2019-20	2020-21	Total
TasWater's proposed capex	143 362	142 367	180 886	466 616
Arup's reductions	- 1 687	- 1 573	- 1 613	- 4 873
Economic Regulator's proposed reductions	- 10 000	- 10 000	- 10 000	- 30 000
Economic Regulator's expected capex	131 675	130 795	169 273	431 743

The Economic Regulator intends to reduce TasWater's expected capex for the third regulatory period, as set out in Table 6.9.

The Economic Regulator seeks stakeholder feedback on the concept of recognising assets on commissioning, as set out in Section 6.4.3.