

2015 PRICE DETERMINATION INVESTIGATION – REGULATED WATER AND SEWERAGE SERVICES IN TASMANIA

FINAL REPORT



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Pictures (L to R): Bracknell Elevated Reservoir, Riverside Waste Water Treatment Plant (chlorine mixing chamber) and Conara Reservoir.

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ACRONYMS AND GLOSSARY

Term	Meaning within the context of this report
ADWG	Australian Drinking Water Guidelines.
Asset Renewal Annuity (ARA)	Annualised calculation of the future asset renewal and replacement program.
Cap	A limit placed on annual price increases to manage the impact on customers (also referred to as a price constraint).
Capex	Capital expenditure ie investment in assets.
Category 1, Category 2A, Category 2B and Category 2C trade waste customers	Trade waste customers assessed as having low grade or low to medium volumes of trade waste. Prices paid by Category 1, Category 2A, Category 2B and Category 2C trade waste customers are regulated.
Category 3 and Category 4 trade waste customers	Trade waste customers, other than Category 1, Category 2A, Category 2B and Category 2C trade waste customers, who produce trade waste assessed as being higher risk with respect to impact on the sewerage network. Prices paid by Category 3 and Category 4 trade waste customers are not regulated.
Connection charge	A cost-based charge for connecting a particular customer to TasWater's water or sewerage infrastructure.
Connection point	As defined in the Industry Act, the point where the customer's pipes connect to the water or sewerage infrastructure or such other point as may be prescribed in Regulations.
Contributed assets	Include developer charges and government grants but exclude equity contributions from the owners of the regulated entity.
CGS	Commonwealth Government Securities.
CPI	Consumer Price Index.

Term	Meaning within the context of this report
Customer	<p>As defined in the Industry Act:</p> <ul style="list-style-type: none"> ▪ an owner or, owner and occupier, of a property that is connected to a regulated entity's water or sewerage infrastructure (including strata title lot owners); or ▪ an occupier of a property that is connected to a regulated entity's water or sewerage infrastructure who is liable for water and sewerage charges; or ▪ an owner or occupier of a property that is not connected to a regulated entity's water or sewerage infrastructure but where a regulated service is available and a regulated entity imposes a service charge for that service; or ▪ an occupier of a property that is connected to a regulated entity's water infrastructure or sewerage infrastructure and is liable for service charges.
Customer Service Code	<i>Tasmanian Water and Sewerage Industry Customer Service Code.</i>
Customer Service Regulations	<i>Water and Sewerage Industry (Customer Service Standards) Regulations 2009.</i>
Data Collection Template	Data submitted by TasWater with its proposed Price and Service Plan in accordance with the requirements of the Price and Service Plan Guideline.
Delegate for Dam Safety	Delegate for Dam Safety Regulation (Secretary of the Department of Primary Industries, Parks, Water and Environment (DPIPWE).
Developer charges	Includes headworks charges, assets gifted by developers and cash payments made by developers to the regulated entity for the construction of new reticulation works.
DHHS	Department of Health and Human Services.
DPIPWE	Department of Primary Industry, Parks, Water and Environment.
DSIP	Dam Safety Improvement Program.
DSMP	Dam Safety Management Plan.
DORC	Depreciated Optimised Replacement Cost.
DWQMP	Drinking Water Quality Management Plan.
Economic Regulator	The Tasmanian Economic Regulator as appointed under the <i>Economic Regulator Act 2009</i> .
EPA	Environment Protection Authority.
ERA	Economic Regulation Authority.

Term	Meaning within the context of this report
Equivalent Tenement (ET)	A measure of the demand that a development will place on infrastructure in terms of water consumption and sewage discharge, compared to a standard residential allotment. An ET is also the basis for calculating fixed sewerage target tariffs.
Existing assets	All assets transferred to a regulated entity before 1 July 2011 under section 41 of the <i>Water and Sewerage Corporations Act 2008</i> .
First regulatory period	1 July 2012 to 30 June 2015.
Fixed charge	A recurrent charge for the provision of a regulated service to a customer but not including a variable charge.
Full cost recovery	A revenue limit that results in a regulated entity recovering all of the costs associated with providing a regulated service.
GSL	Guaranteed Service Level.
Headworks assets	Water or sewerage infrastructure, excluding reticulation assets and private plumbing eg dams, reservoirs, water treatment plants, sewerage treatment plants, pump stations, water and sewerage trunk mains.
Headworks charges	A form of developer charge levied as a contribution towards the cost of existing or proposed headworks assets used to service developments.
Industry Act	<i>Water and Sewerage Industry Act 2008</i> .
Industry regulators	Parties, other than the Economic Regulator, that have responsibility for regulating aspects of the Tasmanian water and sewerage industry (for example, the Delegate for Dam Safety, the Director of Public Health and the Director EPA).
Kilolitre (kL)	A metric unit of volume or capacity equal to 1 000 litres.
kPa	A metric measure of pressure.
Limited water quality customer	A customer receiving water from a supply which has a permanent boil water alert in place or a customer receiving water from a supply that the regulated entity has declared to be not of drinking water quality.

Term	Meaning within the context of this report
Limited water supply customer	<p>A customer:</p> <ul style="list-style-type: none"> ▪ connected to a water main that periodically does not contain water under positive pressure; or ▪ with a connection designed to provide low or intermittent flow, such as where the customer has been required to install, operation and maintain an individual tank or pump; or ▪ connected to a non-reticulation water main that is subject to significant pressure variations due to either: <ul style="list-style-type: none"> ○ a pumped supply where the low pressure is below 50 kPa and the high pressure is above 500 kPa; or ○ an inlet supply to a trunk reservoir such that when the reservoir inlet valve is open the pressure is below 50 kPa; or ▪ receiving a supply that the regulated entity determines to be inadequate.
Minister	Minister for Primary Industries and Water.
Motor home dump point	A facility intended to receive the discharge of waste water from any holding tank or similar device installed in a recreational vehicle.
New assets	All assets purchased or constructed by a regulated entity since 1 July 2009.
Nominal dollars	The actual price of an item during a specific year ie nominal dollars are not adjusted for the effects of inflation.
NPR	National Performance Reporting.
NPV	Net Present Value.
NWI	National Water Initiative.
Opex	Operating and maintenance expenditure ie the cost of operating and maintaining the water and sewerage systems and associated administrative costs (also referred to as OM).
Owner's representative	A representative from each of Tasmania's 29 councils who, together, comprise TasWater's Owners' Representatives' Group. The Group's functions, duties and responsibilities are outlined in TasWater's Constitution and in the Shareholders' Letter of Expectations.
Portable metered standpipes	A portable water hydrant which allows a customer to connect and draw water at authorised points throughout a regulated entity's network.
Previous regulated entities	Collectively the Tasmanian Water and Sewerage Corporation (Northern Region) Pty Ltd trading as Ben Lomond Water, the Tasmanian Water and Sewerage Corporation (North Western Region) Pty Ltd trading as Cradle Mountain Water and the Tasmanian Water and Sewerage Corporation (Southern Region) Pty Ltd trading as Southern Water.

Term	Meaning within the context of this report
Price and Service Plan	A regulated entity's price and service plan approved by the Economic Regulator under section 65 of the Industry Act.
Price constraints	A limit placed on annual price increases to manage the impact on customers (also referred to as caps).
Price Determination	A determination made by the Economic Regulator under section 66 of the Industry Act. A determination sets out, for a regulatory period, the maximum prices a regulated entity can charge for its regulated services.
Price Determination Investigation	An investigation conducted to gather information required by the Economic Regulator before making a Price Determination in respect of a regulated service.
Pricing principles	The principles set out in sections 68 and 68AA of the Industry Act and in the Pricing Regulations.
Pricing Regulations	<i>Water and Sewerage Industry (Pricing and Related Matters) Regulations 2011.</i>
Pricing zones	An area of land where a single price schedule applies.
Proposed Price and Service Plan	A price and service plan submitted by a regulated entity under section 65 of the Industry Act.
PSP Guideline	The Price and Service Plan Guideline published by the Economic Regulator in November 2013.
RAB	Value of a regulated entities' regulated asset base.
RBA	Reserve Bank of Australia.
Real dollars	Nominal figures which have been adjusted for the effects of inflation (CPI).
Regulated assets	Assets used to provide regulated services.
Regulated entity	A person holding a licence under the Industry Act [currently, the Tasmanian Water and Sewerage Corporation Pty Ltd trading as TasWater].
Regulated services	Services or activities for which a licence is required under section 30 of the Industry Act.
Regulatory period	A period covered by a Price Determination.
Reticulation assets	Water or sewerage infrastructure that are not headworks assets or private plumbing.
Returns to owners	Dividends, income tax equivalents and guarantee fees paid to owner councils by a regulated entity.
Reuse water	Water discharged from a sewage treatment plant that is reused for purposes such as irrigation.
Ring fencing	The separation of a regulated entity's accounts for the purpose of economic regulation, including splitting between regulated and unregulated components.
RV	Recreational Vehicle.
Second regulatory period	1 July 2015 to 30 June 2018.

Term	Meaning within the context of this report
Section 61 contract	A contract between a regulated entity and a customer in accordance with section 61 of the Industry Act, related to the provision of regulated services but not subject to the prices and terms in the Price Determination.
Service introduction charges	A charge on a property to recover the cost of installing, altering or utilising a regulated entity's assets so that it can provide a regulated service to that property (excludes a connection charge, fixed charge or a developer charge).
SRMC	Short Run Marginal Cost.
STED Customers	Septic Tank Effluent Disposal customers.
STEDs	Septic Tank Effluent Disposal Schemes.
Target tariff	Cost reflective tariffs for each regulated service.
Tariffs	Prices charged by a regulated entity for the provision of regulated services made up of fixed charges, variable charges and miscellaneous fees and charges.
TDWQG	Tasmanian Drinking Water Quality Guidelines.
TFS	Tasmania Fire Service
Third party capital contributions	Third party capital contributions include developer charges, service introduction charges and government grants.
Trade waste	As defined in the Industry Act, trade waste is liquid waste generated other than in the course of domestic activities and includes liquid waste generated by any trade, industrial, commercial, educational, medical, dental, veterinary, agricultural, horticultural, scientific research or experimental activities.
Trade waste agreement	A legally binding agreement between a customer and a regulated entity allowing the customer to discharge trade waste into the sewerage system.
Transition period	The period from 1 July 2012 to 1 July 2020 (prescribed in Regulation 32 of the Pricing Regulations.)
Transitional Service Standards	Approved customer service standards applying in each year of the transition period. The approved standards represent a transition to the service standard targets set out in the Customer Service Code.
Unregulated assets	Assets used to provide unregulated services.
Unregulated services	Services that are not subject to regulation including water for irrigation, reuse water and stormwater services via a combined sewerage stormwater system.
Variable charge	A charge based on the volume of water delivered to, or sewage removed, as measured by a meter, from, the property to which the charge relates.
Water Directorate	A NSW based association providing technical advice to councils in NSW in relation to water and sewerage issues and publisher of the <i>Section 64 Determinations of Equivalent Tenements Guidelines (January 2005)</i> .

Term	Meaning within the context of this report
Water and Sewerage Corporation Act	<i>Water and Sewerage Corporation Act 2012.</i>
WACC	Weighted average cost of capital.
WSAA	Water Services Association of Australia.
WSAA Guideline	Water Services Association of Australia – <i>Australian Sewerage Quality Management Guideline 2012.</i>
WWMP	Wastewater Management Plan.
WWTP	Wastewater Treatment Plant.

EXECUTIVE SUMMARY

This Report presents the outcomes of the Economic Regulator's second independent price determination investigation for the Tasmanian water and sewerage industry. The water and sewerage industry is critical to public health, the protection of the environment and economic development potential across Tasmania.

Due to the extent of the challenges currently facing the industry, not all concerns of customers, stakeholders and other industry regulators will be able to be addressed during the second regulatory period.

However, the Regulator considers that the decisions contained in this Report strike an appropriate balance between a number of competing objectives and represent an important step towards improving TasWater's sustainability and performance in delivering better outcomes for customers and stakeholders.

Background

The Tasmanian water and sewerage industry has undergone significant structural and regulatory reform over recent years.

As part of the reforms, an economic regulatory framework was added to the existing industry based regulatory arrangements in relation to public health, environmental protection and dam safety. The economic regulatory framework provides for the regulation of both water and sewerage prices and service standards.

On 1 July 2009, three regional corporations - Ben Lomond Water, Cradle Mountain Water and Southern Water - were established to provide water and sewerage services in Tasmania¹. In July 2013, the three regional water corporations were amalgamated into a new single entity, the Tasmanian Water and Sewerage Corporation Pty Ltd (TasWater).

In mid-2014, the Economic Regulator started an investigation in order to make the second independent price determination for the Tasmanian water and sewerage industry which would apply to TasWater from 1 July 2015.

Chapter 1 contains more information on the context for the second price determination investigation and the regulatory framework applying to the Tasmanian water and sewerage industry.

¹ Prior to 1 July 2009, water and sewerage services were provided by the 29 local councils in Tasmania.

Challenges facing the Tasmanian water and sewerage industry

The reforms of the Tasmanian water and sewerage industry were undertaken to address a number of issues identified by a State Government review. These issues included:

- entities which were not financially sustainable into the future due to the extent that revenue was under-recovered relative to costs;
- inadequate or unknown performance in relation to drinking water quality, with a number of permanent or temporary boil water alerts in place across the State;
- under investment in maintaining infrastructure up to modern standards;
- widespread non-compliance of wastewater treatment plants with their respective environmental permits;
- inadequate, or non-existent, asset management practices, particularly in relation to dam safety;
- inadequate, or unknown, customer service standards; and
- a myriad of different pricing structures across council areas, based on prices often applied on an unfair basis without reflecting actual costs.

These issues have developed over years, if not decades and fully addressing these issues will take time and significant capital investment.

Further details on the issues facing the industry and TasWater's performance during its first year of operation are provided in the 2013-14 *Tasmanian Water and Sewerage State of the Industry Report*, released by the Economic Regulator on 1 April 2015.

Approach to second price determination investigation

As was the case for the first price determination investigation, the regulatory approach adopted for the second price determination investigation found that TasWater expects to earn revenue that is substantially below the level required to achieve full cost recovery.

In undertaking its investigation, the Economic Regulator has followed the standard regulatory approach of assessing and determining revenues, prices and service standards.

The Economic Regulator's investigation approach has necessitated achieving a balance between:

- continuing to transition customers to a rational price structure whereby ultimately customers will pay the same price for the same service;

- ensuring that TasWater generates revenue that is at least equal to the lower revenue limit necessary to achieve sustainability; and
- managing the impact of price changes on customers.

Chapter 2 outlines in more detail the approach to the second price determination investigation together with a list of the key activities and timelines for the next steps in the process.

Regulatory compliance improvement

One of the key drivers of the Tasmanian Government’s reform of the water and sewerage industry was the need to improve levels of compliance with regulatory obligations.

Broader regulatory compliance improvement and enforcement across the water and sewerage industry remains the responsibility of the Tasmanian industry regulators, being the Environment Protection Authority (EPA), Director of Public Health and the Secretary of the Department of Primary Industries, Parks, Water and Environment (DPIPWE), who is the Delegate for Dam Safety Regulation.

The Economic Regulator notes that TasWater has liaised with the other Tasmanian industry regulators in preparing its proposed Price and Service Plan.

The Economic Regulator has also consulted with the other Tasmanian industry regulators after public consultation on its Draft Report and draft Price Determination and prior to the release of the Final Report and Price Determination to ensure TasWater’s final Price and Service Plan reflects the compliance improvement outcomes agreed to between TasWater and industry regulators.

Chapter 3 provides more detail on regulatory compliance improvement.

Revenue allowance

The primary focus of the second price determination investigation has been the regulation of prices rather than the regulation of revenue. However, it is important to establish revenue limits for the second regulatory period as it enables a comparison against expected revenue in each year to:

- assess whether TasWater is expected to achieve a financially sustainable level of revenue (ie greater than the lower revenue limit) during the second regulatory period; and
- provide a basis of comparison to identify the extent of further revenue increases required to reach the statutory revenue limit.

To assist with its investigation and to ensure TasWater’s revenue allowance is based on efficient costs and asset values, the Economic Regulator engaged an external consultant, Jacobs Group (Australia), to conduct an independent review of TasWater’s operating and capital expenditure (including asset values). A copy of Jacobs’ report is available on the Economic Regulator’s website.

The Economic Regulator has assessed the revenue that TasWater expects to receive in each year of the second regulatory period and compared this against the following revenue limits:

- the upper revenue limit (full cost recovery);
- the statutory revenue limit (the maximum revenue permitted under the Industry Act); and
- the lower revenue limit (sustainability threshold).

The Economic Regulator has decided on alternative values for a number of the revenue limit components resulting in revenue limits that are lower than those submitted by TasWater in its proposed Price and Service Plan.

Chapter 4 provides more detail on the calculation and analysis of revenue limits.

Structure of proposed water and sewerage prices

Prior to the industry reform process, the prices charged by local governments for water and sewerage services varied markedly between municipalities in terms of both the basis for setting prices and the levels of prices.

Many of these issues with the structure of water and sewerage pricing were addressed as part of the first water and sewerage price determination investigation. TasWater's proposed pricing structure is basically consistent with the previously approved arrangements.

The Economic Regulator has approved TasWater's proposed basis and structure of tariffs, for the second regulatory period, where:

- fixed water charges are determined on the size of the water connection;
- variable water charges are determined on water usage; and
- sewerage charges are determined based on the assessed demand a property is expected to place on the water and sewerage infrastructure.

Sections 5.3 and 5.4 in Chapter 5 provide further information on the structure and basis of TasWater's approved water and sewerage prices.

Price changes

TasWater's proposed Price and Service Plan, TasWater outlined an approach that continued the price transition commenced by the previous regulated entities; whereby customers above and below the target tariff are transitioned to the relevant target by set proportions and by dollar amounts or percentages respectively. The Economic Regulator is generally supportive of this approach as it transitions customers above target to the relevant target and manages the impact of price increases upon customers transitioning up to target tariffs.

However, in assessing TasWater’s price transition proposal the Economic Regulator considered that TasWater’s forecast revenue for the second regulatory period exceeded the lower revenue limit by a significant margin and was approaching the statutory revenue limit during the period.

The Economic Regulator has therefore formed the view that TasWater will have the financial capacity to speed up the price transition without causing price shocks for customers transitioning up to the target tariffs during the second regulatory period.

In summary, the Economic Regulator has required TasWater to adopt the following price transition arrangements for the second regulatory period:

- Customers above their respective fixed target tariffs as at 30 June 2015 will immediately move to their respective target fixed tariffs as from 1 July 2015.
- Most residential customers below their respective fixed target tariffs as at 30 June 2015 will see a maximum annual increase to their combined fixed service charges (water and sewerage) of no more than \$100 or 10 per cent, whichever is greater, until both fixed water and sewerage target tariffs are reached.
- Non-residential customers below their respective target fixed tariffs as at 30 June 2015 will see the combined \$100 price constraint increased in proportion to their water connection size and the assessed number of Equivalent Tenements (ETs).
- TasWater’s proposed 2017-18 fixed water target tariffs are to apply for each year of the second regulatory period.
- Customers on fixed sewerage target tariffs will face price increases of six per cent per annum. This is a continuation of the approach that applied during the first regulatory period.
- Customers below the variable water target rate will see equal annual increases across the three years of the second regulatory period so that they reach the target rate by 1 July 2017.
- The variable water target rate will increase by 2.5 per cent per annum to reflect inflation.
- Trade waste customers will transition to their respective target tariffs by going up or down by one third of the gap to the 2018 target tariffs in each year of the regulatory period depending upon whether they are above or below the target tariff.

Further information on price transition arrangements can be found in section 5.6.

Policies and customer contract

TasWater was required to provide a draft customer contract and draft policies in relation to its proposed pricing for certain water and sewerage services together with

policies governing its interactions with customers. The policies dealt with issues such as:

- imposing developer charges;
- extending water and sewerage infrastructure;
- introducing new services;
- connecting customers to water and sewerage infrastructure;
- sub-metering arrangements;
- charges in relation to unconnected properties; and
- the management of complaints, enquiries, disputes and customer hardship.

A number of issues were identified with the content of the policies proposed by TasWater. As a result, the Economic Regulator has required TasWater to redraft the policies to ensure that they are legally effective, comply with the relevant regulatory and legislative provisions, easily understood to the reader and are consistent in their drafting structure and use of terminology.

Chapter 6 provides a detailed discussion about TasWater's draft policies and customer contract.

Customer service

In addition to price reform and regulatory compliance improvement, one of the key drivers of the Tasmanian Government's reform of the water and sewerage industry was the need to improve customer service levels.

TasWater's proposed Price and Service Plan did not provide the required details of different service standards for different parts of the state (ie differential service standards). Instead TasWater proposed a single set of average service standards to apply statewide.

The Economic Regulator raised concerns about differential service standards not having been addressed and subsequently proposed, in its Draft Report, to approve the current minimum service standards as outlined Schedule 1 of the Customer Service Code as actual minimum standards for the second regulatory period.

In response, TasWater noted it did not necessarily agree with the Economic Regulator's intentions in this regard, however would be open to exploring the possibility of setting actual minimum standards for some of the current indicators. To this end, TasWater provided a secondary proposal in relation to customer service standards for the Economic Regulator's consideration. This proposal included revised 'actual minimum' service standards for 'response time' and 'duration related' indicators as well as those service standards relevant to 'water supply interruptions' and 'sewer breaks and chokes' indicators. TasWater also proposed an alternative

approach whereby some of the standards required the targets to be met a certain percentage of the time.

The Economic Regulator has approved TasWater's revised customer service standards proposal.

Further information on customer service issues can be found in Chapter 7.

Summary of decisions

A summary of the Economic Regulator's decisions is included in the following section.

SUMMARY OF DECISIONS

The following table summarises the decisions made by the Economic Regulator in this Report. A reference is included to where these decisions are discussed in this Report.

Estimating revenue requirements (Chapter 4)

In relation to estimating revenue requirements, the Economic Regulator has made the following decisions:

Section	Decision
4.5	The Economic Regulator <u>requires</u> TasWater to adopt in its final Price and Service Plan, the revenue limit calculations presented in Chapter 4 of this Final Report.

Setting prices and revenue transition paths (Chapter 5)

In relation to setting prices and revenue transition paths, the Economic Regulator has made the following decisions:

Section	Decision
5.3.2	Despite the absence of details about the costs of implementing pricing zones and in light of the issues raised by TasWater, the Regulator <u>approves</u> TasWater's proposal to not introduce pricing zones for the second regulatory period.
5.3.3	The Economic Regulator <u>approves</u> the customer classes TasWater proposed for the second regulatory period.
5.3.4	The Economic Regulator <u>approves</u> TasWater's proposal to base fixed water target tariffs on the proposed connection sizes and multipliers.
5.3.5	The Economic Regulator <u>approves</u> TasWater's proposal to charge limited supply customers 90 per cent of the fixed water target tariffs for each year of the second regulatory period.
5.3.6	The Economic Regulator <u>approves</u> TasWater's proposal to charge fire service customers 25 per cent of the fixed water target tariffs for each year of the second regulatory period.
5.3.7	The Economic Regulator <u>approves</u> TasWater's proposal to apply the ET methodology in determining fixed sewerage charges with the exception of caravan parks where the Economic Regulator requires TasWater's final Price and Service Plan to reflect the adoption of the Economic Regulator's alternative approach to determining caravan park ETs.

Section	Decision
	<p>The Economic Regulator also <u>approves</u> TasWater’s proposed approach to transitioning sewerage customers to target.</p> <p>The Economic Regulator <u>requires</u> TasWater’s final Price and Service Plan to include a schedule detailing the ET rates to be applied to different industries and property uses.</p> <p>The Economic Regulator further <u>requires</u> TasWater’s final Price and Service Plan to include a clear explanation of the ET methodology TasWater has used to calculate the various ET rates to be applied to different industries and property uses.</p> <p>The Economic Regulator <u>requires</u> TasWater to justify any departures in its ET methodology from the schedules contained in the Water Directorate’s Section 64 Determination of Equivalent Tenements Guidelines and to publish any documentation that is not publicly available, that TasWater is intending to rely on.</p>
5.3.8	<p>The Economic Regulator <u>approves</u> TasWater’s proposal to charge STED customers 90 per cent of the fixed sewerage target tariff for each year of the second regulatory period.</p>
5.3.11	<p>The Economic Regulator <u>approves</u> TasWater’s proposed split between fixed and variable charges for the second regulatory period and a continuation of the recovery of some fixed costs through variable charges for that period resulting in a variable water charge of \$0.9711 per kilolitre in 2015-16.</p> <p>The Economic Regulator also <u>approves</u> TasWater’s proposal to index variable water target tariffs for full service customers by 2.5 per cent per annum for each of the 2016-17 and 2017-18 financial years.</p> <p>The Economic Regulator <u>approves</u> TasWater’s proposed full service variable water charges for the second regulatory period.</p>
5.3.12	<p>The Economic Regulator <u>approves</u> TasWater’s proposal to transition customers paying less than the approved 2014-15 water variable target tariffs by one third of the difference between the amount paid in 2014-15 and TasWater’s approved water variable charges target tariff for 2017-18.</p>
5.3.13	<p>The Economic Regulator <u>approves</u> TasWater’s proposal to charge limited service customers 80 per cent of the variable water target tariffs for each year of the second regulatory period.</p>
5.3.14	<p>The Economic Regulator <u>approves</u> TasWater’s proposal to maintain the existing basis for charging for the use of private and public filling stations and portable metered standpipes.</p> <p>The Economic Regulator also <u>approves</u> TasWater’s proposed charges for the use of private and public filling stations and portable metered standpipes as set out in Table 5.6 of this Final Report.</p>

Section	Decision
5.3.15	The Economic Regulator <u>approves</u> TasWater's proposal to transition trade waste customers above and below the target by one third of the difference between the amount paid in 2014-15 and TasWater's relevant proposed trade waste target tariff for 2017-18.
5.3.16	<p>The Economic Regulator <u>approves</u> TasWater's proposal to apply the fixed sewerage (full service) target tariff (ie one ET) in respect of motor home dump points.</p> <p>The Economic Regulator <u>requires</u> TasWater to only apply the approved motor home dump point fixed sewerage charges to dump points located outside caravan parks.</p>
5.3.17	<p>The Economic Regulator <u>requires</u> TasWater to amend its final Price and Service Plan to include a clear explanation as to the process it intends following and the tests that must be met before moving a customer directly to the relevant target tariff.</p> <p>The Economic Regulator also <u>requires</u> TasWater's final Price and Service Plan to reflect the descriptions outlined in Table 5.7 of this Final Report of the circumstances whereby customers may either be moved directly to target or be transitioned to target.</p>
5.4.1	<p>The Economic Regulator <u>approves</u> TasWater's proposed miscellaneous charges and fees.</p> <p>The Economic Regulator also <u>approves</u> TasWater's proposal to increase its miscellaneous fees and charges by 2.5 per cent per annum for each of the 2016-17 and 2017-18 financial years.</p>
5.4.2	<p>The Economic Regulator <u>approves</u> TasWater's proposed development assessment services fees.</p> <p>The Economic Regulator also <u>requires</u> TasWater to replace, in its development assessment classification criteria, the references to Equivalent Population (EP) with references to Equivalent Tenements (ETs).</p>
5.5.1	For the purposes of estimating its revenue, the Economic Regulator <u>requires</u> TasWater to adopt an annual growth rate of 0.3 per cent to forecast growth in the number of customer connections over the second regulatory period.
5.5.2	For the purposes of estimating its revenue, the Economic Regulator <u>requires</u> TasWater to adopt an annual growth rate of 0.3 per cent to forecast growth in water and sewerage volumes over the second regulatory period.

Section	Decision
5.5.3	For the purposes of estimating its revenue, the Economic Regulator <u>requires</u> TasWater to adopt an annual growth rate of 0.3 per cent to forecast growth in the number of miscellaneous fees and charges transactions over the second regulatory period.
5.8.4	The Economic Regulator <u>requires</u> TasWater's final Price and Service Plan to reflect the price transition mechanism provided under Alternative Price Scenario 2 for each year of the second regulatory period.
5.8.5	The Economic Regulator <u>requires</u> TasWater to adopt the Economic Regulator's proposed fixed water target tariffs.

Service provision (Chapter 6)

In relation to service provision, the Economic Regulator has made the following decisions:

Section	Decision
6.1.5	<p>The Economic Regulator <u>approves</u> TasWater applying the minimum water flow and minimum water pressure figures outlined in TasWater's Supplement to the Water Services Association of Australia's <i>Water Supply Code of Australia</i> in determining whether a property or part of a property is within serviced land.</p> <p>The Economic Regulator <u>requires</u> TasWater to publish TasWater's Supplement to the Water Services Association of Australia's <i>Water Supply Code of Australia</i> together with any other additional relevant information that would assist customers and stakeholders in determining whether their property or part of their property is within serviced land.</p>
6.1.5	The Economic Regulator <u>approves</u> TasWater allowing serviced land boundaries to exist within property titles.
6.1.5	The Economic Regulator <u>requires</u> TasWater to ensure that the categories of land used in the finalised and future versions of its state-wide service land maps are consistent with those used in TasWater's approved Price and Service Plan.
6.1.5	With respect to any future changes to the description of TasWater's serviced land, the Economic Regulator <u>requires</u> TasWater to provide an undertaking in its Price and Service Plan to ensure that the description of serviced land is updated, published and made available to the public as soon as possible after changes are made and, in any case, on at least a monthly basis.

Section	Decision
6.1.5	The Economic Regulator <u>requires</u> TasWater to provide in its Price and Service Plan, the finalised versions of its state-wide serviced land maps, as well as an undertaking to make the final version of those maps available to the public from 1 July 2015.
6.2.1	The Economic Regulator <u>requires</u> TasWater to revise its draft customer contract to ensure full compliance with relevant provisions of the Customer Service Code.
6.2.2	<p>The Economic Regulator <u>requires</u> TasWater to amend its draft connection policy to ensure its legislative compliance. That is, TasWater <u>must</u> re-draft its draft connection policy so that it:</p> <ol style="list-style-type: none"> <li>(1) also outlines the circumstances in which TasWater will permit an owner of land to relocate or adjust a connection to TasWater’s water infrastructure or sewerage infrastructure; and <li>(2) specifies the connection charges to apply to properties within serviced land.
6.2.2	<p>The Economic Regulator <u>requires</u> TasWater to:</p> <ol style="list-style-type: none"> <li>(1) adopt, in its final Price and Service Plan, the proposed connection and relocation of connection fees for 2015-16, as outlined in Table 6.3 and Table 6.4 of this Final Report, and that those fees be increased by 2.5 per cent per annum over the second regulatory period to account for inflation. It is noted that the proposed connection fees and relocation of connection fees apply only to 20mm water, 25mm water and 100mm sewerage connections; and <li>(2) determine charges for connection and relocation of connection for non-standard and larger water and sewerage connections on a cost recovery basis.
6.2.3.6	<p>Based on its assessment of TasWater’s proposed Price and Service Plan, the Economic Regulator <u>accepts</u> TasWater’s proposed service charges structure.</p> <p>The Economic Regulator <u>requires</u> TasWater to apply the service charge target tariffs set out in Table 6.6 of this Report.</p> <p>Based on its assessment of TasWater’s discussion on services charges in section 7.2 of the entity’s proposed Price and Service Plan, the Economic Regulator <u>requires</u> TasWater to address the inconsistent use of the term “service charge(s)”. Where the fixed charge for water and sewerage is intended to be used, it should be referred to as a “fixed charge” in accordance with clause 4.5.1 of the PSP Guideline.</p>

Section	Decision
	<p>In respect to different customer classes, the Economic Regulator <u>requires</u> TasWater to:</p> <ol style="list-style-type: none"> <li>(1) note its intention to continue to charge limited service customers a service charge in its service charge policy; and <li>(2) make a mirroring statement in services charges section of its final Price and Service Plan.
6.2.4.1	<p>The Economic Regulator <u>requires</u> TasWater to revise its draft Metering Policy to:</p> <ol style="list-style-type: none"> <li>(1) be a standalone sub-metering policy; <li>(2) address the comments and questions raised by the Economic Regulator (as forwarded to TasWater simultaneous to the release of the Economic Regulator’s Draft Report for public consultation) to ensure the policy’s compliance, accuracy and readability; and <li>(3) address the sub-metering issues listed in section 6.2.4.1 of this Final Report. <p>The Economic Regulator <u>requires</u> TasWater to include, in its final Price and Service Plan, discussion of its current approach to sub-metering, an explanation and justification of any differences between TasWater’s current policy and the policy it proposes for the second regulatory period and any other requirements specified in the PSP Guideline.</p> <p>The Economic Regulator also <u>requires</u> TasWater to provide, in its final Price and Service Plan, an undertaking that it will develop, and make available on its website, supporting documentation that will set out a high level description of the process and procedure to be followed by strata title owners in deciding whether or not to install sub-meters.</p> <p>The Economic Regulator further <u>requires</u> TasWater to include, in its final Price and Service Plan, an undertaking that it will publish, and provide links to, all relevant sub-metering documents (including application forms, diagrams, guidelines etc) on its website.</p>
6.2.5.1	<p>The Economic Regulator <u>requires</u> TasWater to retain the current arrangements for developer charges associated with works internal and works external.</p>

Section	Decision
6.2.5.5	<p>The Economic Regulator <u>requires</u> TasWater to not impose a headworks charge for developments within serviced land.</p> <p>The Economic Regulator <u>requires</u> TasWater to not impose a headworks charge for developments occurring outside of serviced land but that utilise existing capacity.</p>
6.2.5.5	The Economic Regulator <u>approves</u> TasWater imposing a headworks charge, calculated using the NPV methodology, on the component of a development that cannot be satisfied by existing capacity for developments occurring outside serviced land. This incorporates developments relating to extensions to serviced land and to isolated developments.
6.2.5.5	The Economic Regulator <u>requires</u> TasWater to draft a compliant developer charges policy and to include the final version of that policy in its final Price and Service Plan.
6.2.6	The Economic Regulator <u>requires</u> TasWater to amalgamate its draft liquid trade waste policy and its draft liquid trade waste charges policy into a single draft trade waste charges policy for the Economic Regulator to approve.
6.2.6	The Economic Regulator <u>requires</u> TasWater to amend its draft liquid trade waste policy to correct the inconsistent use of terms and document titles.
6.2.6	<p>The Economic Regulator <u>requires</u>:</p> <ol style="list-style-type: none"> <li>(1) TasWater to provide, on its website, a final version of its Trade Waste Category Calculator so that it is available to trade waste customers and the public generally; and <li>(2) that the Trade Waste Category Calculator links to relevant policies and other supporting materials released by TasWater in relation to trade waste to assist customers in understanding their trade waste obligations and in undertaking the self assessment process.
6.2.6	The Economic Regulator <u>requires</u> TasWater to clearly outline, and publish, the methodology on which it has based its trade waste customer categorisation in its Trade Waste Charges Policy.

Section	Decision
6.2.6	<p>The Economic Regulator <u>requires</u> TasWater to disclose details of any instances where it has departed from the discharge factors specified in the NSW Department of Water and Energy's (April 2009) <i>Liquid Trade Waste Regulation Guidelines</i> together with a justification for the adoption of any revised factors.</p> <p>The Economic Regulator also <u>requires</u> TasWater to include in its Price and Service Plan an undertaking to collect data during the second regulatory period with the objective of improving the accuracy of its trade waste discharge factors.</p>
6.2.6	<p>The Economic Regulator <u>requires</u> TasWater to include, in its final Price and Service Plan and in its trade waste charges policy, an undertaking that prices negotiated with Category 3 and Category 4 trade waste customers will reflect a reasonable transition period (and explaining what this transition period entails) recognising the time it would take for a trade waste customer to implement appropriate pre-treatment if it intended to do so.</p>
6.2.6	<p>The Economic Regulator <u>approves</u>:</p> <ol style="list-style-type: none"> <li>(1) the proposed trade waste charges in respect of Category 1, Category 2A, Category 2B and Category 2C trade waste customers for the 2015-16 financial year, as outlined in Table 6.10; and <li>(2) the annual indexation of TasWater's proposed trade waste charges for Category 1, Category 2A, Category 2B and Category 2C trade waste customers by 2.5 per cent for each of the 2016-17 and 2017-18 financial years.
6.2.7	<p>The Economic Regulator <u>requires</u> TasWater to revise its draft Service Extension Policy to:</p> <ol style="list-style-type: none"> <li>(1) meet the obligations of the Industry Act and PSP Guideline by addressing matters pertaining to service expansion; and <li>(2) address the comments and questions raised by the Economic Regulator (as forwarded to TasWater simultaneous to the release of the Economic Regulator's Draft Report for community consultation) to ensure the policy's compliance and accuracy.
6.2.8.1	<p>The Economic Regulator <u>requires</u> TasWater to re-draft its definition of 'service introduction' as stated in its Service Introduction Charges Policy, with the definition provided in the PSP Guideline being the preferred option.</p>

Section	Decision
6.2.8.2	The Economic Regulator <u>requires</u> TasWater to: <ol style="list-style-type: none"> (1) amend the definition of ‘service introduction charge’ to mirror that defined in the Pricing Regulations; (2) clarify the preconditions for imposing a service introduction charge on an owner of a property eg upon connection, upon service availability, prior to service availability etc; and (3) include an undertaking that it will calculate and publish proposed service introduction charges per property, per service, prior to undertaking community consultation on any intended service extension subject to service introduction charges.
6.2.9.1	The Economic Regulator <u>requires</u> TasWater to amend its draft customer complaints, enquiries and disputes management policy to ensure its accuracy and compliance with the relevant regulatory instrument.
6.2.9.2	The Economic Regulator <u>requires</u> TasWater to amend its draft financial hardship policy so that it is fully compliant with the relevant regulatory and legislative instruments.
6.3.4.1.6	The Economic Regulator <u>requires</u> TasWater to adopt the service replacement process outlined in Figures 6.1 to 6.6 inclusive in Chapter 6 of this Final Report.

Setting customer service standards (Chapter 7)

In relation to setting customer service standards, the Economic Regulator has made the following decisions:

Section	Decision
7.5	The Economic Regulator: <ol style="list-style-type: none"> (1) <u>approves</u> the proposed minimum service standards as outlined in Table 7.2 of this Final Report for adoption by TasWater for each year of the second regulatory period; (2) <u>will implement</u> the newly approved minimum service standards by way of the Customer Service Code change process (for a 1 July 2015 commencement); (3) <u>requires</u> TasWater to amend its final Price and Service Plan by removing any discussion concerning the development and application of differential service standards. This includes the map of TasWater’s management areas as shown on page 22 of TasWater’s proposed Price and Service Plan; and (4) <u>notes</u> that there is merit in the Government considering whether to legislate for the introduction of a GSL scheme.

1 INTRODUCTION

This chapter provides an overview of the context, background and legislative and regulatory framework for the second independent price determination investigation of the Tasmanian water and sewerage industry.

The chapter also discusses the role of the various industry regulators including the Tasmanian Economic Regulator and the purpose and scope of the price determination investigation.

1.1 Background

Independent regulation of prices in the Tasmanian water and sewerage industry commenced on 1 July 2012 with the first regulatory period covering the three financial years from 1 July 2012 to 30 June 2015. During the first regulatory period the three previous regulated entities (Ben Lomond Water, Cradle Mountain Water and Southern Water) were required to comply with a Price Determination outlining prices and service standards to apply during the period.

On 1 July 2013, a new, single regulated entity, the Tasmanian Water and Sewerage Corporation Pty Ltd (TasWater) was formed. Under the provisions of the *Water and Sewerage Corporation Act 2012* (Water and Sewerage Corporation Act) the Price Determinations made, and Price and Service Plans approved, as part of the 2012 price determination investigation continue to apply to TasWater for the remainder of the first regulatory period.

In accordance with powers granted under the *Water and Sewerage Industry Act 2008* (the Industry Act), the Treasurer fixed the duration of the first regulatory period at three years and specified the minimum duration of each subsequent regulatory period (ie after the conclusion of the first regulatory period) to be three years. The Industry Act requires the Regulator to declare the duration of each subsequent regulatory period.

On 5 June 2013, the Economic Regulator declared that the second regulatory period would be for a period of three financial years from 1 July 2015 to 30 June 2018 inclusive.

In accordance with the Industry Act and as part of the price determination investigation, TasWater was required to submit a proposed Price and Service Plan to the Economic Regulator. TasWater's proposed Price and Service Plan was required to clearly articulate and commit to a set of outcomes and prices to be delivered over the second regulatory period. TasWater's proposed plan has been published on the Economic Regulator's website.

One of the principles of recent reforms, to the water and sewerage industry has been to achieve much greater equity and fairness in water and sewerage service pricing across Tasmania. Prior to the reforms municipalities used a range of different

methodologies for pricing. As a result customers were paying widely varying amounts for similar services across Tasmania.

Since the commencement of the industry reforms, one of the key focuses of the previous regulated entities, and now, TasWater, has therefore been to transition customers from the myriad of different pricing regimes to common target tariffs to achieve a level playing field for all customers. TasWater is required by law to achieve this for all customers by no later than 1 July 2020.

1.2 Industry structure

TasWater owns, controls and operates water supply and sewerage systems in Tasmania. TasWater manages all aspects of the water supply chain from dams and reservoirs to customer property connections and from customer sewer connections to wastewater treatment and disposal. TasWater is subject to various public health, environmental and customer service regulatory requirements.

TasWater is incorporated as a proprietary company limited by shares and owned by Tasmania's 29 local government councils. The councils, as shareholders, receive dividends, income tax equivalents and guarantee fee payments.

TasWater is controlled by an independent board of management consisting of a chairperson and six directors. The board reports to the Owners' Representatives who in turn report to the council owners.

1.3 Legislative and regulatory framework

Economic regulation of the Tasmanian water and sewerage industry, and the conduct of the price determination investigation in particular, are governed by the:

- Water and Sewerage Corporation Act;
- Industry Act;
- *Water and Sewerage Industry (Pricing and Related Matters) Regulations 2011* (Pricing Regulations);
- *Water and Sewerage Industry (Customer Service Standards) Regulations 2009* (Customer Service Regulations);
- Customer Service Code; and
- Price and Service Plan Guideline (PSP Guideline).

Economic regulation of the Tasmanian water and sewerage industry and the resultant price determination is focussed on both price and service outcomes.

1.3.1 Water and Sewerage Corporation Act

The Water and Sewerage Corporation Act provided for, amongst other things, the formation of TasWater, the transfer of liabilities, employees and water and sewerage

assets from the previous regulated entities to TasWater and the continued application of the Economic Regulator’s 2012 Price Determinations and Price and Service Plans to TasWater until the end of the first regulatory period on 30 June 2015.

1.3.2 Water and Sewerage Industry Act

The Industry Act is the primary legislative instrument governing the economic regulation of the industry.

In relation to pricing, the Industry Act provides for:

- an independent regulator (the Economic Regulator) for the sector with clear accountabilities and responsibilities to ensure effective and efficient outcomes for the sector and the protection of customers;
- independent pricing regulation with a regulated entity required to submit a proposed Price and Service Plan to the Economic Regulator which outlines a regulated entity’s services, revenue requirements and operational requirements. The Economic Regulator bases its price determination on an assessment of the proposed Price and Service Plan submitted by the regulated entity; and
- the Economic Regulator to be guided by legislated pricing principles when making a price determination.

The pricing principles specified in section 68 of the Industry Act are as follows:

- a regulated entity is to be given a reasonable opportunity to recover the efficient costs it incurs in:
 - providing a regulated service; and
 - complying with a regulatory obligation; or
 - complying with a requirement to make a regulatory payment under the Industry Act (except where the Industry Act provides otherwise);
- the price is to provide for efficient pricing by:
 - applying two-part pricing for water services based on the recovery of fixed costs and variable costs by way of a fixed charge and a variable charge (with the variable charge determined by the volume of water used as measured by a water meter); and
 - reflecting the costs of servicing particular customers or classes of customers in different locations, regions or schemes;
- the price is to provide effective incentives, with respect to a regulated service to:
 - promote economic efficiency;
 - reduce costs; or

- otherwise improve productivity;
- the price is to allow a regulated entity to receive a return on assets used in providing the regulated service; and
- the price charged to a particular customer or class of customers is to reflect at least the costs that relate directly to providing the regulated service to that customer or class of customers to the extent that it is commercially and technically reasonable to do so.

In addition, section 68AA of the Industry Act acknowledges that the full application of the pricing principles will require a significant transition period. During this transition period, it is unlikely that all the pricing principles will be achieved and, therefore, reform objectives will need to be prioritised.

Section 68AA enables some of the Pricing Principles during the transition period not to be applied in price and service plans and price determinations to the extent that the application of those principles would:

- result in a significant impact on customers, or a particular class of customers, due to the rate of change in prices;
- adversely affect the sustainability of a regulated entity in so far as it provides regulated services; or
- adversely affect the ability of a regulated entity to deliver regulated services.

For the purpose of section 68AA, the Transition Period is defined in the Pricing Regulations as the eight year period from 1 July 2012 to 1 July 2020 inclusive.

Due to the requirement for regulatory periods to be at least three years duration, the third regulatory period will not align with the end of the Transition Period, on 1 July 2020.

As a result, TasWater was required to demonstrate, in its proposed Price and Service Plan, how target tariffs and price transition paths for the second regulatory period and the first two years of the third regulatory period would enable it to comply with all pricing principles in the Industry Act by the end of the transition period ie by the beginning of the third year of the third regulatory period (1 July 2020).

Section 68AA does not apply to the matters the Economic Regulator is to take into account under section 15 of the Industry Act, including the need for the Economic Regulator to consider the impact of the rate of change of prices on customers.

1.3.3 Water and Sewerage Industry Pricing Regulations

In addition to the pricing principles set out in the Industry Act, the Pricing Regulations contain additional pricing principles in relation to:

- pricing zones (nodal pricing);

- the structure of service introduction charges;
- the calculation of developer charges;
- the treatment of contributed assets¹; and
- the basis for setting fixed and variable charges (including the removal of free water allowances).

1.3.4 Customer Service Regulations and the Code

The Customer Service Regulations stipulate minimum service standards for the water and sewerage industry. As required by the Customer Service Regulations, and to regulate the standards and conditions of supply for water and sewerage services, the Economic Regulator has:

- developed the Code;
- established minimum service standard targets within the Code; and
- required TasWater to develop a customer charter.

TasWater is required to comply with the Code. The Code was last updated in April 2013 and will be amended as part of this investigation.

Chapter 7 provides more detail about service standards and TasWater's regulatory obligations with respect to service standards.

1.3.5 Price and Service Plan (PSP) Guideline

In November 2013, the Economic Regulator issued a PSP Guideline to assist TasWater in preparing its proposed Price and Service Plan for the second regulatory period.

The PSP Guideline sets out the legislative and regulatory requirements that TasWater had to comply with when submitting its proposed Price and Service Plan. The PSP Guideline also sets out the key steps and timing for the second price determination investigation.

The Economic Regulator acknowledges that it is unlikely that TasWater will be able to comply with all the Pricing Principles by the end of the second regulatory period. This is primarily due to the need to manage the impact of the rate of price changes on customers as well as ensuring the ongoing financial sustainability of TasWater. Consequently, there is a need to prioritise the price reform objectives for the second regulatory period, as was necessary for the first regulatory period.

¹ Contributed assets include developer charges and government grants but exclude equity contributions from the owner of a regulated entity. Furthermore, the three previous regulated entities' assets which were transferred to TasWater are not treated as capital contributions.

The PSP Guideline sets out the following price reform priority objectives for the second regulatory period:

- continuing to transition customers to a rational price structure consistent with National Water Initiative (NWI) pricing principles;
- transitioning customers paying above the target tariff towards the target tariff;
- continuing to transition all other customers towards the target tariff;
- generating revenue that, at a minimum, equals the lower revenue limit to achieve sustainability; and
- managing the impact of price changes on customers.

The PSP Guideline also sets out the following price reform objectives which are considered secondary priorities for the second regulatory period:

- ensuring all customers pay the same price for the same services; and
- transitioning revenue to the statutory revenue limit.

Whilst it is desirable that TasWater work towards achieving these secondary objectives during the second regulatory period, the Economic Regulator accepts that achieving these objectives may require additional time.

In assessing TasWater's proposed Price and Service Plan, the Economic Regulator considered the Pricing Principles and the requirements contained in the PSP Guideline.

1.4 National reforms and legislation

Tasmania is a signatory to the National Water Initiative (NWI) Agreement which provides a blueprint for water reform in Australia. As a signatory to the NWI, the Tasmanian Government has developed and published a plan of how it will implement its commitments to the NWI.

The Implementation Plan² sets out the actions that Tasmania has already completed and provides information on the tasks and timelines to complete the remaining commitments, and the context within which these actions are being implemented.

In relation to establishing limits on the revenue that can be earned by a regulated water and sewerage business, the NWI prescribes two revenue limits:

- the upper revenue limit (full cost recovery); and
- the lower revenue limit (sustainability threshold).

² [www.dpipwe.tas.gov.au/water/water-legislation-policies-and-strategies/national-water-initiative/nwi-implementation-plan-\(tas\)](http://www.dpipwe.tas.gov.au/water/water-legislation-policies-and-strategies/national-water-initiative/nwi-implementation-plan-(tas))

Under the NWI, a water and sewerage business should recover revenue at least equal to the lower revenue limit but no greater than the upper revenue limit.

Revenue above the upper revenue limit represents monopoly profits.

Consistent with the:

- commitments made under the NWI;
- pricing principles specified in the Industry Act; and
- Pricing Regulations,

TasWater should be moving towards recovering revenue at the upper revenue limit as a longer-term objective.

More information about the calculation of the revenue limits, is outlined in Chapter 4.

1.5 Industry regulators

The Economic Regulator is responsible for implementing and administering the economic regulatory framework for the Water and Sewerage Industry, in accordance with the Industry Act and its subordinate legislation. Responsibility for environmental, fire safety, public health and dam safety regulation of the industry lies with the Director of the Environment Protection Authority (EPA), the Director of Public Health, Chief Officer of the Tasmania Fire Service (TFS), and the Secretary of the Department of Primary Industries, Parks, Water and Environment (DPIPWE), who is the Delegate for Dam Safety Regulation, respectively.

Economic regulation of the industry and, more specifically, the price determination investigation, focuses on both price and service outcomes. Through the development of the Code and the PSP Guideline, the Economic Regulator has sought to assist the previous regulated entities, and now TasWater, in addressing the Industry Act requirements in their respective proposed Price and Service Plans, by:

- identifying regulated water and sewerage services, and determining service standards, to be delivered to customers over the second regulatory period;
- determining the revenue required to deliver the regulated services to the agreed standards, based on efficient costs; and
- determining regulated prices (or tariffs) that meet the Pricing Principles.

The PSP Guideline required TasWater, in conjunction with the other Tasmanian water and sewerage industry regulators, to establish regulatory compliance improvement outcomes to be achieved during the price determination investigation. These outcomes will be based on compliance improvement priorities identified by the Tasmanian industry regulators. Capital expenditure (Capex) programs proposed in TasWater's Price and Service Plan were required to reflect these compliance improvement priorities.

The price determination authorises prices and, therefore, directly or indirectly, revenues, which, among other things, fund agreed Capex programs.

The Price Determination does not, however, authorise Capex as being sufficient to meet the compliance improvement priorities of the Tasmanian industry regulators. Compliance improvement and compliance enforcement remain the responsibility of the relevant Tasmanian industry regulators, being the EPA, Director of Public Health, the TFS and the Delegate for Dam Safety Regulation.

1.5.1 Director, Environment Protection Authority

The Director of the EPA is one member of the Board of the EPA.

The EPA administers and enforces the provisions of the *Environmental Management and Pollution Control Act 1994*. The functions of the EPA, with respect to the water and sewerage sector, include the assessment and regulation of significant wastewater treatment plants (WWTPs), defined as 'Level 2' WWTPs (ie plants discharging greater than 100 kilolitres per day).

The responsibilities of the EPA in regulating Level 2 WWTPs include:

- undertaking environmental impact assessments, in relation to proposals for new WWTPs or significant changes to existing WWTPs;
- developing legally binding environmental conditions for approved WWTPs, which are included as part of the planning permit or as a stand-alone environment protection notice (EPN);
- applying the Tasmanian policy framework in relation to water quality management as is relevant for wastewater activities and updating environmental conditions where necessary; and
- ensuring compliance with environmental conditions, largely through collection and evaluation of data on specified discharge limits and the impacts on the receiving environment.

The EPA also offers advice and guidance in relation to a broad range of wastewater issues including pumping stations, wastewater reuse, trade waste and biosolids reuse through the provision of policies and guidelines.

The EPA has released environmental guidelines governing the use of recycled water and biosolids and the recycling of wastewater and biosolids in Tasmania. The guidelines provide a framework for the sustainable reuse and recycling of water, wastewater and biosolids in a manner which is not only practical and safe for agriculture, the environment and the public but consistent with industry standards and best practice environmental management.

1.5.2 Director of Public Health

The functions of the Director of Public Health with respect to drinking water are to:

- protect public health with respect to the supply of drinking water;
- establish drinking water quality performance standards;
- monitor water suppliers' performance against the standards and requirements prescribed by the *Public Health Act 1997* (and the associated Tasmanian Drinking Water Quality Guidelines 2005), the *Fluoridation Act 1968*, the *Fluoridation (Interim) Regulations 2009* and the *Australian Drinking Water Guidelines 2011*;
- enforce compliance with the requirements prescribed by the above mentioned Acts, Regulations and Guidelines;
- report on the water suppliers' compliance with the prescribed standards;
- provide oversight of the fluoridation program in Tasmania through the Fluoridation Committee; and
- develop and implement strategies to promote and improve public health.

1.5.3 Chief Officer of the Tasmania Fire Service (TFS)

The regulatory authority for fire safety in Tasmania is the TFS. The responsibilities of its Chief Officer, who is also Chairperson of the State Fire Commission, include:

- developing and implementing appropriate fire prevention and community preparedness strategies;
- establishing fire brigades that are trained, resourced and available to respond to fires;
- maintaining other arrangements as are necessary to ensure ongoing capacity to deliver effective and efficient fire prevention and protection measures throughout Tasmania.

Under the *Building Regulations 2014* and *Fire Service (Miscellaneous) Regulations 2007*, the TFS is required to, amongst other things, inspect and report on the installation of new fire hydrants. The TFS is also required to comment on the suitability of the water flows and pressure as part of this reporting. Testing to ensure the required flows and pressures is also required to be undertaken when a new hydrant is commissioned.

TasWater's obligations under the Industry Act, with respect to fire safety, relate to:

- the installation of fire hydrants in TasWater's water infrastructure at distances and locations as are necessary for the ready supply of water to control and extinguish fires; and
- the need to keep TasWater's water infrastructure charged with water where that infrastructure supplies water to a fire hydrant.

The Industry Act provides that TasWater can also impose a ban on the use of outdoor water on days declared by the TFS to be days of total fire ban. Limiting non-essential water use such as garden watering or lawn sprinklers on days of total fire ban can help to help to ensure that the TFS and residents who may be facing a bushfire threat have water available for fire fighting and prevention.

1.5.4 Delegate for Dam Safety Regulation

The Minister for Primary Industries and Water has regulatory oversight for dam safety through administration of the *Water Management Act 1999* and the *Water Management (Safety of Dams) Regulations 2003*. The key functions of the Minister concerning dam safety regulation, which have been delegated to the Secretary of the DPIPWE, include:

- developing prescribed standards required for the design, construction, maintenance, surveillance and decommissioning of dams, and ensuring compliance with those standards (these standards are largely based on the criteria and guidelines produced by the Australian National Committee on Large Dams); and
- formulating measures to ensure the safety of dams and, in particular, plans to remove or minimise risks to persons, property or the natural environment arising from a dam safety incident.

The Water Management Branch of the Water and Marine Resources Division of DPIPWE administers the dam safety legislation. In relation to dam safety this is primarily implemented through:

- reviewing new dam applications to ensure dams are constructed to contemporary safety standards and in accordance with the statutory requirements; and
- a program ensuring owners of existing dams meet their statutory dam safety responsibilities by monitoring, reviewing and managing dam safety as required by the above mentioned Act and Regulations which incorporate the national dam safety guidelines.

1.6 Purpose of price investigation and price determination

The purpose of the price determination investigation has been to gather information to enable the Economic Regulator to make a price determination in respect of regulated water and sewerage services provided by TasWater.

The Price Determination specifies the method for determining the maximum prices that TasWater can charge, for the supply of regulated water and sewerage services for each financial year of the regulatory period ie for the 2015-16, 2016-17 and 2017-18 financial years.

The Price Determination is based on information provided by TasWater in its proposed Price and Service Plan which was submitted to the Economic Regulator

on 29 August 2014 together with additional information provided by TasWater during the course of the Economic Regulator's investigation.

1.7 Scope of the investigation

The price determination investigation estimates annual revenue limits for TasWater for each financial year of the second regulatory period. However, the maximum prices that TasWater can charge, for the supply of regulated water and sewerage services for each financial year of the second regulatory period has been determined by placing limits on annual price increases.

1.7.1 Regulated and unregulated services

The price determination applies only to prices charged for regulated services. Regulated services are services or activities requiring a licence under the Industry Act. In general, regulated services include reticulated water and sewerage services (including trade waste), activities that support those services (including the treatment of water and wastewater) and any ancillary activities where a miscellaneous fee is charged.

The Industry Act exempts some activities from economic regulation under the Industry Act. In addition, section 31 of the Industry Act allows the Minister to decide if an activity is to be regulated or unregulated. In terms of the services provided by the regulated entities, the Industry Act, and clause 3 of the *Water and Sewerage Industry Declaration Order 2011*, specifies the provision of the following services to be unregulated services:

- water for irrigation;
- reuse water; and
- stormwater services via a combined sewerage/stormwater system.

The Minister has also exempted a number of entities providing water and sewerage services from the requirement to be licensed under the Industry Act. This effectively means that currently, TasWater is the only entity required to be licensed.

A person or entity is exempt from the requirement to be licensed if the person (including a body corporate or an unincorporated body of persons) owns or operates infrastructure used for the provision of a water or sewerage service to another person, or provides a water or sewerage service to another person, but whose primary function is not being a provider of the relevant service ie the provision of the relevant service is ancillary to their primary purpose.

The following activities are also exempt from the requirement to be licensed:

- providing water and/or sewerage services, while owning or operating a caravan park, to a person occupying a site within the caravan park;
- providing water and/or sewerage services, while owning or leasing a building, to occupants of the building;

- providing water and/or sewerage services, while owning or managing a shopping centre, to occupants of the centre;
- providing water and/or sewerage services to another person for free; and
- providing water and/or sewerage services to not more than 250 customers.

1.7.2 Price regulation

Under the Industry Act, the price determination investigation involves two key steps:

- determining revenue limits based on appropriate services, service standards, regulatory compliance improvement, efficient costs and appropriate returns; and
- approving an appropriate tariff structure that continues the transition towards meeting the requirements of the Pricing Principles but does not generate revenue in excess of annual revenue limits.

For the second price determination investigation the Economic Regulator has adopted an approach that reflects:

- the current status of the industry reform process;
- TasWater's financial position; and
- the need to manage the impact of price increases on customers.

The Economic Regulator is also required to assess TasWater's proposed Price and Service Plan against a number of principles and objectives outlined in the Industry Act and in the Pricing Regulations (see sections 1.3.2 and 1.3.5 respectively).

The Economic Regulator must decide whether to approve the pricing proposals contained in the proposed Price and Service Plan, or require TasWater to amend its proposed Price and Service Plan. In approving the Price and Service Plan, the Economic Regulator must be satisfied that TasWater will have sufficient revenue to meet its obligations and deliver agreed standards of customer service, while also taking into account the impact of price increases on customers.

The Economic Regulator is also required to ensure that any reform of tariffs is consistent with the pricing principles under the Industry Act, or represent a transition towards achieving those principles.

2 APPROACH TO SECOND PRICE DETERMINATION INVESTIGATION

This chapter provides an overview of the approach adopted by the Economic Regulator for the second independent price determination investigation for the Tasmanian water and sewerage industry.

The chapter also outlines the approach taken by the Economic Regulator with respect to assessing the appropriateness of TasWater's proposed operating and capital expenditure (including asset values).

The chapter also provides background on key regulatory issues and explains how they were managed during the price determination investigation.

2.1 Investigation process

2.1.1 Overview

As part of the 2015 price determination investigation, TasWater was required to prepare its proposed Price and Service Plan, setting out its costs and proposed prices and services by 29 August 2014.

TasWater's proposed Price and Service Plan was submitted to the Economic Regulator on 29 August 2014. However, the Plan was initially incomplete in that it did not include a number of policies. Draft policies for Water Metering, Developer Charges, Service Introduction, and Service Extension were provided on 3 October 2014.

The Economic Regulator reviewed the information contained within TasWater's proposed Price and Service Plan including its proposed:

- service obligations;
- revenue requirements, including operating and maintenance expenditure (Opex) and Capex needs;
- demand forecasts; and
- pricing proposals and customer impact analysis.

Where the Economic Regulator considered the information was deficient or did not comply with the Industry Act, the Pricing Regulations, the Code or the PSP Guideline, the Economic Regulator requested that TasWater resubmit additional or revised information.

This Final Report outlines the Economic Regulator's decisions on TasWater's proposed service levels, revenue requirements, demand forecasts and pricing

proposals, taking into account any additional or revised information submitted by TasWater.

The Economic Regulator has also made a Price Determination that applies to TasWater specifying the methods for determining the maximum prices that TasWater can charge for the supply of regulated water and sewerage services for the second regulatory period.

2.1.2 Consultation

2.1.2.1 *Initial consultation*

On 3 May 2014, the Economic Regulator notified, through the three regional Tasmanian newspapers, its intention to conduct a price determination investigation and make a Price Determination.

Prior to publishing that notice, the Economic Regulator:

- on 5 June 2013, declared that the duration of the second regulatory period would be three years from 1 July 2015 to 30 June 2018; and
- on 1 November 2013, published its PSP Guideline for the price determination investigation.

The PSP Guideline specifies the legislative and regulatory requirements that TasWater must comply with when submitting its proposed Price and Service Plan.

TasWater was required to prepare its proposed Price and Service Plan in accordance with the PSP Guideline, including consulting with customers and other stakeholders, and submit it to the Economic Regulator by 29 August 2014.

The Economic Regulator also published a draft Guideline and complementary Consultation Paper which highlighted the issues addressed in the draft Guideline and sought stakeholder feedback on the draft Guideline.

The Economic Regulator considered the comments made in submissions on the draft Guideline before releasing a final version of the PSP Guideline. The Economic Regulator also released a Statement of Reasons discussing issues raised in submissions on the draft Guideline and the Economic Regulator's responses to those issues.

2.1.2.2 *Further consultation*

The Economic Regulator invited comments on its Draft Report and draft Price Determination during January and February 2015. Submissions were considered prior to the Final Report and the Price Determination being finalised.

The Economic Regulator also prepared and released a Statement of Reasons outlining the submissions received, the Economic Regulator's responses to the issues raised in the submissions and the changes that were required to be made to the Draft Report to reflect those decisions.

2.1.3 Key steps and timelines

Table 2.1 Timetable for the second price determination investigation

Action	Due date
Draft Report and draft Price Determination released for public consultation	9 January 2015
Consultation on Draft Report and draft Price Determination closes	27 February 2015
Consultation with the TasWater on draft of Final Report and draft of final Price Determination	17 April 2015
Final Report and final Price Determination published	30 April 2015
Making of final Price Determination gazetted	6 May 2015
TasWater to submit revised 2015-18 Price and Service Plan reflecting the requirements outlined in the Price Determination and Final Report	29 May 2015
Economic Regulator approves TasWater's Price and Service Plan	15 June 2015
Second Price Determination commences	1 July 2015

2.2 Approach to revenue and price regulation

In 1995 the Council of Australian Governments (CoAG) agreed on a number of competition policy reforms. The Tasmanian Government was a signatory to these reforms. These National Competition Policy reforms centred on:

- the review and reform of regulation that restricted competition;
- the introduction of competitive neutrality (where government services are provided in competition to the private sector);
- the restructure of public monopoly businesses; and
- providing rights of access to infrastructure (for example, railway lines and gas pipelines) to promote greater competitive pressure and, thereby, encourage greater efficiency.

CoAG recognised that effective competition may not always be achievable. The competition policy reforms provided for government regulation of pricing as an appropriate action where effective competition was not achievable. In such circumstances, it has become common practice for monopoly, or near monopoly, providers of goods and services to be subject to revenue and/or price regulation, particularly where the goods and services provided are considered to be essential services such as electricity and water.

In the absence of effective competition, regulation of such industries is usually undertaken to ensure that consumers do not pay more than the efficient cost for the provision of the goods or service, and to ensure that services meet prescribed standards.

Revenue regulation generally involves determining the revenue required (referred to as the “revenue limit”) for the regulated business to meet its costs to produce the goods and services to prescribed standards and deliver them to customers.

Prices are then set based on the revenue limit, customer numbers and the volume of goods and services to be delivered over a defined period.

Under price regulation, the price the entity can charge for each regulated service may be set by reference to:

- the maximum amount of revenue the entity can earn;
- maximum prices; or
- maximum rates of change in prices.

As was the case for the first price determination investigation, the regulatory approach adopted for the second price determination investigation reflects that TasWater expects to earn revenue that is substantially below the level required to achieve full cost recovery.

The requirement under section 15(d) of the Industry Act to take into account the impact on customers of the rate of change in prices, combined with the current level of revenue under-recovery by TasWater, means that movements in annual prices will again be regulated ie prices will be determined by applying a limit on annual price movements.

However, the revenue limits applying to TasWater are expected to take on greater importance in the near future as the statutory revenue limit becomes relevant. For this reason, the Economic Regulator has calculated all three revenue limits for the second regulatory period. More detail on the calculation and analysis of revenue limits is included in Chapter 4.

2.3 Assessing Opex, Capex and asset values

For the second price determination investigation, the Economic Regulator engaged Jacobs Group (Australia) Pty Ltd to undertake an independent review of TasWater’s proposed Opex and Capex (including asset values). The objective of the consultancy was to assess TasWater’s expenditure proposals and provide advice so that the Economic Regulator could ensure that only those assets used to deliver regulated services and only efficient costs were taken into account when calculating revenue limits for the purpose of determining water and sewerage prices. The report produced by Jacobs Group was released along with the Economic Regulator’s Draft Report in January 2015.

TasWater provided, as part of its proposed Price and Service Plan, its proposed capital expenditure (Capex), operating cost and depreciation expense data to determine annual revenue limits reflecting the amount to be invested in new regulated assets required to deliver its proposed water and sewerage services.

In assessing the proposed Capex programs, the Economic Regulator has consulted with the other Tasmanian water and sewerage industry regulators to ascertain whether the proposed Capex program will achieve their respective expected outcomes in relation to regulatory compliance improvement over the second regulatory period.

Chapter 3 provides further details about regulatory compliance improvement expectations during the second regulatory period.

2.4 Assessment of Price and Service Plan

In assessing TasWater's proposed Price and Service Plan, the Economic Regulator considered:

- whether the proposed Price and Service Plan was consistent with, or was working towards, the Pricing Principles;
- how and to what extent the proposed Price and Service Plan addresses the price reform priorities established by the Economic Regulator; and
- the customer impacts flowing from the proposed Price and Service Plan.

The Pricing Principles and reform priorities are listed in sections 5.1 and 5.2 of this Final Report, respectively.

Consistent with the “propose and respond” nature of the regulatory framework, the Economic Regulator considered that TasWater was best placed to develop models to support pricing proposals and assess customer impacts as it holds detailed customer and usage information.

The PSP Guideline required TasWater to propose the structure and the amount of constraints on annual price changes in its proposed Price and Service Plan. During the price determination investigation the Economic Regulator also required TasWater to have the capability to model alternative price constraint scenarios.

For TasWater's proposed price constraints, its proposed Price and Service Plan was required to specify the estimated total regulated revenue and Net Profit After Tax for each financial year of the second regulatory period.

In relation to customer impacts, the PSP Guideline required TasWater to provide, for each financial year from 1 July 2015 until the end of the transition period on 1 July 2020, the percentage of customers whose tariffs are:

- expected to be above the target tariffs (target tariffs represent a single tariff structure to apply across Tasmania rather than the current structure of different tariffs in different regions. The target tariffs will, over the regulatory period, increase towards the level required to achieve full cost recovery revenue);
- on the target tariffs (ie their tariffs will increase at the target tariff rate proposed by TasWater);

- below the target tariffs by an amount less than the proposed price constraint (ie these customers will reach the target tariff during that year); and
- below the target tariffs by an amount greater than the proposed price constraint but whose annual tariff increase will be capped at the proposed price constraint limit (ie those customers who will not reach the target tariff during that year).

During the course of the investigation TasWater advised that it was unable to provide the requested details about the expected distribution of customers around the target tariffs.

In addition to its proposed price constraints, for any alternative price constraint scenarios, the Economic Regulator expected TasWater to have a model capable of producing the same information in relation to customer impacts and financial outcomes as required for TasWater's proposed price constraint.

The Economic Regulator determined the structure and amount of the proposed price constraints developed by TasWater by assessing TasWater's ability to deliver price reform in a manner that manages the complex and competing objectives facing the industry.

The Economic Regulator has therefore had to balance the impact of the rate of change of prices on customers and the need to move to efficient pricing in the long term in order to meet future investment and regulatory compliance requirements.

2.5 Structure and administration of the Price Determination

2.5.1 Draft price determination

The Industry Act and Pricing Regulations set out requirements for the scope and content of, and the process for making, the Price Determination. Before making the Price Determination, the Economic Regulator is required by the legislation, amongst other things, to publish a draft Price Determination for consultation.

The release of the draft Price Determination (Appendix 1 to the Draft Report) for consultation in January 2015 satisfied these legislative requirements.

Following the consideration of issues raised in consultation on the draft Price Determination the Economic Regulator has now released its Price Determination.

The Price Determination requires TasWater's Price and Service Plan (which includes various policies and the customer contract) to be, amongst other things, consistent with the decisions and requirements outlined in the Economic Regulator's Final Report. This Final Report sets out the Economic Regulator's decisions and requirements regarding TasWater's Price and Service Plan and the associated draft policies and customer contract. The Economic Regulator will only approve the final draft of the proposed Price and Service Plan and the associated policies and customer contract if they are consistent with the Economic Regulator's decisions and requirements in the Price Determination and in this Final Report. Any

subsequent proposed amendments to the Price and Service Plan and/or the associated policies and customer contract (after they have been approved) would require the Economic Regulator's approval. Consultation would be undertaken in accordance with the Economic Regulator's Consultation Policy and Procedures of the Regulator (Consultation Policy) for substantive proposed amendments.

Section 65(5) of the Industry Act states that the Economic Regulator must approve TasWater's draft proposed Price and Service Plan if it fulfils the requirements set out in the PSP Guideline and the Price Determination. Embedding in the Price Determination the requirement that TasWater's Price and Service Plan must be consistent with the Economic Regulator's decisions and requirements in the Final Report will ensure that the Economic Regulator's final decisions and requirements will be taken into account when TasWater revises its proposed Price and Service Plan and the associated policies and customer contract before resubmitting them for approval.

It is noted that Regulation 21 of the Pricing Regulations requires the Price Determination itself to require the Price and Service Plan to include miscellaneous fees and charges. Hence, the Price Determination does not include a table of all miscellaneous fees and charges but instead specifically requires these fees and charges to be included in the Price and Service Plan in accordance with Regulation 21 and to be consistent with the Economic Regulator's decisions and requirements in the Final Report. Similarly, Regulation 7 of the Pricing Regulations requires the Price Determination itself to require the Price and Service Plan to include '*anticipated changes, over time, of any prices specified in the Plan*'. This requirement has been included in the Price Determination.

2.5.2 Amending Price Determination within the regulatory period

The need for certainty is considered important as the industry moves through a reform transition period. To maximise certainty for TasWater, owner councils, stakeholders and customers, the Pricing Regulations permit price adjustments in limited specified circumstances. That is, prices may be adjusted only if there has been a material change in the costs incurred by a regulated entity as a result of complying with one or more of the following events, which may occur after the Price Determination has been made:

- new or amended legislative requirements; or
- a tax event (as defined in the Pricing Regulations).

Prices will not be reviewed annually. Rather, TasWater will be responsible for proposing any adjustments in line with the terms of the Price Determination and the requirements of the Pricing Regulations.

All other variations between forecasts and actual outcomes over the second regulatory period will, therefore, need to be managed by TasWater, including any differences between forecast and actual CPI.

The next (third) price determination investigation will review any differences between forecast and actual outcomes that occurred during the second regulatory period and recommend appropriate actions to account for those variations.

2.6 Regulatory accounting

The Economic Regulator requires an understanding of the nature and substance of TasWater's business activities to effectively monitor TasWater's compliance with the relevant price determination and conduct pricing inquiries and investigations.

Section 64(2) of the Industry Act gives the Economic Regulator the power to issue guidelines requiring the separation of a regulated entity's accounts and functions. In this regard, in May 2013 the Economic Regulator issued a Ring Fencing Guideline. The objectives of the Ring Fencing Guideline are to establish the detailed accounting and information requirements necessary to enable the Economic Regulator to undertake its responsibilities under the Industry Act.

The objectives of accounting ring fencing are to:

- provide the Economic Regulator with sufficiently detailed and accurate information to undertake price determination investigations;
- facilitate the monitoring of compliance with any relevant price determinations;
- facilitate the effective regulation of monopoly activities by identifying and attributing expenditure and revenue to relevant business segments;
- facilitate the introduction of competition wherever possible by identifying and ring fencing regulated and unregulated services;
- avoid the anti-competitive effects of cross-subsidies between regulated and unregulated activities; and
- ensure that unfair competitive advantage is not secured by using information acquired by the monopoly activity for the benefit of an unregulated activity.

TasWater submitted the first set of regulatory accounts for the Tasmanian water and sewerage sector in December 2014 in respect of the 2013-14 financial year.

3 REGULATORY COMPLIANCE IMPROVEMENT

Broader regulatory compliance improvement and compliance enforcement across the water and wastewater sector remains the responsibility of the relevant Tasmanian industry regulators, being the EPA, Director of Public Health (Department of Health and Human Services (DDHS)) and the Secretary of the Department of Primary Industry, Parks, Water and Environment (DPIPWE), who is the Delegate for Dam Safety Regulation.

Improvements in regulatory compliance are usually achieved through Capex, but may also be attained through achieving efficiency in Opex. Expenditure on regulatory compliance improvement over the second regulatory period, therefore, needs to underpin pricing proposals contained within TasWater’s proposed Price and Service Plan.

One of the key drivers of the Tasmanian Government’s reform of the water and sewerage industry in 2009 was the need to improve the level of compliance with regulatory obligations. Due to the legacy issues inherited by the previous regulated entities and now TasWater, it is acknowledged that some non-compliance may not be able to be rectified for some time. During 2013-14, 1.4 per cent of Tasmanians serviced with reticulated water received non-compliant drinking water and 19 drinking water supply systems operated with a permanent boil water alert. In the same period, 20 wastewater treatment plants were classified as substantially non-compliant (ie less than 75 per cent compliance). Compliance improvement plans and programs are, therefore, needed to ensure that the industry regulators’ priority compliance improvement expectations are met.

The Economic Regulator consulted with officers representing the industry regulators prior to the release of its Draft Report and draft Price Determination to assess the extent to which the industry regulators were satisfied that the compliance improvement outcomes agreed with TasWater had been reflected in TasWater’s proposed Price and Service Plan.

The Tasmanian industry regulators are:

- The Director of Public Health, who is responsible for regulating water quality and fluoridation.
- The EPA, which is responsible for regulating wastewater treatment plants.
- DPIPWE, which is responsible for water licence allocations and dam safety.

A more detailed description of the respective roles and responsibilities of each of the industry regulators are set out in section 1.5 of this Final Report.

This chapter outlines the Economic Regulator's understanding of the interactions that have occurred to date between the individual industry regulators and TasWater in terms of monitoring TasWater's efforts to improve regulatory compliance outcomes.

3.1 Director of Public Health

The DHHS administers the Tasmanian Drinking Water Quality Guidelines (TDWQG), which require TasWater to develop and implement, and update annually, a Drinking Water Quality Management Plan (DWQMP). An updated TDWQG to be issued in 2015 will require TasWater to have the DWQMP independently audited. The frequency of the auditing requirement will be biennially. DHHS received a draft DWQMP in January 2015.

The TDWQG closely align with the best practice management principles outlined in the Australian Drinking Water Guidelines 2011(ADWG). The Economic Regulator understands that, where necessary, DHHS and TasWater will continue to consult on reviews and updates of the ADWG and TDWQG.

In February 2014, the Director of Public Health provided TasWater with a priority list of non-compliant or inadequate drinking water supply systems which required urgent attention, with the intention of providing TasWater guidance for its capital works planning and, in turn, Capex for inclusion in its proposed Price and Service Plan. When presenting TasWater with the priority list, DHHS noted that the list was developed following extensive discussions with TasWater and that many of the systems featured in the list already had works underway, or planning had commenced. TasWater agreed, stating in its proposed Price and Service Plan that the systems identified by DHHS feature heavily in its proposed capital works program and in the new DWQMP.

In addition to its specific priority list, DHHS provided TasWater with six general overarching priorities to guide its efforts to improve drinking water quality:

- investigate solutions for the upgrade or replacement of systems on Permanent Boil Water Alerts;
- comply with the Fluoridation Code of Practice;
- complete the reservoir roofing program;
- identify and implement solution to address disinfection by-product formation in non-compliant water supplies; and
- implement an audit program for the DWQMP against the TDWQG 2015.

TasWater stated in its proposed Price and Service Plan that it has a key focus on reducing the number of towns with poor water quality through a range of projects and investigations. Specifically, the proposed plan details a series of projects to address the priorities listed above. The specific towns and systems highlighted by DHHS are to be addressed in the forthcoming DWQMP, which, TasWater states, will align with its proposed capital works program for the second regulatory period.

TasWater consulted with DHHS on the proposed Price and Service Plan in June 2014. In response DHHS noted that the proposed plan failed to include any detailed information regarding the magnitude of Capex planned for the second regulatory period and did not give any indication as to how the money would be apportioned between competing priorities. DHHS also believed that providing a full list of planned Capex and a detailed breakdown of the planned investment across all of the drivers of Capex (such as ‘compliance’ and ‘investment’-related works) would be beneficial. The Economic Regulator understands that TasWater subsequently provided DHHS with a Capex spreadsheet for the second regulatory period, which indicated that most of DHHS’s priorities were to receive the benefit of at least some investment during the upcoming period.

3.2 Environment Protection Authority

The Director, EPA can issue TasWater with directions, most notably in the form of Environment Protection Notices. These notices serve to update ageing permits for TasWater’s WWTPs through issue of contemporary environmental compliance requirements. The EPA regulates Level 2 WWTPs ie plants with a throughput volume greater than 100 kilolitres per day.

During 2013-14, only four per cent of TasWater’s WWTPs complied with discharge limits, indicating a need for major improvements and significant investment into sewage treatment infrastructure (although, in 2013-14, 83 per cent of treated wastewater volume was compliant). Upon the formation of the regional corporations, the EPA required each corporation to submit a Wastewater Management Plan (WWMP) outlining the investments and actions that would drive compliance. With the amalgamation of the three entities into TasWater, these plans have been merged and updated. The Economic Regulator understands that, as for the DWQMP, TasWater submitted its draft WWMP in January 2015. This plan includes a comprehensive risk assessment of TasWater’s WWTPs and a range of capital upgrades and operational initiatives that will drive improvement.

The Economic Regulator understands that the EPA has had significant input into the previous regulated entities’ WWMPs and also provided a priority list to assist TasWater’s formation of the new plan.

In addition to investment for refurbishing and replacing ageing infrastructure, the Economic Regulator understands that TasWater is looking to improve management of environmental incidents and sewage spills with investment in remote alarming and telemetry systems and an updated Emergency and Incident Management framework.

The Economic Regulator also understands that the EPA liaised with TasWater about its proposed Capex for the second regulatory period. The EPA previously noted that the projected wastewater related Capex for the second regulatory period, as contained in TasWater’s proposed Price and Service Plan, was significantly lower than estimates provided to the EPA in June 2014. The Economic Regulator understands that the EPA has continued to liaise with TasWater to gain a better

understanding of wastewater Capex commitments provided in TasWater’s draft WWMP.

The EPA was also concerned that there were not any contingencies built into the forecast Capex plan to allow for upgrade requirements which may become evident after the Price and Service Plan is finalised, but which require the project to commence prior to the start of the third regulatory period. The EPA identified a lack of explanation with respect to prioritisation of the various Capex projects focused on upgrading sewerage reticulation.

The EPA has also provided feedback to TasWater on a regional basis. In relation to the southern region, the EPA observed incremental improvement in Capex planning in terms of refinement of project scopes and state-wide prioritisation. The EPA expects that improvements in planning will carry over into improved performance against Capex commitments in this price and service period. The EPA noted that some key projects are significantly delayed, but accepted that while this was not ideal, in some cases the revised timeframes provided a more realistic view of what is achievable. The EPA encouraged TasWater to utilise additional freed up funds for immediate implementation of smaller scale projects leading to improvements at high priority, underperforming WWTPs.

For the northern region, the EPA noted that generally progress was slower than anticipated and incremental, rather than leading to acceptable solutions in the medium to long term. However the EPA stated that progress was reasonable over the first regulatory period and was satisfied with what was outlined in the Capex spreadsheet, even though significant challenges remain to be resolved.

For the north-western region, the EPA noted TasWater’s poor progress to date with the implementation of the approved WWMP, but hoped that TasWater’s performance would improve during the second regulatory period. The EPA also expressed concerns regarding delays to projects associated with higher priority plants.

3.3 Delegate for Dam Safety Regulation

The Secretary of DPIPWE is the dam safety delegate. TasWater is responsible for approximately 200 water and wastewater storages, lagoons and weirs which fall within the definition of a dam under the *Water Management Act 1999*. TasWater recognises that a major dam failure causing asset damage and public safety issues is a significant strategic risk.

The Dam Safety Management Plans (DSMP) have been developed to provide a business wide risk based framework for the management and mitigation of dam safety risks to ensure they do not pose an unacceptable risk to the public.

The Economic Regulator understands that TasWater has consulted with DPIPWE and that the three existing regional DSMPs and the Dam Safety Improvement Program (DSIP) have been consolidated into a single TasWater DSMP. The Economic Regulator also understands that an up-to-date state-wide DSIP was

approved by TasWater's board in February 2014 and that TasWater submits annual DSMP progress reports to DPIPWE.

DPIPWE noted that there was little detail in TasWater's proposed Price and Service Plan on dam safety and raised concerns about TasWater's capacity to deliver on its planned Capex.

3.4 Summary

The Economic Regulator met with officers representing the other Tasmanian industry regulators following the receipt of TasWater's proposed Price and Service Plan. The industry regulators' representatives indicated that they were generally positive about the proposed Price and Service Plan. However, the representatives considered that the proposed Price and Service Plan lacked detail such that it was difficult to comment on specific issues. In particular, initially there was not enough detail in the material made available to the industry regulators to assess TasWater's proposed Capex for the second regulatory period. In response, TasWater subsequently provided a spreadsheet which outlined its proposed Capex projects. The industry regulators also commented that consultation with TasWater had been limited leading up to TasWater's submission of its proposed Price and Service Plan, whilst noting that discussions with TasWater were ongoing.

Complete versions of TasWater's DWQMP, WWMP and DSMP were provided to the other industry regulators after the Draft Report had been released for public consultation in January 2015. In addition, the Economic Regulator understands that the submitted versions of those plans required further refinement following discussions between TasWater and the respective industry regulators.

The Economic Regulator subsequently consulted with industry regulators after public consultation on the Draft Report and draft Price Determination, and prior to the release of the Final Report and final Price Determination. The industry regulators indicated that they were satisfied with the Capex priorities outlined in the various management plans although all regulators expressed concerns about whether TasWater could complete the scheduled capital projects given the historical under delivery of Capex by TasWater and its predecessors.

In summary, the Economic Regulator considers that the consultation requirements set out in the Economic Regulator's PSP Guideline have been met.

4 ESTIMATING REVENUE REQUIREMENTS

It is common practice for monopoly, or near monopoly, providers of goods and services to be subject to government regulation with respect to setting prices, particularly where the goods and services provided are considered to be essential services such as electricity and water.

In the absence of effective competition, regulation of such industries aims to ensure that consumers do not pay more than the efficient cost of providing the goods and/or services, and that the goods and services meet prescribed standards. The framework most commonly used by Australian economic regulators to determine prices for regulated services is referred to as the ‘building block’ approach.

4.1 Building block approach

The Economic Regulator adopted the building block methodology for the first regulatory period and will continue this approach for the second regulatory period.

Under the building block approach the maximum revenue a regulated business is allowed for each period is determined by summing the following costs (‘building blocks’) incurred in providing regulated goods and services:

- depreciation;
- operating and maintenance expenditure (Opex) necessary to provide the regulated services; and
- cost of capital - comprising the cost of the debt and equity that together make up the total amount of capital invested in the regulated business.

The value of capital invested in the regulated business is deemed to be equal to the value of the regulated asset base (RAB) ie assets used to provide regulated services. The cost of capital is determined by multiplying the capital invested (RAB) by an appropriate weighted average cost of capital (WACC).

Therefore, under the building block approach, the maximum allowed revenue for each period is calculated as follows:

$$\text{Maximum allowed revenue} = (\text{RAB} \times \text{WACC}) + \text{D} + \text{OM}$$

where:

- RAB = value of regulated asset base
- WACC = weighted average cost of capital (return on capital)
- D = depreciation (return of capital)
- OM = operating and maintenance expenditure

4.2 Revenue limits

Consistent with the approach adopted in the first water and sewerage price determination investigation the Economic Regulator has calculated three annual revenue limits – upper, lower and statutory.

In calculating TasWater’s revenue limits, the Economic Regulator has adopted an approach that is consistent with:

- the National Water Initiative (NWI) pricing principles¹;
- the pricing principles listed in section 68 of the Industry Act; and
- the additional pricing principles expressed in the Pricing Regulations.

4.2.1 National Water Initiative (NWI) revenue limits

The NWI prescribes two revenue limits:

- the upper revenue limit (full cost recovery); and
- the lower revenue limit (sustainability threshold).

Under the NWI, a regulated water and sewerage business should recover revenue at least equal to the lower revenue limit but no greater than the upper revenue limit as this represents the limit above which monopoly profits would be earned.

4.2.2 Statutory revenue limit

The requirements of the Industry Act necessitate a third revenue limit, the statutory revenue limit, in addition to the two revenue limits prescribed under the NWI-

The statutory revenue limit is the maximum allowed revenue where the cost of capital component is calculated in accordance with section 68(1A) of the Industry Act. Section 68(1A) of the Industry Act requires the rate of return, on assets transferred to the previous regulated entities before 1 July 2011, to incorporate a commercial rate of return on debt and a legislated pre-tax rate of return of three percent on equity. For all other assets, the rate of return will incorporate a commercial risk based rate of return on both debt and equity.

Section 68(1A) of the Industry Act therefore, effectively, requires two separate WACCs and two separate RABs: one for assets transferred to the previous regulated entities before 1 July 2011 and another for assets purchased or constructed by the previous regulated entities and now TasWater after 1 July 2009².

¹ Natural Resource Management Ministerial Council, 23 April 2010:
<http://www.environment.gov.au/water/policy-programs/urban-reform/nwi-pricing-principles.html>

² Amongst other things, the *Water and Sewerage Corporation Act 2012* provided for the transfer of the assets and liabilities of the previous regulated entities to the new regulated entity, TasWater.

TasWater must maintain and roll forward each RAB on an annual basis in accordance with the Economic Regulator’s Data Collection Template.

The RAB for existing assets will gradually decline over time as depreciation and disposals reduce the value of those assets, whilst the RAB for new assets will increase in line with Capex on new assets.

During the second regulatory period TasWater should be aiming to:

- ensure that revenue is kept above the lower revenue limit to maintain financial sustainability; and
- transition revenue towards the statutory revenue limit (the maximum revenue permitted under the Industry Act).

Over the long term the statutory revenue limit will become the upper revenue limit as the value of existing assets decrease due to depreciation and disposals.

4.2.3 Statutory revenue limit formula

The annual statutory revenue limit ($R_{\text{STATUTORY}}$) is calculated as follows:

$$R_{\text{STATUTORY}} = (RAB_{\text{EXISTING}} \times WACC_{\text{EXISTING}}) + (RAB_{\text{NEW}} \times WACC_{\text{NEW}}) + D_{\text{NEW}} + D_{\text{EXISTING}} + OM$$

where:

RAB_{EXISTING}	=	value of the regulated asset base in respect of existing assets
$WACC_{\text{EXISTING}}$	=	weighted average cost of capital to be applied to existing assets
RAB_{NEW}	=	value of the regulated asset base in respect of new assets
$WACC_{\text{NEW}}$	=	weighted average cost of capital to be applied to new assets
D_{NEW}	=	depreciation of the regulated asset base in respect of new assets
D_{EXISTING}	=	depreciation of the regulated asset base in respect of existing assets
OM	=	operating and maintenance expenditure

4.2.4 Upper revenue limit formula

The annual upper revenue limit (R_{UPPER}) is calculated as follows:

$$R_{UPPER} = (RAB_{NEW} \times WACC_{NEW}) + (RAB_{EXISTING} \times WACC_{NEW}) + D_{NEW} + D_{EXISTING} + OM$$

where:

RAB_{NEW}	=	value of the regulated asset base in respect of new assets
$RAB_{EXISTING}$	=	value of the regulated asset base in respect of existing assets
$WACC_{NEW}$	=	weighted average cost of capital to be applied to new assets
D_{NEW}	=	depreciation of the regulated asset base in respect of new assets
$D_{EXISTING}$	=	depreciation of the regulated asset base in respect of existing assets
OM	=	operating and maintenance expenditure

4.2.5 Lower revenue limit formula

The annual lower revenue limit (R_{LOWER}) is calculated as follows:

$$R_{LOWER} = Debt + OM + ARA$$

where:

Debt	=	debt servicing costs
OM	=	operating and maintenance expenditure
ARA	=	asset renewal annuity

The lower revenue limit provides an estimate of the minimum revenue TasWater requires to recover the outlays needed to maintain its financial viability.

4.3 Revenue limit components

4.3.1 Regulated asset base

The RAB comprises the value of assets used to provide regulated services and therefore excludes the value of assets used to provide unregulated services which are discussed in section 4.3.1.4.

As discussed in section 4.2.2, section 68(1A) of the Industry Act necessitates calculating two RABs ($RAB_{EXISTING}$ and RAB_{NEW}). Each RAB is split between water

and sewerage assets to enable the Economic Regulator to ascertain whether the revenue from each regulated service relates only to the costs associated with providing that service. The Economic Regulator has not attempted to exclude third party capital contributions made before the previous regulated entities were formed from $RAB_{EXISTING}$ due to difficulties in ascertaining the value of those contributions.

The opening $RAB_{EXISTING}$ and RAB_{NEW} are DORC³ asset values as at 1 July 2015 which have been rolled forward from 1 July 2009.

For each financial year of the second regulatory period RAB_{NEW} is rolled forward as follows:

$$\begin{aligned}
 & \text{Opening } RAB_{NEW} \\
 & + \text{ Capex} \\
 & - \text{ Depreciation}_{NEW} \\
 & - \text{ Asset disposals}_{NEW} \\
 & - \text{ Third party capital contributions} \\
 & = \text{ Closing } RAB_{NEW}
 \end{aligned}$$

For each financial year of the second regulatory period, $RAB_{EXISTING}$ is rolled forward as follows:

$$\begin{aligned}
 & \text{Opening } RAB_{EXISTING} \\
 & - \text{ Depreciation}_{EXISTING} \\
 & - \text{ Asset disposals}_{EXISTING} \\
 & = \text{ Closing } RAB_{EXISTING}
 \end{aligned}$$

The RABs in each financial year are calculated as the average of the opening RAB (ie the RAB as at 1 July in the relevant financial year) and closing RAB (ie the RAB as at 30 June in the relevant financial year) with the opening RAB value in each financial year equal to the closing RAB from the previous financial year.

4.3.1.1 *Capital expenditure (Capex)*

Capex is the amount invested in new regulated assets and includes expenditure funded through third party capital contributions but excludes expenditure on assets used to provide unregulated services.

4.3.1.2 *Third party contributions*

Third party capital contributions are assets contributed by third parties that are not funded by the regulated entity and include developer charges, service introduction

³ Depreciated Optimised Replacement Cost.

charges and government grants. Third party capital contributions are netted off the value of the RAB as regulated entities are not permitted to receive a return on capital, or return of capital, that they did not fund.

4.3.1.3 *Asset disposals*

Asset disposals refer to the value of assets which are no longer used to provide regulated services.

4.3.1.4 *Assets used to provide unregulated services*

The cost of assets used to provide unregulated services (ie unregulated assets) must be recovered from the customers utilising those services rather than from the regulated customer base.

Unregulated services include:

- providing water for irrigation;
- reusing water, discharged from a sewage treatment plant, for irrigation; and
- providing stormwater services via a combined sewerage/stormwater system.

In determining the regulated entity's RAB, the value of unregulated assets and the costs associated with unregulated services, such as providing water for irrigation or providing stormwater services via a combined sewerage/stormwater system, must therefore be excluded using an optimisation approach. Under the optimisation approach, the value of assets used to provide services to both unregulated and regulated customers is adjusted to determine the value of the assets required to service regulated customers only, which is then included in the RAB.

Where reuse water is used for irrigation in accordance with existing contracts, a proportion of reuse assets must be excluded from the RAB to cover the cost of the reuse system based on the following ratio:

$$\frac{\text{Revenue received from reuse customers}}{(\text{Value of assets used to provide reuse water} \times \text{WACC}) + D + \text{OM}}$$

where:

WACC	=	weighted average cost of capital ⁴
D	=	depreciation associated with reuse assets
OM	=	operating and maintenance expenditure associated with reuse assets

⁴ WACC_{NEW} to be used where new assets are used for reuse activities and WACC_{EXISTING} to be used where existing assets are used for reuse activities.

For new reuse schemes or renegotiated reuse contracts, the value of assets excluded from the RAB is calculated on the basis of a ratio proposed by the regulated entity which reflects the average revenue contribution from reuse customers as a proportion of total reuse costs. The ratio proposed by the regulated entity must be justifiable.

4.3.2 Depreciation

Depreciation is the return of the capital invested in an asset over the life of that asset. The regulated entity is required to calculate depreciation using the straight line method. Different useful lives of the assets comprising RAB_{EXISTING} and RAB_{NEW} will result in two depreciation rates which are used to calculate separate depreciation amounts for each RAB roll forward for each financial year of the second regulatory period. In addition the two depreciation amounts are used in calculating the statutory revenue limit (section 4.2.3) and upper revenue limit (section 4.2.4).

Depreciation on existing assets (D_{EXISTING}) in each financial year of the second regulatory financial period is calculated as follows:

$$D_{\text{EXISTING}} = DR_{\text{EXISTING}} \times (\text{Opening RAB}_{\text{EXISTING}} - (0.5 \times AD_{\text{EXISTING}}))$$

Where:

$$DR_{\text{EXISTING}} = \text{depreciation rate for existing assets}$$

$$= \frac{1}{\text{Average use life of existing assets}}$$

$$\text{Opening RAB}_{\text{EXISTING}} = \text{opening value of RAB}_{\text{EXISTING}} \text{ in each financial year}$$

$$AD_{\text{EXISTING}} = \text{existing asset disposals}$$

Depreciation on new assets (D_{NEW}) in each financial year of the second regulatory financial period is calculated as follows:

$$D_{\text{NEW}} = DR_{\text{NEW}} \times (\text{Opening RAB}_{\text{NEW}} + (0.5 \times (\text{Capex} - \text{CC} - AD_{\text{NEW}})))$$

Where:

$$DR_{\text{NEW}} = \text{depreciation rate for new assets}$$

$$= \frac{1}{\text{Average use life of new assets}}$$

$$\text{Capex} = \text{capital expenditure}$$

$$\text{Opening RAB}_{\text{NEW}} = \text{opening value of RAB}_{\text{NEW}} \text{ in each financial year}$$

$$\text{CC} = \text{third party capital contributions}$$

$$AD_{\text{NEW}} = \text{new asset disposals}$$

4.3.3 Operating and maintenance expenditure (Opex)

The three revenue limits include an amount for the efficient costs of operating and maintaining the water and sewerage systems together with the associated administrative costs incurred in providing regulated services. Opex relating to providing unregulated services is excluded from the Opex amount used to calculate the three revenue limits.

Opex consists of:

- Operating costs – expenditure incurred in operating the water and sewerage system, including the cost of collecting, treating, testing, and pumping water and sewerage and also include royalties, chemicals, power and labour.
- Maintenance costs - the direct expenditure on maintaining the water and sewerage systems and includes materials, internal labour costs, and contractor costs. Total maintenance expenditure will vary with the type, age and general condition of the assets.
- Regulatory costs - including charges imposed by the various industry regulators and internal costs incurred in complying with regulatory obligations.
- Administration costs - including all expenditure on overhead costs, salaried staff costs (including costs of planning and engineering staff) and other items such as Board costs but excludes depreciation and interest costs except where interest paid relates to security deposits.

4.3.4 Weighted Average Cost of Capital (WACC)

The return on capital is calculated using the WACC which is the weighted average of the cost of debt and cost of equity. In line with accepted regulatory practice, a benchmarked debt to equity ratio is used in calculating the WACC to ensure customers do not bear the cost associated with an inefficient financing structure.

The WACC can be set on a real or nominal, pre-tax or post-tax basis. There is little consistency across Australia in terms of the type of WACC adopted for the water and sewerage sector. Therefore the Economic Regulator has decided to use a real pre-tax WACC as was used in the first water and sewerage price investigation.

As discussed in section 4.2.2, section 68(1A) of the Industry Act requires the calculation of two separate WACCs: $WACC_{NEW}$ and $WACC_{EXISTING}$.

4.3.4.1 *WACC_{NEW}*

$WACC_{NEW}$ incorporates a commercial risk adjusted cost of debt and return on equity and is used in calculating the statutory revenue limit (section 4.2.3) and the upper (section 4.2.4) revenue limits. The WACC is converted from a nominal to a real measure. Throughout this draft report the real WACC (shown below as “ $WACC_{NEW\ REAL}$ ”) is referred to as $WACC_{NEW}$.

$WACC_{NEW}$ is calculated as follows:

$$WACC_{NEW\ NOMINAL} = R_d \times G + R_e \times \left(\frac{1}{(1 - t(1 - \gamma))} \right) \times (1 - G)$$

$$WACC_{NEW\ REAL} = \left(\frac{(1 + WACC_{NEW\ NOMINAL})}{(1 + i)} \right) - 1$$

where:

R_e	=	cost of equity (post-tax)
	=	$R_f + \beta_e \times (MRP)$
R_d	=	pre-tax cost of debt
MRP	=	market risk premium
R_f	=	risk free rate
t	=	corporate tax rate
β_e	=	equity beta
G	=	gearing ratio
i	=	forecast inflation (annual average over regulatory period)
γ	=	gamma - represents the proportion of imputation credits which can be utilised by shareholders and varies between 0 and 1

4.3.4.2 $WACC_{EXISTING}$

The statutory revenue limit (section 4.2.3) requires a WACC, to be applied to existing assets incorporating a real pre-tax cost of equity of three per cent per annum. Therefore, $WACC_{EXISTING}$ is calculated by replacing the formula for $WACC_{NEW\ NOMINAL}$ in section 4.3.4.1 with the following:

$$WACC_{EXISTING\ NOMINAL} = (Rd \times G) + (Z \times (1 - G))$$

where:

Z = Statutory pre-tax return on equity replacing

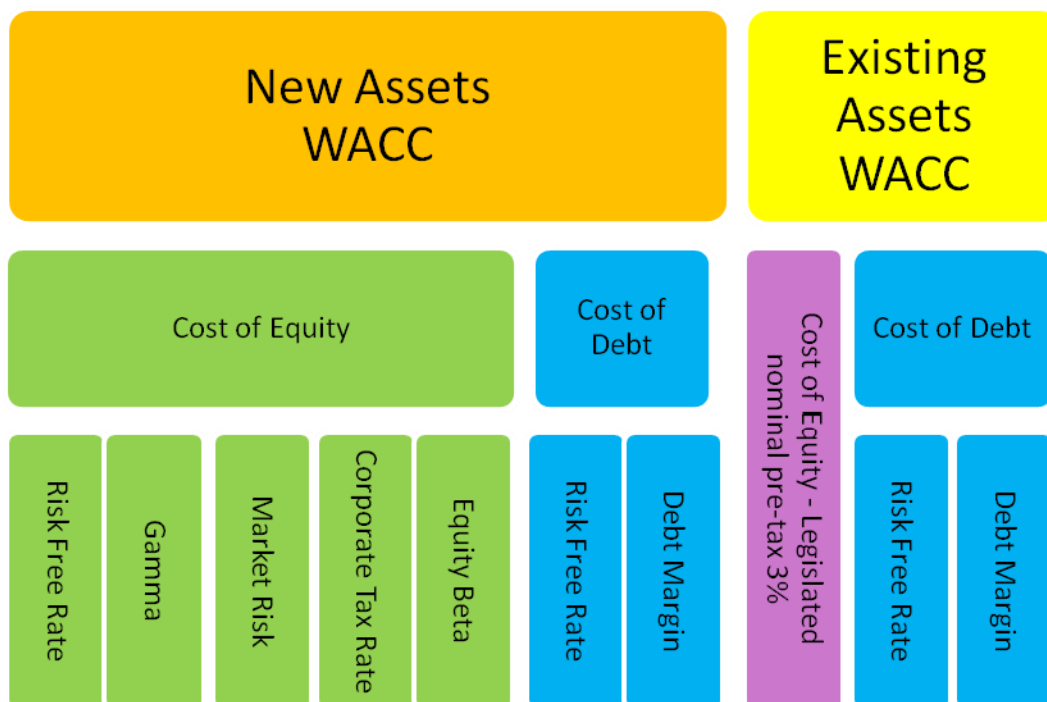
$Re \times \left(\frac{1}{(1 - t(1 - \gamma))} \right)$ in the $WACC_{NEW}$ formula.

Rd = pre-tax cost of debt

G = gearing ratio

The various components used to calculate each of $WACC_{EXISTING}$ and $WACC_{NEW}$ are shown diagrammatically in Figure 4.1.

Figure 4.1 components of the WACC for new and existing assets



4.3.5 Asset renewal annuity

The Asset Renewal Annuity (ARA) is the annualised average cost of maintaining the operating capacity of existing infrastructure assets. The ARA provides an estimate of the amount of funds required to meet future Capex needs converted to an annuity so that the relevant funds can be accumulated consistently and equitably over a long period thereby avoiding sudden significant variations in funding needs.⁵

⁵ The ARA is based on estimating the funds required to replace the assets as distinct from depreciation which apportions the cost of the assets over their useful lives.

As investment in infrastructure assets is generally “lumpy” rather than being able to be added to in regular small increments, an annuity is used to smooth out the year to year variations in asset refurbishment and replacement expenditure.

The ARA is part of the calculation of the lower revenue limit and is calculated using the following formula:

$$\text{ARA} = \text{NPV} \times \left(\frac{r}{(1 - (1 + r)^{-n})} \right)$$

where:

NPV = the net present value of projected asset renewal and replacement expenditure

r = the discount rate

n = the number of years

As occurred for the first regulatory period with the previous regulated entities, the Economic Regulator directed TasWater, via the PSP Guideline, to include Capex required to achieve regulatory compliance in its ARA on the basis that achieving regulatory compliance (ie operating legally) is considered necessary to achieving a financially viable operation.

The discount rate used in calculating the NPV for the ARA is WACC_{NEW} .

4.3.6 Debt Servicing Costs

The lower revenue limit includes the regulated entity’s actual debt servicing costs rather than the benchmark level of debt used calculating the WACC as the lower revenue limit is the minimum revenue required to be financially viable. Debt servicing costs applicable in calculating the lower limit are total debt servicing costs for each financial year of the second regulatory period apportioned on the ratio of the value of regulated assets to the value of total assets.

4.4 Economic Regulator’s assessment of TasWater’s proposed revenue limit components

This section assesses TasWater’s revenue limit components as provided in its Data Collection Template and proposed Price and Service Plan and explains the Economic Regulator’s proposed approach to, and results from, calculating each of the components having regard to:

- the information contained in Jacobs’ final report;
- the information in TasWater’s Data Collection Template; and
- TasWater’s responses to the Economic Regulator’s queries about the data provided in the Data Collection Template.

As outlined in section 2.3, the Economic Regulator commissioned Jacobs to undertake an independent review⁶ of TasWater’s proposed Opex and proposed Capex (including asset values). In particular, Jacobs was required to examine whether it considered:

- there was a need for TasWater to spend the amounts proposed (ie was the expenditure prudent?); and
- whether the amount spent was the most cost effective approach to achieving the desired outcomes (ie was the expenditure efficient?).

4.4.1 Capex

Table 4.1 shows the Capex values from TasWater’s Data Collection Template and the Capex values from Table 9 of TasWater’s proposed Price and Service Plan. The differences between the two sets of figures are due to the inclusion of third party contributions in the Data Collection Template figures.

Table 4.1 TasWater’s proposed Capex (\$’000s)

	2015-16	2016-17	2017-18
Proposed Price and Service Plan	110 000	110 000	110 000
Data Collection Template	117 745	117 939	118 138

Jacob’s review identified that TasWater has, and the three previous regulated entities also had, under-spent on capital projects compared to their respective Capex forecasts. In addition, Jacobs questioned the efficiency of TasWater’s proposed Capex based on its review of a sample of TasWater’s capital projects. Jacobs also discounted the Capex in TasWater’s proposed Price and Service Plan by 2.5 per cent to express the figures in real 2014-15 dollars as shown in the following table:

Table 4.2 Jacobs’ discounting of TasWater’s proposed Capex (\$’000s)

	2015-16	2016-17	2017-18
TasWater proposed (nominal)	110 000	110 000	110 000
Jacobs (real 2014-15\$)	107 250	104 570	101 960

Based on the findings of its review, Jacobs recommended reducing TasWater’s proposed Capex in 2015-16 by \$10.73 million and increasing TasWater’s proposed Capex in 2017-18 by \$10.73 million.

Jacobs explained that the recommended decrease in 2015-16 reflected:

- TasWater’s current low level of committed expenditure;

⁶ Jacobs Group Australia, *Review of the Tasmanian Water and Sewerage Corporation’s Operating Expenditure and Capital Expenditure (including asset values), Final Report, 2 December 2014.*

- the approval delays associated with some of the projects Jacobs had sampled; and
- TasWater’s history of under delivering capital projects.

Jacobs also explained that the recommended increase in 2017-18 recognised that TasWater had demonstrated to Jacobs’ satisfaction that there was a genuine need for the proposed Capex to occur (ie the expenditure was prudent) and was an acknowledgment of TasWater’s focus on both increasing its capacity to deliver capital projects and in developing business cases in relation to high priority projects.

The Economic Regulator has accepted Jacob’s recommendations with respect to variations in TasWater’s Capex allowance for the first and third years of the second regulatory period. Based on TasWater’s comments on the Economic Regulator’s Draft Report the Economic Regulator has reviewed the calculation of the annual Capex allowances and has made a number of minor adjustments to the Capex allowances shown in the Draft Report to correct indexation errors. The Capex values the Economic Regulator has used in determining TasWater’s two RABs are specified in the following table.

Table 4.3 Economic Regulator’s Capex allowances (\$’000s) (\$2014-15)

	2015-16	2016-17	2017-18
Jacobs’ Capex recommendation	96 530	104 570	112 690
Less: unregulated Capex ⁷	921	970	0
Economic Regulator’s Draft Report proposed Capex	95 609	103 600	112 690
Economic Regulator’s Capex allowances	95 687	103 776	112 878
Breakdown of Economic Regulator’s Capex allowances:			
Water	42 370	46 064	47 612
Sewerage	53 317	57 712	65 266

4.4.2 Third party contributions

Table 4.4 shows TasWater’s proposed third party contributions, namely gifted reticulation assets. The Economic Regulator noted in its Draft Report that TasWater’s forecast total revenue (Table 28 of TasWater’s proposed Price and Service Plan) included government grants which are not included in third party contributions in its Data Collection Template for the purpose of determining its RABs.

⁷ As provided in TasWater’s Data Collection Template.

Table 4.4 TasWater’s proposed third party contributions (\$’000s)

	2015-16	2016-17	2017-18
Third party contributions	7 745	7 939	8 138

Due to the correction of indexation errors, the third party contributions in this Final Report vary slightly from those shown in the Economic Regulator’s Draft Report.

The Economic Regulator’s approved third party contributions for the second regulatory period are shown in Table 4.5.

Table 4.5 Economic Regulator’s third party contributions (\$’000s) (\$2014-15)

	2015-16	2016-17	2017-18
Reticulation assets	7 556	7 556	7 556
Government grants	6 340	1 784	1 740
Total Third Party Contributions	13 896	9 340	9 296

4.4.3 Depreciation

Table 4.6 shows TasWater’s average useful life for new and existing assets as provided in its Data Collection Template. Jacobs’ review noted that, due to a lack of detail about the assumptions TasWater had adopted in calculating the useful lives for its assets, it was unable to validate the asset lives provided in Table 19 of TasWater’s proposed Price and Service Plan. Jacobs also questioned the adoption of a relatively short 40 year asset life for new asset headworks.

Table 4.6 TasWater’s proposed average useful life – existing and new assets (years)

	Average useful life – existing assets	Average useful life – new assets
Water	36.9	40.1
Sewerage	35.6	36.3

For its Draft Report the Economic Regulator reviewed the data provided by TasWater and recalculated the useful lives of TasWater’s infrastructure assets based on TasWater’s data and using a value weighted average rather than a straight average. The resultant useful lives are shown in Table 4.7. The Economic Regulator’s recalculated regulatory depreciation allowances for new assets and existing assets and for combined new and existing assets are reflected in Table 4.8 and Table 4.9 respectively for each year of the second regulatory period.

Table 4.7 Economic Regulator’s average useful lives and depreciation rates for existing and new assets

	Average useful life – existing assets (years)	Depreciation rate (%)	Average useful life – new assets (years)	Depreciation rate (%)
Water	42.3	2.36	57.5	1.74
Sewerage	39.4	2.54	56.7	1.76

Table 4.8 Economic Regulator’s calculation of depreciation for new assets (D_{NEW}) (\$’000s) (\$2014-15)

	2015-16	2016-17	2017-18
TasWater	14 711	18 197	21 641
Economic Regulator	8 044	9 629	11 365
Variation	(6 667)	(8 568)	(10 276)

Table 4.9 Economic Regulator’s calculation of depreciation for existing assets ($D_{EXISTING}$) (\$’000s) (\$2014-15)

	2015-16	2016-17	2017-18
TasWater	75 030	75 030	75 030
Economic Regulator	63 398	63 398	63 398
Variation	(11 632)	(11 632)	(11 632)

In its submission on the Economic Regulator’s Draft Report, TasWater considered that the Economic Regulator’s approach to calculating the regulatory depreciation allowances was incorrect. TasWater was also of the view that the proposed reduction in the annual depreciation allowances may impact on TasWater’s ability to undertake renewals and may lead to future step changes in the depreciation allowance which in turn may result in price increases for customers.

The Economic Regulator considers that its use of a value weighted average approach is appropriate noting that this approach is used by regulators in other jurisdictions in both the water and other sectors.

Industry experts have consistently recommended the adoption of a value weighted average approach⁸ whilst industry regulators such as the Australian Competition and Consumer Commission (ACCC) have accepted those recommendations in determining prices for regulated entities⁹.

This approach is also considered to be the most appropriate as failing to calculate useful lives on a value weighted average approach gives greater weighting to relatively lower value and shorter life corporate assets at the expense of the much higher value and longer life infrastructure assets.

Additionally, because of the expected long lives of infrastructure assets, the application of a value based weighted average approach delivers intergenerational equity in that it ensures that the costs of that infrastructure are met by both current and future customers as both groups benefit from the availability of those assets.

⁸ See for example, Deloitte Access Economics’ report to the Australian Competition and Consumer Commission, *Final report – asset lives for State Water’s 2014 pricing proposal*, 9 December 2013 and The Allen Consulting Group’s Report to the Economic Regulation Authority, Western Australia, *Review of Asset Values, Costs and Cost, Allocation of Western Australian Urban Water and Wastewater Service Providers Water Corporation*, April 2005 (page 14).

⁹ ACCC, *Final Decision on State Water Pricing Application: 2014-15 – 2016-17*, June 2014.

The Economic Regulator therefore disagrees with TasWater's approach and considers that contrary to TasWater's views, adoption of TasWater's approach would be more likely to result in step changes in depreciation and consequentially a greater likelihood of future price volatility for customers.

The Economic Regulator also requested a copy of TasWater's Asset Register and conducted a review of the Register in an attempt to verify the basis for TasWater's proposed asset lives.

The Economic Regulator's analysis of the Register indicated that, with respect to some asset categories, the useful lives appeared to be longer than the useful lives proposed by the Economic Regulator in its Draft Report which, if adopted, would result in lower regulatory depreciation allowances than proposed in the Economic Regulator's Draft Report.

However, the Economic Regulator does not intend making further adjustments at this time due to the current level of uncertainty about, and therefore confidence in, information relating to TasWater's assets ie the Economic Regulator has decided to adopt the same asset lives regulatory depreciation allowances as it had proposed in its Draft Report. The regulatory depreciation allowances for new assets set out above in Table 4.8 vary slightly from those reflected in the Economic Regulator's Draft Report due to the impact of the minor changes made to third party contributions as outlined in section 4.4.2 of this Final Report.

The Economic Regulator considers that the issue of asset useful lives and the associated regulatory depreciation allowances will need to be revisited during the next price determination investigation ie the methodology adopted in calculating regulatory depreciation for the second regulatory period should not necessarily be seen as setting a precedent for future regulatory periods.

4.4.4 WACC – new and existing assets

TasWater's proposed Price and Service Plan indicated that TasWater intended adopting the following parameters:

- six per cent for the market return;
- an equity beta of 0.65;
- 60 per cent gearing;
- 30 per cent corporate tax rate; and
- 50 per cent for gamma.

TasWater also proposed adopting the following methodology for calculating the risk free rate and debt risk premium:

- Calculate the risk free rate as close as possible to the start of the regulatory reset period using the simple averages of Reserve Bank of Australia (RBA)

data for the 10-year Commonwealth Government bond rate over the previous 40 business days and over the previous 10 years.

- Calculate the debt risk premium as close as possible to the start of the regulatory reset period using the simple averages of the BBB credit (debt) margin over the previous 40 business days and over the last 10 years, using RBA data.

Applying its approach, TasWater calculated the $WACC_{NEW}$ and $WACC_{EXISTING}$ as shown in Table 4.10 and Table 4.11 respectively.

Table 4.10 TasWater’s Parameters for $WACC_{NEW}$

Parameter	Description	Proposed value
Re	cost of equity (post tax)	8.26%
Rd	pre-tax cost of debt	6.87%
MRP	market risk premium	6.00%
Rf	risk free rate	4.36%
T	corporate tax rate	30.00%
β_e	equity (beta)	0.65
G	gearing ratio	60.00%
i	forecast inflation	2.50%
γ	gamma	50.00%
$WACC_{NEW}$		5.37%

Table 4.11 TasWater’s Parameters for $WACC_{EXISTING}$

Component	Description	Proposed value
Rd	pre-tax cost of debt	6.87%
G	gearing ratio	60.00%
Z	statutory pre-tax return on equity	3.00%
i	forecast inflation	2.50%
$WACC_{EXISTING}$		2.75%

In its Draft Report, the Economic Regulator proposed maintaining, market return, equity beta, gearing, corporate tax rate and gamma as adopted for the first regulatory period (ie six per cent, 0.65, 60 per cent, 30 per cent and 50 per cent respectively).

With respect to the risk free rate and the debt risk premium, Australian economic regulators use a number of diverse approaches to determine these parameters. Furthermore, economic regulators may use a different approach for different industries due to specific legislative requirements.

In recent years regulated entities have been lobbying regulators that the debt incurred by the benchmark firm should reflect an efficient debt financing and risk

management policy. Such a policy would be based on issuing debt at different points in time with a staggered maturity profile. Therefore the effective interest cost of an unregulated business is likely to be a mix of current and past interest rates. Consequently regulated entities claim a point in time estimate does not reflect actual debt issuing practices.

Whilst the Economic Regulator acknowledged the arguments in favour of incorporating a historic component in the debt component, the Economic Regulator also notes the Economic Regulation Authority's (ERA) view that incorporating past interest rates into the cost of debt is akin to a cost pass through. This leaves customers exposed to interest rate risk and has the potential to result in costs of debt out of line with the market and distorting Capex incentives.

The approaches currently being considered or applied by Australian regulators in determining the cost of debt component of the WACC include:

- a 'trailing average' methodology;
- a trailing average methodology with a transitional period;
- the mid-point of the 40 trading day average and a 10-year average of the yield on 10-year Commonwealth Government securities (CGS);
- 40 trading day average of the yield on 10-year CGS; and
- 40 trading day average of the yields on a portfolio of BBB corporate bonds.

In the absence of any consensus among economic regulators, for its Draft Report the Economic Regulator proposed calculating the risk free rate as the mid-point of the 40-day trading average of the 10-year CGS and a time weighted average of the 10-year CGS with a 10-year averaging period.

With respect to the debt risk premium, the Economic Regulator proposed, in its Draft Report, using the credit spreads for Australian non-financial corporations as published by the RBA. As the RBA's corporate credit spread is available monthly the Economic Regulator noted that it intended taking the last two observations available prior to making its final Price Determination. The WACCs adopted in the Economic Regulator's Draft Report used the RBA data for 12 December 2014 and are shown in Table 4.12 and Table 4.13.

Table 4.12 Economic Regulator’s proposed parameters for WACC_{NEW}

Parameter	Description	Proposed value
Re	cost of equity (post tax)	7.63%
Rd	pre-tax cost of debt	6.01%
MRP	market risk premium	6.00%
Rf	risk free rate	4.36%
T	corporate tax rate	30.00%
β_e	equity (beta)	0.65
G	gearing ratio	60.00%
i	forecast inflation	2.50%
γ	gamma	50.00%
WACC _{NEW}		4.58%

Table 4.13 Economic Regulator’s proposed parameters for WACC_{EXISTING}

Component	Description	Proposed value
Rd	pre-tax cost of debt	6.01%
G	gearing ratio	60.00%
Z	statutory pre-tax return on equity	3.00%
i	forecast inflation	2.50%
WACC _{EXISTING}		2.25%

In its submission on the Economic Regulator’s Draft Report TasWater raised concerns about the use of different methodologies for calculating the risk free premium and the debt risk premium. The Economic Regulator has reviewed its methodology for calculating the cost of debt and, noting the continued lack of consistency between regulators with regards to calculating the risk free premium and the debt risk premium, has decided, for the sake of simplicity, to use the same methodology to calculate both the risk free premium and the debt risk premium ie a combination of time weighted average and point in time methodology.

Using the RBA data for 10 April 2015 and applying the revised methodology set out above, the Economic Regulator has calculated the final parameters for the WACCs for the second regulatory period as set out in Table 4.14 and Table 4.15.

Table 4.14 Economic Regulator’s final parameters for WACC_{NEW}

Parameter	Description	Proposed value
Re	cost of equity (post tax)	7.18%
Rd	pre-tax cost of debt	5.81%
MRP	market risk premium	6.00%
Rf	risk free rate	3.28%
T	corporate tax rate	30.00%
β_e	equity (beta)	0.65
G	gearing ratio	60.00%
i	forecast inflation	2.50%
γ	gamma	50.00%
WACC _{NEW}		4.26%

Table 4.15 Economic Regulator’s final parameters for WACC_{EXISTING}

Component	Description	Proposed value
Rd	pre-tax cost of debt	5.81%
G	gearing ratio	60.00%
Z	statutory pre-tax return on equity	3.00%
i	forecast inflation	2.50%
WACC _{EXISTING}		2.13%

4.4.5 Opening regulatory asset base (New Assets)

TasWater calculated its opening RAB for new assets as follows:

Table 4.16 TasWater’s Proposed Opening RAB new assets (\$’000s) (\$2014-15)

	Water	Sewerage
1 July 2015 Opening RAB	272 028	196 249

As discussed in section 4.4.1 Jacobs’ review identified that TasWater’s actual Capex was less than its forecast Capex with Jacob’s identifying that TasWater and its predecessors had underspent approximately \$64 million over the first regulatory period. Consequently, for its Draft Report the Economic Regulator recalculated TasWater’s opening RAB (New Assets) as at 1 July 2015 to factor in the difference between actual and forecast Capex during the first regulatory period. The adjustment applied to TasWater’s opening RAB (New Assets) has been calculated as follows:

- (a) Determine the difference between the closing RAB value for 2014-15 for new assets in the first regulatory period and the closing RAB value for new assets for 2014-15 as provided by TasWater in its Data Collection Template. This provides the amount of under-spent Capex already factored into the opening RAB (New Assets).
- (b) Subtract the difference between the RABs calculated in (a) from the amount of under-spent Capex identified by Jacobs. This is the additional amount of under-spent Capex that is not factored into the opening RAB (New Assets).
- (c) Reduce the opening RAB (New Assets) by the amount calculated in (b).

The adjusted Opening RAB for new assets is provided in the following table.

Table 4.17 Economic Regulator’s Opening RAB new assets (\$’000s) (\$2014-15)

	Water	Sewerage
1 July 2015 Opening RAB	251 018	174 792

4.4.6 Regulatory asset bases

Based on the Economic Regulator’s proposed RAB components specified in sections 4.4.1 to 4.4.5 above, the Economic Regulator has calculated TasWater’s two RABs as follows:

Table 4.18 Economic Regulator’s RABs (\$’000s) (\$2014-15)

	2015-16	2016-17	2017-18
RAB _{EXISTING}	2 558 217	2 494 819	2 431 421
RAB _{NEW}	462 683	541 960	630 472

4.4.7 Operating and maintenance expenditure

TasWater’s proposed Opex is provided in the following table.

Table 4.19 TasWater’s Proposed Opex (\$’000s) (\$2014-15)

	2015-16	2016-17	2017-18
Opex	160 301	164 676	169 173

Jacobs’ review recommended using the Opex for the second year (ie 2013-14) of the first regulatory period expressed in 2014-15 dollars as a base year from which Opex is determined for the second regulatory period. In addition Jacobs also recommended that the base Opex allowance be adjusted to remove annual recurring savings of \$5.9 million arising from the merger of the three previous regulated entities into TasWater. Recognising the impacts of TasWater’s proposed capital program on future Opex, Jacobs also recommended increases in TasWater’s Opex allowances of \$700 000 in 2015-16, \$1 million in 2016-17 and \$1.4 million in 2017-18.

The Economic Regulator also reviewed the actual Opex for the previous regulated entities' for 2012-13 and 2013-14 and notes that the aggregated actual Opex exceeded the previous regulated entities' aggregated Opex forecasts by \$11.12 million and \$9.24 million respectively. Further, TasWater's forecast Opex for 2014-15 exceeds the aggregate of the previous regulated entities' Opex forecasts by \$9.99 million.

In its Draft Report, the Economic Regulator accepted Jacobs' recommendations with respect to Opex and used the 2013-14 financial year as a base and included Jacobs' recommended additional annual allowances to account for the expected additional Opex associated with TasWater's capital program.

In its submission on the Draft Report, TasWater requested the Economic Regulator confirm that the various Opex figures had been expressed correctly and queried the deduction of \$3.781 million to account for unregulated Opex.

The Economic Regulator subsequently reviewed and confirmed the accuracy of the Opex figures proposed in its Draft Report including that the figures had been correctly represented in 2014-15 dollars. The Economic Regulator's review also identified that Jacobs' Final Report was referring only to regulated Opex such that the reduction in the 2013-14 base figure to remove the unregulated component of Opex was not required. The Economic Regulator has therefore reversed this adjustment and has calculated TasWater's Opex for the second regulatory period as shown in Table 4.20.

Table 4.20 Economic Regulator's Opex (\$'000s) (\$2014-15)

	2015-16	2016-17	2017-18
Opex	149 746	150 046	150 446

4.4.8 Value of unregulated assets

The Economic Regulator notes that TasWater's Data Collection Template proposed treating eight per cent of the value of its total assets as unregulated assets. The Economic Regulator questioned TasWater about this and was advised that TasWater had adopted the same percentage of unregulated assets to total assets as the previous regulated entities had relied upon.

However this percentage (and the corresponding unregulated asset values) appears to be relatively high given the Economic Regulator's understanding of TasWater's unregulated activities and the assets involved in those activities (eg the value of the stormwater component of the Launceston Combined System and the value of pumps and pipes used for sewage re-use activities). However, over-estimating unregulated assets would be to the benefit of water and sewerage customers. The Economic Regulator therefore proposes accepting TasWater's estimate of the value of its unregulated assets.

4.4.9 Debt servicing costs

The following table reflects TasWater’s calculation of its debt servicing costs for each financial year of the second regulatory period.

Table 4.21 TasWater’s proposed debt servicing costs (\$’000s)

	2015-16	2016-17	2017-18
Debt Servicing Costs	23 617	25 908	30 564

As noted in its Draft Report the Economic Regulator concluded that TasWater had not apportioned its debt servicing costs on the basis of the ratio of the value of regulated assets to the value of total assets. Therefore, accepting TasWater’s proposal that unregulated assets comprise eight per cent of its total assets the Economic Regulator has calculated TasWater’s debt servicing costs for each financial year of the second regulatory period as follows:

Table 4.22 Economic Regulator’s debt servicing costs (\$’000s) (\$2014-15)

	2015-16	2016-17	2017-18
Debt Servicing Costs	21 728	23 836	28 119

4.4.10 Asset renewal annuity

The following table summarises TasWater’s calculation of its ARA for both water and sewerage.

Table 4.23 TasWater’s proposed ARA (\$’000s)

	2015-16	2016-17	2017-18
Water	45 511	45 511	45 511
Sewerage	49 679	49 679	49 679
Total ARA	95 190	95 190	95 190

Following the receipt of TasWater’s proposed Price and Service Plan, the Economic Regulator sought further clarification from TasWater about its approach to the calculation of its ARA. In response, TasWater advised that it viewed the ARA as an annualised theoretical calculation of the future asset renewal and replacement program required to maintain the operating capacity of infrastructure assets over the life of the regulated entity. TasWater also considered that the ARA does not necessarily equate to the current and forecast Capex allocated to renewals.

TasWater also explained that its annuity was based on a “fully regulated asset base” and essentially represented the amount it should be spending on renewals, as opposed to its forecast Capex which, given its need to focus on compliance in the near future, is based on the remaining funds that can be allocated and delivered each year.

TasWater’s responses indicated that it views the calculation of the asset renewal annuities as a theoretical exercise. In its Draft Report, the Economic Regulator

noted that it did not accept TasWater’s view or methodology with respect to the calculation of the ARA.

In particular, the Economic Regulator noted that the inputs into TasWater’s ARA were based on theoretical expenditure which the Economic Regulator contended is not practically achievable based on both Jacobs’ and the Economic Regulator’s review of TasWater’s past Capex.

As a result, in its Draft Report, the Economic Regulator ‘re-profiled’ each of the water and sewerage ARAs for the second regulatory period as follows:

- (a) Use forecast renewal and compliance Capex as per the Data Collection Template for the three years of the second regulatory period.
- (b) After three years, reduce compliance expenditure over a seven year period to reflect Jacobs’ final report reference to compliance Capex being required for a decade.
- (c) After three years, use the forecast renewal Capex for the five financial years from 2013-14 to 2017-2018 as provided in the Data Collection Template and then eight years of adding the annual reduction in compliance Capex to the renewals Capex over the previous eight years.
- (d) From 2032 onwards use the combined renewal and compliance Capex from 2016 onwards thereby creating an approximate 17 year renewals cycle based on TasWater’s own data which Economic Regulator considers is within TasWater’s financial and logistical capabilities.

Applying the methodology outlined in (a) to (d) above, the Economic Regulator’s Draft Report ARA was as follows:

Table 4.24 Economic Regulator’s proposed calculation of the ARA (\$’000s) (\$2014-15)

	2015-16	2016-17	2017-18
Water	16 040	16 040	16 040
Sewerage	28 991	28 991	28 991
TOTAL	45 031	45 031	45 031

As to the reasons for the large variation between TasWater’s proposed ARA and the Economic Regulator’s proposed ARA, the Economic Regulator noted in its Draft Report that it was of the opinion that Capex detailed in TasWater’s ARA is not achievable and considers that TasWater has not provided adequate justification for its approach to calculating the ARA.

In its submission on the Draft Report, TasWater provided a narrative as to why the Economic Regulator’s proposed ARA was incorrect. However, TasWater did not provide an alternative expenditure profile relevant to, or consistent with, that narrative. Upon request, TasWater subsequently provided a revised ARA which reflected a change in the annuity from 30 years to 60 years, included combined water and sewerage Capex of over \$474 million in 2015-16 and resulted in a

proposed annual annuity value of \$95.4 million which was slightly higher than the ARA presented in TasWater’s proposed Price and Service Plan. The Economic Regulator notes that the \$474 million in Capex for 2015-16 relates to TasWater’s estimate of the expenditure required to address the backlog of renewals.

The Economic Regulator considers that the additional information provided by TasWater did not address the concerns outlined in the Economic Regulator’s Draft Report regarding TasWater’s proposed ARA, specifically that the Capex used to calculate the annuities must be realistic and within TasWater’s financial and logistical capabilities to deliver. Consequently, the Economic Regulator has decided to apply the same methodology as it applied in calculating the ARA reflected for the Draft Report in calculating TasWater’s annual lower revenue limits for the second regulatory period.

However, due to the reduction in $WACC_{NEW}$ between the Economic Regulator’s Draft Report and in this Final Report (as explained in section 4.4.4), there has been a consequential decrease in the ARAs TasWater is required to adopt for the second regulatory period as shown in the following table.

Table 4.25 Economic Regulator’s calculation of the ARA (\$’000s) (\$2014-15)

	2015-16	2016-17	2017-18
Water	15 756	15 756	15 756
Sewerage	28 504	28 504	28 504
TOTAL	44 260	44 260	44 260

4.5 Calculation of TasWater’s revenue limits

The upper, statutory and lower revenue limits in this section have been calculated using the Economic Regulator’s decisions on the revenue limit components as set out in section 4.4.

Table 4.26 Upper revenue limit (\$2014-15)

	2015-16	2016-17	2017-18
Total RAB (a) (\$’000s)	3 020 900	3 036 779	3 061 893
$WACC_{NEW}$ (b)	4.26%	4.26%	4.26%
Depreciation (c) (\$’000s)	71 442	73 027	74 763
O&M (d) (\$’000s)	149 746	150 046	150 446
Upper revenue limit = (a x b) + c + d (\$000s)	349 784	352 344	355 550

Table 4.27 Statutory revenue limit calculation (\$2014-15)

	2015-16	2016-17	2017-18
RAB _{Existing} (g) (\$'000s)	2 558 217	2 494 819	2 431 421
WACC _{EXISTING} (h)	2.13%	2.13%	2.13%
RAB _{New} (i) (\$'000s)	462 683	541 960	630 472
WACC _{NEW} (b)	4.26%	4.26%	4.26%
Depreciation (c) (\$'000s)	71 442	73 027	74 763
O&M (d) (\$'000s)	149 746	150 046	150 446
Statutory Revenue Limit = (g x h) + (i x b) + c + d (\$000s)	295 455	299 362	303 914

Table 4.28 Lower revenue limit calculation (\$2014-15)

	2015-16	2016-17	2017-18
Debt servicing costs (e) (\$'000s)	21 728	23 836	28 119
O&M (d) (\$'000s)	149 746	150 046	150 446
ARA (f) (\$'000s)	44 260	44 260	44 260
Statutory revenue limit = e + d + f (\$000s)	215 733	218 141	222 824

A more detailed calculation of the three revenue limits is outlined in Appendix 1.

Chapter 5 of this Final Report compares the revenue limits calculated above against TasWater's forecast of its expected revenue for each year of the second regulatory period.

The Economic Regulator requires TasWater to adopt in its final Price and Service Plan the revenue limit calculations presented in Chapter 4 of this Final Report.

5 SETTING PRICES AND REVENUE TRANSITION PATHS

This chapter provides an overview of TasWater's proposed prices and pricing structures for the second regulatory period together with the Economic Regulator's assessment of those pricing proposals.

The chapter outlines the:

- Pricing Principles;
- price reform priorities for the second regulatory period;
- structure of pricing for regulated water and sewerage services;
- pricing for other services associated with the provision of regulated water and sewerage services;
- Economic Regulator's assessment of TasWater's forecasts and proposed price transition arrangements; and
- the Economic Regulator's alternative pricing scenarios.

5.1 Pricing Principles

Prior to the commencement of the industry reform process, the prices charged by local governments for water and sewerage services varied markedly between municipalities in terms of both the basis for setting prices and the level of prices. The current structure and level of prices for water and sewerage services remain, by and large, a legacy of those former council arrangements.

One of the key objectives of the reform of the Tasmanian water and sewerage sector was to transition customers to a rational price structure consistent with the principles set out in the Industry Act, Pricing Regulations and the NWI's pricing principles. The commencement of this price reform transition process was recognised by the Economic Regulator as a priority for the first regulatory period.

For the second regulatory period TasWater's proposed Price and Service Plan was required to propose price reform arrangements that continued the transition of prices to a structure that meets the:

- Pricing Principles contained in section 68 of the Industry Act;
- additional Pricing Principles set out in the Pricing Regulations; and
- price reform priorities established by the Economic Regulator for the second regulatory period.

5.1.1 Statutory Pricing Principles

Subject to section 68AA of the the Industry Act (see section 5.1.3 below), TasWater's pricing proposal for regulated services must reflect the Pricing Principles contained in section 68 of the Industry Act together with any additional Pricing Principles set by regulation.

Section 68(1) of the Industry Act outlines the following Pricing Principles:

- a regulated entity is to be given a reasonable opportunity to recover the efficient costs it incurs in:
 - providing a regulated service; and
 - complying with a regulatory obligation; or
 - complying with a requirement to make a regulatory payment under the Industry Act (except where the Industry Act provides otherwise);
- the price is to provide for efficient pricing through:
 - separately charging and recovering fixed costs and variable costs via voluntary metering, mandatory metering or in such other manner as determined by the Economic Regulator (that is, via two-part pricing for water services); and
 - reflecting the costs of servicing particular customers or classes of customers in different locations, regions or schemes;
- the price is to provide effective incentives, with respect to a regulated service to:
 - promote economic efficiency;
 - reduce costs; or
 - otherwise improve productivity;
- the price is to allow a regulated entity to receive a return on assets used in providing the regulated service; and
- the price charged to a particular customer or class of customers is to reflect at least the costs that relate directly to providing the regulated service to that customer or class of customers to the extent that it is commercially and technically reasonable to do so.

5.1.2 Pricing Regulations

In addition to the Pricing Principles set out in section 68 of the Industry Act, the Pricing Regulations contain additional Pricing Principles in relation to the following matters:

- the treatment of contributed assets¹;
- pricing zones (nodal pricing);
- the basis for setting fixed and variable charges (including the prohibition of free water allowances);
- the calculation of developer charges; and
- the structure of service introduction charges.

Pricing proposals within proposed price and service plans must also reflect the matters to which the Economic Regulator is to take into account under section 15 of the Industry Act.

5.1.3 The transition period

Section 68AA of the Industry Act acknowledges that the full application of the Pricing Principles will require a transition period. For the purpose of section 68AA, the Transition Period is defined in the Pricing Regulations as the eight year period from 1 July 2012 to 1 July 2020 inclusive (that is, the Transition Period will expire at the beginning of the third year of the third regulatory period).

Section 68AA enables the Pricing Principles to not be applied to the formation or approval of price and service plans and price determinations during the transition period to the extent that the application of those principles would:

- result in a significant impact on customers, or a particular class of customers, due to the rate of change in prices;
- adversely affect the sustainability of a regulated entity in so far as it provides regulated services; or
- adversely affect the ability of a regulated entity to deliver regulated services.

Therefore, if TasWater includes a pricing proposal in its proposed Price and Service Plan that does not satisfy all of the Pricing Principles in the Industry Act and the Pricing Regulations, it must justify, in each instance, why it is unable to satisfy that individual Pricing Principle, in the context of the requirements of section 68AA.

It should be noted that section 68AA does not apply to the matters the Economic Regulator is to take into account under section 15 of the Industry Act,

¹ Contributed assets include developer charges and government grants but exclude equity contributions from the owner of a regulated entity. Furthermore, the assets of the three previous regulated entities which have been and will be vested in the regulated entity are not to be treated as capital contributions.

including the need for the Economic Regulator to consider the impact of the rate of change of prices on customers. The outcomes from the Economic Regulator's assessment of these price impacts are discussed in section 5.8.

Due to the requirement for regulatory periods to be at least three years duration, the third regulatory period will not align with the end of the Transition Period. The Economic Regulator is not concerned about the non-alignment with the end of the Transition Period provided target tariffs and proposed price transition paths for the second and third regulatory periods are designed to enable compliance with the Pricing Principles by 1 July 2020.

In accordance with the preceding discussion TasWater was required to show how prices will be transitioned, whilst managing customer impacts, such that the Pricing Principles are met by the end of the Transition Period. TasWater was also required to demonstrate, in its proposed Price and Service Plan, how target tariffs and price transition paths for the second regulatory period will enable TasWater to comply with all Pricing Principles in the Industry Act by the end of the Transition Period ie by the beginning of the third year of the third regulatory period.

In its proposed Price and Service Plan TasWater stated that, in determining its proposed price transition arrangements for the second regulatory period, it has been conscious of the fact that inequitable pricing arrangements still exist across the state. In addition, TasWater has acknowledged that, by 30 June 2018, customer prices will have been in transition for almost a decade.

TasWater's Proposed Price and Service Plan also acknowledges that TasWater is required to fully comply with the Pricing Principles by the end of the Transition Period and, in this regard, its proposed Price and Service Plan notes that:

- all residential customers (and 95 per cent of all customers) will reach target tariffs by 30 June 2018; and
- all customers will reach target tariffs by 30 June 2020.²

5.2 Price reform priorities for the second regulatory period

The Economic Regulator specified the price reform priorities for the second regulatory period in its PSP Guideline. In doing so the Economic Regulator acknowledged that it is unlikely that TasWater will be able to comply with all the Pricing Principles by the end of the second regulatory period on 30 June 2018. This is primarily due to the need to manage the impact of the rate of change of prices on customers whilst ensuring TasWater's ongoing financial sustainability. Consequently, there is a need to prioritise the price reform objectives for the second regulatory period, as occurred for the first regulatory period.

² TasWater, *Draft Price and Service Plan 2015-18 (August 2014)*, page 71.

To assist TasWater in this regard, the Economic Regulator proposed a number of priority price reform objectives for the second regulatory period. The priority objectives have been determined based on:

- existing water and sewerage pricing structures that continue to deliver inequitable pricing across the state; and
- TasWater's financial position.

For the second regulatory period price reform proposals contained within TasWater's proposed Price and Service Plan are required to continue to focus on achieving the following priority objectives:

- continuing to transition customers to a rational price structure consistent with NWI Pricing Principles;
- transitioning customers paying above the target tariff to the target tariff;
- continuing to transition all other customers to the target tariff;
- generating revenue that, at a minimum, equals the lower revenue limit to achieve sustainability; and
- managing the impact of price changes on customers.

The following price reform objectives are considered secondary priorities for the second regulatory period:

- ensuring all customers pay the same price for the same services; and
- transitioning revenue to the statutory revenue limit.

In relation to these priorities, TasWater stated in its proposed Price and Service Plan that its focus in the second regulatory period is on equity and fairness for all customers, achieving a level playing field, and delivering better services and outcomes for Tasmanians.

TasWater stated that it was aware of continuing community concerns about cost of living pressures which include the affordability of water and sewerage services. TasWater also noted that it understood that many of its stakeholder groups see current pricing transition arrangements as taking too long and being unfair.

In developing the proposed approach to the pricing and delivery of services for the second regulatory period, TasWater considered the need to balance the following outcomes:

- managing the impact of increases for customers currently paying below target tariffs;
- managing the expectations of those customers currently paying over target tariffs;

- continuing the path of public health and environmental compliance improvement;
- meeting owner expectations as set out in the Shareholders' Letter of Expectations, particularly with respect to facilitating economic development; and
- ensuring TasWater maintains an appropriate financial position so that it can meet its obligations and deliver the agreed standards of customer service.

5.3 Structure of regulated prices

This section provides an overview of the services TasWater intends providing during the second regulatory period, categorised under water services, sewerage services and other fees and charges, as well as the proposed tariff structure for each service.

5.3.1 Explanation of proposed tariff structure

The following is a high level description of TasWater's proposed tariff structure for each regulated service:

Water charges:

- fixed water tariff – an annual charge for the provision of water via water infrastructure for both full service customers and limited supply customers;
- volumetric water tariff – a charge per kilolitre for water usage, split between water that is of drinking water quality and water that is not of drinking water quality;
- fire service connection tariff – an annual charge for the provision of capacity to support fire fighting in private buildings;
- water carriers tariffs – a charge per kilolitre for water taken from water infrastructure by water carriers;
- public and private filling tariffs - a charge per kilolitre for water taken from water infrastructure via public and private filling stations (the private filling tariff also includes an annual fixed charge whilst the public filling station tariff includes a one-off security deposit);
- portable metered standpipes – a charge per kilolitre for water taken from portable metered standpipes and an annual fixed charge; and
- service charge – an annual charge for the ability to connect to TasWater's infrastructure, even though a physical connection may not be in place.

Sewerage charges:

- fixed sewerage tariff – an annual charge for the removal, treatment and disposal of sewage via sewerage infrastructure (including motor home dump points and Septic Tank Effluent Disposal (STED) customers);

- service charge – an annual charge for the ability to connect to a regulated entity’s infrastructure, even though a physical connection may not be in place; and
- trade waste tariffs – annual charges for the removal, treatment and disposal of trade waste via sewerage infrastructure. The charge depends on the category of customer which in turn depends on the type and volume of waste produced. Category 1, 2A, 2B and 2C customers pay an annual application fee and an annual fixed charge. Minor and major non-compliance charges may also be levied where trade waste discharge is outside agreed limits. Charges for Category 3 and 4 customers are negotiated with TasWater and may involve fixed and/or variable charges and reflect the costs of removing, treating and disposing of the trade waste.

Miscellaneous charges:

- connection/disconnection charges – cost recovery charges levied for connecting to, or disconnecting from, water or sewerage infrastructure;
- metering charges – cost recovery charges levied for items such as special meter reads, meter testing and meter relocation;
- sundry fees – cost recovery charges levied for a number of sundry fees such as location of services or pressure and flow testing;
- development services fees – cost recovery charges levied for the assessment of development, subdivision, building and plumbing applications;
- developer charges – cost recovery charges levied upon developers (either as a charge or via the gifting of water and/or sewerage infrastructure by the developer) to cover the cost of expanding water and/or sewerage infrastructure to support the development or the consumption of excess infrastructure capacity (headworks charges); and
- service introduction charges – a temporary additional charge imposed on particular customers to recover some of the cost of the construction of water and/or sewerage infrastructure to service areas not previously receiving reticulated water and/or sewerage services.

The Economic Regulator notes that TasWater’s proposed high-level tariff structure is not significantly different to that approved by the Economic Regulator in respect of the three previous regulated entities for the first regulatory period.

The Economic Regulator reviewed TasWater’s proposed regulated services and proposed tariff structures and considered that they generally satisfied the definition of a regulated service and are structured in line with the Pricing Principles respectively.

5.3.2 Pricing zones

A pricing zone is a region where the prices charged to customers are the same for the same service, ie the same sets of prices apply to each customer class. A pricing zone could cover the entire region serviced by TasWater (which would equate to ‘postage stamp’ pricing) or there could be a number of zones within the region (nodal pricing).

The Pricing Regulations set out the circumstances where pricing zones may be included in a proposed price and service plan. Regulation 6 states that different pricing zones can only be implemented where there are significant differences in the costs of providing regulated services to different areas.

Even if there are significant differences in the cost of providing services across the region, different pricing zones may still not be required if the Economic Regulator considers the cost of implementing such zones outweighs the benefits.

Where material cost differences are identified, or there is insufficient data to assess cost variations, and TasWater does not propose implementing pricing zones, TasWater must justify its decision not to implement pricing zones.

Where material cost differences are identified and TasWater proposes adopting pricing zones, the pricing zones must be clearly identified (for example, via maps) and justified on the basis of cost differentials in providing a regulated service.

In the first regulatory period, postage stamp pricing applied in Tasmania on a regional basis, with one set of target tariffs for the North, one set for the North West and one set for the South.

In its proposed Price and Service Plan, TasWater proposed one state-wide target tariff for each service for the second regulatory period. TasWater considered that state-wide postage stamp pricing is the fairest and most practical pricing approach in Tasmania, given the dispersed population and asset base.

TasWater offered a number of reasons to justify postage stamp pricing within the Tasmanian context:

- the concept of paying the same price for the same service is generally viewed as leading to an equitable outcome for an essential service;
- uniform pricing is simple to understand, particularly given the many different pricing arrangements which previously existed in Tasmania;
- many small towns could not afford to pay the costs associated with operating and maintaining small water supply and wastewater treatment systems, thereby rendering the systems unsustainable; and
- the administrative cost of developing a complex zone-based pricing system, which would in all likelihood require data of a level that TasWater does not yet have, is prohibitive.

TasWater's proposed Price and Service Plan noted that the concept of postage stamp pricing was raised through the targeted stakeholder consultation it undertook in early 2014. TasWater also noted that solid support was expressed through this consultation across all regions for a single state-wide target tariff for each service, with a general feeling that postage stamp pricing made it fair/equitable for everyone and that with one water authority, one price made sense.

TasWater also indicated that this issue was not prominent in the submissions it received in response to the summary of its proposed Price and Service Plan that was released for public comment on 30 May 2014.

As required under the PSP Guideline any decision not to implement pricing zones must be justified by demonstrating that the cost of implementing such zones outweighs the benefits. However, TasWater's proposed Price and Service Plan did not provide information to demonstrate that the cost of implementing pricing zones outweighed the benefits in the proposed Price and Service Plan. When asked by the Economic Regulator for additional information, TasWater stated that data on a system by system basis would be needed to accurately and appropriately identify and inform the build-up of costs and prices between different zones and that TasWater does not have this level of data for all systems across the state.

TasWater also stated that implementing zone pricing would require costly changes to systems which TasWater believes are not warranted given its small customer base.

TasWater also pointed out that there are approximately 50 000 customers (25 per cent of its customer base) in Tasmania receiving a water and sewerage concession, which is a flat state-wide rate funded by the State Government. Given this, TasWater considered that any move away from postage stamp pricing would have to be thoroughly considered in terms of its impact on concession customers.

Despite the absence of details about the costs of implementing pricing zones and in light of the issues raised by TasWater, the Regulator approves TasWater's proposal to not introduce pricing zones for the second regulatory period.

5.3.3 Customer classes

In its proposed Price and Service Plan TasWater was required to outline customer classes that reflect the differential cost of providing regulated services to each customer class. However, where a regulated entity proposes a change to the existing approved customer classes, justification should be provided on the basis of furthering achievement of the Pricing Principles in the Industry Act and be in line with the priority price reform objectives.

Different customer classes are required to reflect the following:

- differences in customer service levels (for example, customers connected to main water supply pipes (wayside customers) may experience more frequent service interruptions and can also experience variable water quality); or

- differences in the quality of the product supplied (for example, water that is of drinking water quality versus water that is not of drinking water quality); or
- differences in the fixed costs associated with providing water services or sewerage services to a property.

The end use of the product and/or service provided should not determine customer class. For example, a customer class based on whether the customer is a residential or non-residential customer does not reflect differing service levels or product quality and should not be used to define a customer class.

The following customer classes were approved as part of the 2012 Price Determination Investigation:

- full service customers;
- limited water quality - customers receiving water from a supply which has a permanent boil water alert in place, or customers receiving water from a supply the regulated entity has declared to not be of drinking water quality;
- limited water supply - customers that:
 - are connected to a water main that periodically does not contain water under positive pressure; or
 - have a connection designed to provide low or intermittent flow, such as where the customer has been required to install, operate and maintain an individual tank or pump; or
 - are connected to a non-reticulated water main that is subject to significant pressure variations due to either –
 - o a pumped supply where the low pressure is below 50 kPa and the high pressure is above 500 kPa; or
 - o an inlet supply to a trunk reservoir such that when the reservoir inlet valve is open the pressure is below 50 kPa; or
 - receive a supply the regulated entity determines to be inadequate; and
- combined limited water quality and limited water supply.

Different customer classes were also approved as part of the 2012 Price Determination Investigation in respect of trade waste, with sub-classes developed to reflect the level of service provided to different classes of trade waste customers. The Economic Regulator decided, at that time, that each of the previous regulated entities was to categorise and treat trade waste customers as follows:

- Category 1 and 2 trade waste customers operating under a standard regulated contract (section 60 of the Industry Act); and
- Category 3 and 4 trade waste customers operating under a section 61 contract.

The 2012 Price Determination Investigation also recognised the different costs associated with septic tank effluent disposal schemes (STEDs). These schemes operate in a number of areas including Granville Harbour, Arthur River, Cowrie Point, Trial Harbour and Colebrook. With STEDs, liquid waste is removed through the regulated entity's infrastructure whilst the customer maintains a septic tank which has to be pumped out periodically to remove the solid waste. If the periodic pumping is at the owner's expense then the service provided is below that ordinarily provided in a standard sewerage scheme. Customers using STED schemes are therefore considered to be a separate customer class. TasWater's proposed charges in respect of STEDs for the second regulatory period are outlined in section 5.3.8.

With the exception of trade waste customers, TasWater has proposed to maintain the same customer classes for the second regulatory period as those in place for the first regulatory period.

With respect to trade waste customers, TasWater has proposed to refine the categories using an improved technical and commercial risk assessment of trade waste impacts on the wastewater system as the basis for categorisation and calculation of trade waste charges. More specifically, Category 2 will be split into three sub-categories to more accurately categorise trade waste customers according to their demand on the wastewater system. This change is discussed in more detail in section 6.2.6.

The Economic Regulator, having reviewed TasWater's proposals, considers that TasWater's proposed customer classes for the second regulatory period reflect the differential cost of providing regulated services to customers in each class.

The Economic Regulator approves the customer classes TasWater proposed for the second regulatory period.

5.3.4 Fixed water charges (full services)

A fixed charge is a recurrent charge for a regulated service that should reflect a regulated entity's costs of providing the service to a customer or class of customers. A fixed charge does not change as the usage of the regulated service changes. A fixed charge is not a variable charge or a service introduction charge.

Under the Pricing Regulations, a fixed charge for a regulated service supplied to residential premises on a property can only be imposed on a person who is an owner of those premises.

As for the first regulatory period, TasWater proposed setting fixed water charges based on the size of a property's metered water connection. TasWater advised that this approach is used in many other jurisdictions around Australia and is accepted as best practice. The relationship between the diameter of the metered connection and the potential flow that can be provided is used to scale the fixed price for water. A larger connection size means a larger potential demand on the system and, therefore, a higher fixed charge. The following table outlines the multipliers relating to water connection size.

Table 5.1 Multipliers for fixed water charges based on connection size

Water Connection Size (mm)	Multiplier (x)
20	1.00
25	1.56
30	2.25
32	2.56
40	4.00
50	6.25
65	10.56
75	14.06
80	16.00
100	25.00
150	56.25
200	100.00
250	156.25

The Economic Regulator considers that TasWater’s proposal to base fixed water target tariffs on connection sizes is appropriate as it reflects potential water demand upon TasWater’s water infrastructure, which is consistent with the requirements of the statutory Pricing Principles and arrangements in other jurisdictions.

The Economic Regulator approves TasWater’s proposal to base fixed water target tariffs on the proposed connection sizes and multipliers.

5.3.5 Fixed water charge (limited service)

As was the case for the first regulatory period, TasWater has proposed the application of a 10 per cent discount to the target fixed water charge for customers who receive a limited service due to pressure and/or flow related issues. This discount reflects the deficiency in the local water reticulation system. These charges are linked to the fixed water charge for full service customers.

The Economic Regulator considers that TasWater’s proposal to provide a discount to the full service fixed water target tariffs where the service provided is inferior to a full service is appropriate.

The Economic Regulator approves TasWater’s proposal to charge limited supply customers 90 per cent of the fixed water target tariffs for each year of the second regulatory period.

5.3.6 Fixed water charge (fire services)

Commercial and industrial customers in particular may have a water service provided to their property to support a sprinkler system or hose reel in the event of fire.

Fire services are not metered connections and are not often called upon. However, the need for the service requires a regulated entity to build capacity into its network to meet peak supply requirements.

As for standard water charges, and as occurred for the 2012 Price Determination Investigation, TasWater has proposed levying a charge based on the connection size. However, given this service is used infrequently, TasWater has also proposed levying 25 per cent of the fixed water target tariff for fire services (eg a 40mm fire service would be charged at the same target tariff rate as a standard 20mm metered water service, which is one quarter of the tariff applying to a 40mm water connection).

The Economic Regulator considers it appropriate to reduce the fixed charge for fire services in recognition of the fact that these services are rarely used and the demand on the network is, therefore, less than the demands placed on the network by standard water connections.

The Economic Regulator approves TasWater's proposal to charge fire service customers 25 per cent of the fixed water target tariffs for each year of the second regulatory period.

5.3.7 Fixed sewerage charge (full service)

The Pricing Regulations specify that TasWater must charge a variable charge (volumetric charges) for water services but gives TasWater discretion as to whether or not to impose a variable charge for sewerage services. Since the reform of the water and sewerage industry, the previous regulated entities and now TasWater have elected not to include a variable pricing component in the sewerage service charge, instead utilising the fixed charge to cover costs associated with the treatment and disposal of domestic wastewater. TasWater has stated that it does not consider it practical or effective to meter all sewerage connections.

As part of the 2012 Price Determination Investigation the previous regulated entities proposed determining sewerage charges as a ratio of the assessed ETs for each customer. An ET is a measure of the load a property places on the sewerage system, and is based on the discharge of a standard residential dwelling.

However, at that time the previous regulated entities had not yet determined ETs for all customers. The Economic Regulator approved the proposed use of an ET methodology and accepted the entities' undertaking to complete the calculation of ETs on or before a customer's first quarterly accounting billing cycle of the first regulatory period. Customers would be transitioned to the determined ETs in line with the proposed price constraints.

It became apparent during the first regulatory period that there were differences between the three previous regulated entities in terms of the application of price caps, ET methodologies and accompanying policies.

In its proposed Price and Service Plan TasWater was required to outline:

- the ET methodology employed including the basis for the methodology adopted;
- the basis for determining the applicable ET for different types of customers; and
- how it intends to transition ET prices whilst managing customer impacts through to the end of the Transition Period (1 July 2020).

In its proposed Price and Service Plan, TasWater explained that the ET methodology is based on the Water Services Association Australia (WSAA) Sewerage Code and information released by the Water Directorate³ and has been adjusted to best reflect Tasmanian circumstances.

The Water Directorate published the *Section 64 Determinations of Equivalent Tenements Guidelines* in January 2005. The document was originally developed by The Hunter Water Corporation under the direction and peer review of the Water Directorate's Policy sub-committee. The methodology for the setting of the actual charge per ET is set out in the document *Developer Charges Guidelines for Water Supply, Sewerage and Stormwater* which was published by the Victorian Department of Land and Water Conservation in December 2002. The Economic Regulator notes that the WSAA and Water Directorate information is available only to members of those organisations ie this information is not available to the general public.

As is currently the case, TasWater proposed that a customer's sewerage service target tariff increase proportionally with the ET assessment, with non-residential properties charged based on the load they place on the sewerage system relative to a single residential dwelling. This means that if a property is deemed to place twice as much load on the sewerage system, it will be assessed as two ETs and the target tariff will be twice the standard sewerage service charge.

TasWater considered it to be administratively efficient and cost effective to apply a standard for residential properties, which is also common practice. In relation to non-residential customers, various property attributes, including building area, land size, number of occupants, general public entertainment facilities, hospital beds and amenities, are used to undertake an ET assessment.

³ The Water Directorate is a water and sewerage industry organisation that provides independent advice to councils including direction on technical issues. Membership is open to all councils and county councils providing water and/or sewerage services in NSW.

The proposed ET assessment process has three steps:

1. Ascertain the property type and associated property attributes using a combination of data sources such as site visits, local knowledge, Google maps, direct customer contact and council data. .
2. Identify customers who have a property within serviced land that is not physically connected to TasWater’s infrastructure but which has the ability to connect. These customers are assessed as 0.6ET.⁴
3. Attribute a default one ET to all identified standard residential customers. ETs for identified non-residential customers, for example commercial, industrial, primary industry, and community services, are to be determined based on their respective category and, within that category, the other relevant parameters including number of beds or rooms, number of staff and students, and gross floor area and/or applicable amenities.

Where multiple activities are conducted on a property the ET assessment is based on a calculation for specific types of activity, noting discharge of non-domestic liquid trade waste is recouped through the application and payment of trade waste charges.

ET categories fall into two major classes: residential user categories and non-residential user categories. The majority of property lots are residential lots on standard allotments. It is generally accepted that a loading of one ET is applicable for residential lots. Where the lots are classified as multiple-residential (ie if more than one domestic dwelling is located on a single allotment), the number of ETs will be multiplied by the number of dwellings. These lot types which may include duplexes, units (including self-care retirement units), flats, apartments, granny flats and other separated dwellings on a per lot basis) will each be assessed as one ET. Non-residential user categories include: accommodation, business (excluding food preparation), food preparation, entertainment, sporting/spectator facilities, community facilities, general and other.

TasWater’s schedule of the proposed ET rates for different industries and property uses is as follows:

Table 5.2 TasWater’s proposed Equivalent Tenement (ET) Rates

Code	Property Type	ET per unit	Unit
RE00	Unconnected serviced land (ie undeveloped vacant land)	0.6000	lot
RE	Standard occupancy		
RE01	Single residential dwelling ^{Note 1}	1.0000	dwelling
RE01	All other residential properties	1.0000	dwelling

⁴ The assessment of 0.6ET recognises that whilst there isn’t any sewage discharged from these properties, TasWater’s view is that the property owner should make a contribution towards the capital cost of the infrastructure even if not actually connected.

Code	Property Type	ET per unit	Unit
AP	Accommodation (permanent)		
AP01	Nursing home/ special care home	0.4500	bed
AP02	Self-care retirement units/villas	1.0000	dwelling
AP03	Self-care retirement – serviced unit (on-site)	1.0000	dwelling
AP04	Self-care retirement – serviced unit (off-site)	1.0000	dwelling
AP05	Boarding house	0.5000	per bed
AS	Accommodation (short term)		
AS01	Caravan park – caravan/cabin/camping sites, including long term sites. NB any stand-alone residence will be have the standard ET of 1 applied in addition to amenities	0.5000 0.4500	toilet/shower cabin
AS02	Bed and breakfast/guest house	0.4500	room
AS03	Services – motel/hotel/resort room – medium density	0.4500	room
AS04	Services – motel/hotel/resort room – high density	0.4500	room
AS05	Backpackers/ hostel	0.2300	bed
AS06	Serviced/unserviced apartments	1.0000	dwelling
AM	Accommodation (medical care)		
AM01	Hospital	0.9710	bed
AM02	Hostel (medical)	0.9710	bed
BE	Business (excluding food preparation)		
BE01	Single retail shop	0.0030	GBFA(sqM)
BE02	Supermarket	0.0030	GBFA(sqM)
BE03	Shopping centre	0.0020	GBFA(sqM)
BE04	Office	0.0060	GBFA(sqM)
BE05	Hairdresser/ beauty salon	0.8000	basin ^{Note 2}
BE06	Laundromat	0.7000	machine ^{Note 2}

Code	Property Type	ET per unit	Unit
BE07	Medical centre	0.6000	consulting room
BE08	Service station	0.9000	lane
BE09	Car wash (wand wash)	0.5000	wand
BE10	Car wash (drive through)	1.0000	lane
BE11	Animal boarding	0.0750	per kennel
		0.0060	0.0060 GBFA(sqM) office space
BE12	Nursery	0.0030	GBFA(sqM)
BE13	Airport	case-by-case	case-by-case
BE14	Nursery	0.0030	GBFA(sqM)
MP	Meal preparation		
MP01	Restaurant/café	0.0080	GBFA(sqM)
MP02	Take away/fast food no public amenities	0.0080	GBFA(sqM)
MP03	Take away/fast including public amenities	0.0160	GBFA(sqM)
MP04	Catering	0.0080	GBFA(sqM)
FM	Food Manufacture		
FM01	Meat – abattoir/smallgoods	0.0080	GBFA(sqM)
FM02	Dairy - milk	0.0080	GBFA(sqM)
FM03	Dairy – cheese, butter, yoghurt	0.0080	GBFA(sqM)
FM04	Dairy – ice cream	0.0080	GBFA(sqM)
FM05	Grain – flour milling/bakery	0.0080	GBFA(sqM)
FM06	Grain – biscuits & cakes	0.0080	GBFA(sqM)
FM07	Beverages - beer	0.0080	GBFA(sqM)
FM08	Beverages – soft drinks & cordials	0.0080	GBFA(sqM)
FM09	Other - confectionery	0.0080	GBFA(sqM)
TL	Textile & Leather		
TL01	Wool – wool scour	0.0040	GBFA(sqM)
TL02	Wool – felt & carpet, dyeing & spinning	0.0040	GBFA(sqM)

Code	Property Type	ET per unit	Unit
MM	Metal processing & manufacturing		
MM01	Factory/workshop/warehouse	0.6000	toilet/shower
MM02	Metal finishing – electroplating, anodising, galvanising	0.6000	toilet/shower
MM03	Engineering – machine shops, sheet metal, foundry, extrusion	0.6000	toilet/shower
MM04	Engineering – rolling	0.6000	toilet/shower
MM05	Manufacturing – concrete products	0.6000	toilet/shower
SL	Services		
SL01	Services – laboratories	0.0100	GBFA(sqM)
SL02	Services – laundries - industrial	0.0060	GBFA(sqM)
EF	Entertainment		
EF01	Licensed club	0.0080	GBFA(sqM)
EF02	Pub/bar	0.0080	GBFA(sqM)
		0.450	accommodation
EF03	Cinema/ theatre/pubic entertainment	0.0140	visitor
EF04	Conference centre	0.0140	visitor
EF05	Marina	0.0080	GBFA(sqM)
SF	Sporting/spectator facilities		
SF01	Sports stadium	0.6000	0.6000 ETs per public amenity + 0.0080 ETs per SqM of clubrooms (GBFA)
SF02	Amenities & indoor facilities	0.6000	0.6000 ETs per public amenity + 0.0080 ETs per SqM of clubrooms (GBFA)
SF03	Hockey field – artificial surface	0.0080	GBFA(SqM)
SF04	Sports ground irrigated area	0.6000	shower
		0.6000	wc
SF05	Bowling alley	0.5500	lane

Code	Property Type	ET per unit	Unit
SF06	Bowling green	0.0080	GBFA(SqM)
SF07	Swimming pool – indoor/outdoor	case-by-case	case-by-case
SF08	Gymnasium	0.6000	amenities
CF	Community facilities		
CF01	Child care centre/pre school	0.0570	child
CF02	Education – school (primary & secondary)	0.0570	student
CF04	Education – college/university (tertiary)	0.0570	student
CF05	Correction centre	0.7500	person
CF06	Church/place of worship	0.0030	GBFA (sqM)
CF07	Community centre/hall	0.0030	GBFA (sqM)
CF08	Parks/ gardens/reserves	0.6000	shower + wc
CF09	Public amenities (per shower)	0.6000	shower
	Other		
CP00	Telstra/Aurora/Council - properties that do not have any sewerage facilities (eg exchanges, substations & roundabouts/parks that do not have any buildings or small pieces of lands) (this may include private parcels that have no likelihood of future development)	null	null
CP01	Telstra/Aurora/Council - properties that have sewer facilities (eg exchanges, substation & roundabouts/parks that have small buildings as well). Bigger buildings to be assessed per sq meter under the office code.	1	Default 1ET
ET00	Mixed use, a generic code for properties which might have multiple use, such as multiple use free hold titles	case-by-case	case-by-case

Code	Property Type	ET per unit	Unit
RU01	Non-residential property with a water connection and no sewer connection (Not within serviced land)	null	null
NR01	Non-residential property with a water connection and no sewer connection (Not within serviced land)	null	null
MH01	Motor home dump points	1	Default 1ET
NULL	Properties with no sewer connections	null	null

Notes:

1. *Includes units/flats/apartments/granny flats, regardless of number of bedrooms, medium or high density dwellings.*
2. *Subtract 1 ET from total assessment to account for Trade Waste charges.*

GBFA = Gross Building Floor Area.

Case-by-case – means individual assessment on specific identified multiple uses, similar to ET00.

Equivalent Tenement (ET) calculations are rounded down to 1 decimal place. Minimum assessment is 1 ET.

For the purpose of calculating sewerage charges, consistent with the approach approved for the first regulatory period, a customer's ET assessment will result in a minimum of one ET being applied, except for vacant properties where 0.6ET is applied. The number of ETs will vary depending on the unit of measure and property types.

In its Draft Report, the Economic Regulator considered that TasWater's proposed adoption of an ET methodology was appropriate given that the methodology is designed to estimate the load placed on the sewerage system by each connection. The Economic Regulator also noted that TasWater's proposed Price and Service Plan provided an explanation of the basis for determining the applicable ET for different types of customers. The Economic Regulator was, however, concerned about the lack of transparency surrounding the ET methodology itself and indicated its intention of requiring TasWater to make relevant details publicly available.

The Economic Regulator also noted in its Draft Report that whilst TasWater has provided a detailed schedule of ET rates, it has not provided a clear explanation of the ET methodology it has used to calculate the various ET rates to be applied to different industries and property uses in its proposed Price and Service Plan. This is particularly an issue given that the supporting basis for TasWater's approach (ie information published by WSAA and the Water Directorate), is available by subscription only to members of those bodies. The PSP Guideline states that TasWater must outline its ET methodology including the basis for the methodology

adopted and the basis for determining the applicable ET for difference customer types.

The Economic Regulator's Draft Report also noted that TasWater proposed transitioning sewerage customers to target tariffs based on their respective number of ETs ie the price constraints of the greater of \$100 or 10 per cent apply to one ET and are proportionally adjusted in line with increases in the number of ETs. The Economic Regulator considered this approach to be appropriate in terms of managing the impact of price shocks for customers.

In consultation on the Draft Report, concerns were raised about the validity and accuracy of applying TasWater's proposed ET methodology to caravan parks due to the diverse range of facilities and services offered by Tasmanian caravan parks. It was contended that the methodology as proposed did not provide an accurate estimate of the likely demand each caravan park would impose on the sewerage network.

To address these concerns and following discussions with both the industry peak body, Caravanning Tasmania, and TasWater, the Economic Regulator developed the following alternative approach to determining ETs for caravan parks for the second regulatory period:

Caravan park ETs =

$$\frac{\text{Previous year Q3 to current year Q3 annual water consumption} \times \text{Discharge Factor}}{\text{Average annual residential water consumption}}$$

Where:

- Discharge Factor is 0.75⁵; and
- Average annual residential water consumption for the preceding financial year based on TasWater's annual performance report⁶

The standard ET assessment process would then apply to the calculated figure as it does for other customers in terms of value and transition arrangements.

It is considered that this approach will be simpler to administer and result in more cost reflective outcomes. For example, once on target tariffs, caravan parks with average water consumption will receive sewerage bills roughly equivalent to their water bills. However, parks with above average water consumption will have sewerage bills higher than their water bill. This reflects the higher demand those parks put on the system and the fact that sewerage treatment typically has higher variable costs than water treatment.

⁵ Based on the findings from the Independent Pricing and Regulatory Tribunal's, Water - Discussion Paper, *Discharge factors for non-residential customers – Towards a standardised approach*, September 2013.

⁶ TasWater's reported average annual residential water consumption for 2013-14 was 185.6Kilolitres.

The Economic Regulator approves TasWater’s proposal to apply the ET methodology in determining fixed sewerage charges with the exception of caravan parks where the Economic Regulator requires TasWater’s final Price and Service Plan to reflect the adoption of the Economic Regulator’s alternative approach to determining caravan park ETs.

The Economic Regulator also approves TasWater’s proposed approach to transitioning sewerage customers to target.

The Economic Regulator requires TasWater’s final Price and Service Plan to include a schedule detailing the ET rates to be applied to different industries and property uses.

The Economic Regulator further requires TasWater’s final Price and Service Plan to include a clear explanation of the ET methodology TasWater has used to calculate the various ET rates to be applied to different industries and property uses.

The Economic Regulator requires TasWater to justify any departures in its ET methodology from the schedules contained in the Water Directorate’s Section 64 Determination of Equivalent Tenements Guidelines and to publish any documentation that is not publicly available, that TasWater is intending to rely on.

5.3.8 Fixed sewerage charge (STEDs)

As part of the 2012 Price Determination Investigation, the Economic Regulator approved the discounted price for sewerage services of 0.9ET for STED customers on the basis that an annual ten per cent discount approximates the cost to the owner of having their septic tank pumped out every five years.

TasWater has proposed a similar charging regime in respect of STEDs for the second regulatory period ie TasWater intends charging STED customers for sewerage services based on 0.9ET. The Economic Regulator considers that this approach is appropriate in light of the lower costs to TasWater of providing this particular service.

The Economic Regulator approves TasWater’s proposal to charge STED customers 90 per cent of the fixed sewerage target tariff for each year of the second regulatory period.

5.3.9 Variable charges

The Pricing Regulations specify that a regulated entity must charge a variable charge (volumetric charges) for water services but has discretion whether or not to impose a variable charge for sewerage services. Under two-part pricing, and applying the user pays principle, variable charges are imposed based on the volume of water a customer uses.

Under Pricing Regulation 16(3), a variable charge for a regulated service must be payable for each unit of water delivered to, or wastewater removed from, the property to which the charge relates.

The Pricing Regulations also specify that the amount of the variable water usage charge for a property must at least cover the cost of delivering water to that property. This means that variable charges should ordinarily be set to recover only variable costs directly related to providing water to the property.

However, Pricing Regulation 16(6) states that the amount of a variable charge can be greater than the cost of delivering water or removing sewerage if:

- there are constraints on the amount of water supply available to be provided by the regulated entity or the capacity of water treatment plants or wastewater treatment plants;
- there are constraints on the capacity of the regulated entity's water and/or sewerage infrastructure;
- it is desirable to do so to reduce the demand for water and/or wastewater treatment for a relevant purpose (one example of a relevant purpose may be improving regulatory compliance); or
- the Economic Regulator considers that the rate should be greater than the cost to enable the regulated entity to recoup funds that it may not otherwise receive.

Where TasWater proposes levying a variable charge greater than the cost of delivering water or removing wastewater it must identify, quantify and justify the other costs to be recovered through variable charges in its proposed Price and Service Plan.

The volume of water or sewerage for which a variable charge applies must be determined through consumption as measured through a meter. As such, TasWater is unable to recover revenue through variable charges until such time as a meter is installed at a property to measure the volume of water delivered to the property or wastewater removed from the property to which the charge relates. In these circumstances, the customer will still be liable for the relevant fixed charges.

5.3.10 Variable water charges (full service)

Under two-part pricing, and applying the user pays principle, variable water charges are imposed based on the volume of water a customer uses. For the second regulatory period, TasWater has proposed that target variable water charges continue to be set on a similar basis to that used for the first regulatory period, so as to assist TasWater in transitioning customers to uniform prices thereby minimising price shocks.

On that basis, TasWater is proposing a variable water charge of \$0.9711/kL in 2015-16. This rate represents the indexation of the 2014-15 variable water charge of \$0.9474 by 2.5 per cent per annum to reflect inflation.

As to water usage, TasWater has estimated an average annual consumption figure of 200 Kilolitres for the purpose of developing its proposed Price and Service Plan. TasWater expects to revisit this assumed usage for the third regulatory period when more data is available. TasWater’s proposed Price and Service Plan also notes that this review will assist in determining whether there are any significant year-on-year variations that can be attributed to pricing, climate or demographic changes.

As for the first regulatory period, the Economic Regulator has undertaken a benchmarking exercise with respect to the variable water charges imposed by mainland providers, the results of which are reflected in the following table.

Table 5.3 Interjurisdictional comparison of variable water charges

Service Provider	Note	(\$/kL)	Usage (kL)	Period
Cassowary Coast Regional Council	1	0.47-0.80	≤500	2014-15
TasWater	2	0.9474	All usage	2014-15
Cairns Waste and Water	3	1.11	All usage	2014-15
Goulburn Valley Water	4	1.1200	None stated	2014-15
Wannon Water	5	1.4122-2.2643	0 - 438	2014-15
North East Water	6	2.1266	All usage	2014-15
Barwon Water	7	2.2618	All usage	2014-15

Notes:

- <http://www.cassowarycoast.qld.gov.au/documents/1422210/3759688/2014-2015%20Rates%20and%20Charges%20Information%20Brochure.pdf>
- TasWater, *Proposed Price and Service Plan*, 29 August 2014.
- <http://www.cairns.qld.gov.au/environment/water-and-waste/water-billing>
- <http://www.gvwater.vic.gov.au/customer/fees/Tarrifs.asp>
- http://www.wannonwater.com.au/index.php?option=com_content&task=view&id=344&Itemid=366
- <http://www.newater.com.au/residential/your-bill/fees-charges.asp>
- <https://www.barwonwater.vic.gov.au/residential/bill/fees>

As shown in Table 5.3, compared to mainland service providers, TasWater’s current variable charge is among the lowest imposed. This conclusion also holds true even if TasWater’s current variable charge is compared to a provider such as Cairns Waste and Water operating where the water supply is not constrained. The Economic Regulator understands that water supply for each of the four Victorian providers listed in this table is constrained.

The level of TasWater’s proposed variable water charges is discussed further in the following section.

5.3.11 Extent of fixed costs recovered through variable charges

For the first regulatory period, a higher proportion of TasWater’s costs were considered to be fixed costs, compared to variable costs. TasWater is not proposing to change the mix of charges for the second regulatory period.

In support of its intended continuation of this approach, TasWater noted that the current mix of fixed and variable charges is largely driven by the fact that water can be sourced readily in most cases (a major driver of the variable charge) whilst significant investment is required in infrastructure improvements (covered by fixed charges). TasWater therefore considers the mix of charges to be a determining factor of its ability to deliver infrastructure improvements.

Further, TasWater stated that as an infrastructure business with predominantly long-life assets, its cost base is largely fixed. TasWater also noted that Tasmania is not exposed to the same circumstances as other jurisdictions (with regards to water scarcity issues for example), which have been significant drivers of the weighting of fixed and variable charges interstate.

However, TasWater's proposed Price and Service Plan stated that a number of customers and stakeholders had raised the issue of the balance between fixed and variable charges during consultation.

The Economic Regulator therefore asked TasWater to provide further evidence to justify the proposed mix of fixed and variable charges and also to justify the extent to which it is proposing to recover fixed costs through the variable charge.

In response TasWater advised that the proposed fixed and variable charges set out in its proposed Price and Service Plan represented a split of approximately 60 per cent fixed and 40 per cent variable. TasWater also noted that a rough estimate of the split of costs revealed that approximately 70 per cent were fixed and the remaining 30 per cent variable.

TasWater referred to the Short Run Marginal Cost (SRMC) information provided by the previous regulated entities as part of the 2012 Price Determination Investigation. In particular, TasWater referred to the associated proposal, which was accepted by the Economic Regulator in 2012, to charge variable target tariffs above the SRMC of supplying water of drinking water quality to customers' properties. The respective SRMCs estimated by the previous regulated entities were as follows:

Table 5.4 Previous regulated entities' estimate of water SRMC for 2014-15

Entity	Estimated SRMC \$/kL
Ben Lomond Water	0.3925
Cradle Mountain Water	0.4500
Southern Water	0.2899

For the first regulatory period the Economic Regulator approved the setting of target variable charges above the estimated cost of supplying water of drinking water quality as permitted by the Pricing Regulations. TasWater considers that this approach is still appropriate, particularly given the extent of capital investment required to achieve regulatory compliance. Additionally, TasWater claimed that, due to the continuing pricing transition and the extent of the compliance challenges it is facing, revenue certainty is central to its ability to meet the needs of its various

stakeholders. TasWater noted that its proposed variable charges are lower than most (if not all) other jurisdictions around the country.

TasWater also contended that a change to the current weighting, particularly towards the variable component, would:

- place revenue at risk;
- complicate the price transition; and
- may impede TasWater's ability to undertake the capital program required to improve compliance.

Whilst the 2014-15 SRMC estimates noted in Table 5.4 are likely to have increased by at least movements in the CPI, and recognising that TasWater's proposed Price and Service Plan assumes chemicals and power will increase annually by four per cent, the Economic Regulator notes that TasWater has not revisited the costs of delivering water in developing its proposed Price and Service Plan for the second regulatory period.

In light of the unavailability of current data in relation to the SRMC of supplying water to customers' properties and the issues TasWater has raised, the Economic Regulator intends approving TasWater's proposals with respect to the relative weighting of fixed and variable charges. In terms of the requirements of Regulation 16(6), the Economic Regulator does not consider that any of the circumstances listed in Regulation 16(6)(i) – (iii) inclusive are relevant at this point in time. The Economic Regulator does however consider Regulation 16(6)(iv) to be relevant to TasWater's current situation. That is, given TasWater's current financial position (in terms of under-recovery of costs) and its associated need to finance substantial compliance improvement programs, the Economic Regulator has formed the preliminary view that it is appropriate for TasWater to continue to charge variable charges that exceed the costs of delivering water to customers' properties.

The extent to which variable charges may be set above cost is a matter of judgement. It should be noted that setting variable charges at levels above cost results in large water users (such as industrial customers, hospitals and schools) subsidising low use customers (residences and office blocks). This has the effect of creating a cross subsidy and is inconsistent with the Pricing Principles in relation to cost reflective charging.

On balance, the Economic Regulator has decided that setting the variable charge at around \$1.00 per kilolitre represents a fair balance between sending an appropriate price signal to customers so as they can choose to modify their water consumption and enable demand driven investment to be deferred, thereby allowing regulatory compliance improvement Capex to continue to be prioritised over the second regulatory period.

TasWater has also proposed increasing target variable water charges annually by 2.5 per cent, a continuation of the approach that applied through the first regulatory period, to account for the effects of inflation. The Economic Regulator considers this approach to be appropriate.

The Economic Regulator approves TasWater’s proposed split between fixed and variable charges for the second regulatory period and a continuation of the recovery of some fixed costs through variable charges for that period resulting in a variable water charge of \$0.9711 per kilolitre in 2015-16.

The Economic Regulator also approves TasWater’s proposal to index variable water target tariffs for full service customers by 2.5 per cent per annum for each of the 2016-17 and 2017-18 financial years.

The Economic Regulator approves TasWater’s proposed full service variable water charges for the second regulatory period.

5.3.12 Variable water target tariffs (transitional tariff reform zones)

The Economic Regulator notes that customers in some north-western local council areas are not expected to be paying the target variable water charge by 30 June 2015. For these customers TasWater proposes increasing the variable charge for each financial year of the second regulatory period by one third of the difference between the variable charge being paid as at 30 June 2015 and the approved target variable water charge for the 2017-18 financial year.

The Economic Regulator considers it appropriate and equitable to transition these customers as TasWater has proposed particularly as these customers have paid, in some cases and for significant time periods, substantially lower water usage charges than customers in other council areas.

The following table details the affected areas and the approved variable charge immediately prior to the commencement of the second regulatory period.

Table 5.5 Transitional water variable charges as at 30 June 2015 (nominal dollars)

Transitional tariff reform zone	Variable charge (\$/kL)
Zone A (previously Burnie City Council)	0.4399
Zone B (previously Central Coast Council)	0.7417
Zone D (previously Devonport City Council)	0.6097
Zone F (previously King Island Council)	0.5699
Zone G (previously Latrobe Council)	0.9071
Zone I (previously West Coast Council)	0.6149

The Economic Regulator approves TasWater’s proposal to transition customers paying less than the approved 2014-15 water variable target tariffs by one third of the difference between the amount paid in 2014-15 and TasWater’s approved water variable charges target tariff for 2017-18.

5.3.13 Variable water charges (limited service)

As approved by the Economic Regulator for the first regulatory period, TasWater proposes that limited water quality customers will continue to receive a 20 per cent discount on the full service variable rate to reflect that limited quality water goes through a reduced treatment process. The Economic Regulator considers that TasWater’s proposed approach is appropriate given that it costs less to supply limited quality water to a property.

The Economic Regulator considers it appropriate that limited water quality customers receive a 20 per cent discount on the full service variable rate given the lower costs associated with supplying water to these customers.

The Economic Regulator approves TasWater’s proposal to charge limited service customers 80 per cent of the variable water target tariffs for each year of the second regulatory period.

5.3.14 Bulk water provided via filling stations and metered standpipes

TasWater’s proposed Price and Service Plan notes that TasWater has several sites throughout the state which provide bulk water filling facilities to ‘mobile’ customers through:

- Private filling stations (dedicated meter banks are provided at various points on the water network).
- Public filling stations – e-card system (customers can utilise the Avdata system of e-cards for public filling points at various points on the water network).
- Public filling stations – registered key access system (customers can utilise the registered key access for public filling points at various points on the water network).
- Public filling stations – token based (some newsagents and councils are agents for token based filling points at various points on the water network).
- Portable metered standpipes.

Consistent with the approach to levying water and sewerage charges, TasWater’s proposed Price and Service Plan notes that it is proposing to apply consistent state-wide charges for each of these water filling options from the start of second regulatory period. The type and level of charges for each of these water filling options is set out in the following table.

Table 5.6 TasWater’s proposed water filling target tariffs (nominal\$)

Access type	Tariff	2015-16	2016-17	2017-18
Private filling stations	Fixed charge per annum	As per meter size (see section 5.3.4)	As per meter size (see section 5.3.4)	As per meter size (see section 5.3.4)
Public filling stations (e-card and registered key)	Per kL ^{Note 1}	\$0.9711	\$0.9954	\$1.0202
- Volumetric charge	Per kL	\$1.4627	\$1.5165	\$1.5727
- Security deposit	One-off Fee	\$50.00	\$50.00	\$50.00
Public filling stations (token based)	Per token ^{Note 2}	\$0.7313	\$0.7582	\$0.7863
Portable stand pipes	Fixed charge per annum	As per meter size (see section 5.3.4)	As per meter size (see section 5.3.4)	As per meter size (see section 5.3.4)
	Per kL ^{Note 1}	\$0.9711	\$0.9954	\$1.0202
e-card credit top up	Processing Fee ^{Note 3}	\$5.50	\$5.63	\$5.77

Notes:

1. Consistent with the proposed water variable charges for each year of the period as set out in section 7.5.2 of TasWater’s proposed Price and Service Plan.
2. Tokens are for 500 litres of water.
3. Escalated by CPI each year.

TasWater’s proposes the same methodology as approved for the first regulatory period for charging for these services. The Economic Regulator agrees with TasWater’s approach. The Economic Regulator has also approved TasWater’s proposed charges for the use of private and public filling stations and portable metered standpipes.

The Economic Regulator approves TasWater’s proposal to maintain the existing basis for charging for the use of private and public filling stations and portable metered standpipes.

The Economic Regulator also approves TasWater’s proposed charges for the use of private and public filling stations and portable metered standpipes as set out in Table 5.6 of this Final Report.

5.3.15 Trade Waste

As outlined in section 6.2.6, the Economic Regulator has approved TasWater’s proposed charges with respect to Category 1, Category 2A, Category 2B and Category 2C Trade Waste customers.

TasWater has proposed transitioning trade waste customers above and below the relevant target as at 30 June 2015 by one third of the difference between the

amount paid in 2014-15 and TasWater's relevant proposed trade waste target tariff for 2017-18.

The Economic Regulator considers TasWater's proposed transition approach to be appropriate.

The Economic Regulator approves TasWater's proposal to transition trade waste customers above and below the target by one third of the difference between the amount paid in 2014-15 and TasWater's relevant approved trade waste target tariff for 2017-18.

5.3.16 Motor Home Dump Points

A motor home dump point is a facility intended to receive the discharge of wastewater from any holding tank or similar device installed in a recreational vehicle. Some of these facilities also have water connections.

Where a motor home dump point facility has a water connection, TasWater proposed charging the full service fixed water target tariff and the full service variable water target tariff.

The Economic Regulator noted in its Draft Report that it considered that charging at the full rates for each of the fixed and variable water components is appropriate.

With respect to the sewerage component of these facilities, TasWater proposed that charging be based on one ET.

For the first regulatory period there was a lack of reliable data on the usage of these facilities, and for this investigation, the Economic Regulator sought further details from TasWater to support its proposed basis for sewerage charging.

In its response TasWater explained that it had estimated the volume of waste discharged into the 65 motor home dump points across the state based on:

- the estimated percentage of nights of visitation that occur outside holiday parks relating to caravans/recreational vehicles (RVs)⁷;
- the assumption that two-thirds of these nights occur between 1 December and 31 March to arrive at the number of nights of visitation relating to caravans/RVs during the three month peak period;
- the assumption of 2.5 as the average number of tourists per caravan/RV to convert the number of nights of caravan/RV visitation during the three month peak period into an average number of caravans/RVs per day;
- the assumed daily volume of waste dumped by each caravan/RV to estimate the peak load on the system; and
- the assumption that 70 per cent of average household usage goes to sewer ie based on 200 kilolitres of annual water usage TasWater estimates that there is

⁷ Based on Tourism Tasmania's, *Caravan and Holiday Park Market Snapshot, October 2009*.

140 kilolitres of sewer per annum or 35 kilolitres over the three month peak tourist period.

The Economic Regulator considered TasWater’s methodology to be reasonable and proposed in its Draft Report that sewerage charging for motor home dump points on the basis of one ET is appropriate.

In its submission on the Draft Report, Caravanning Tasmania considered that there should not be any additional charge applied to dump points located within caravan parks as any use of these facilities relates to sewerage that would normally enter the system via the communal ablutions block anyway.

The Economic Regulator has decided that motor home dump points located within a caravan park should not be subject to separate and additional charges ie the caravan park’s ET assessment already covers charging for these services.

The Economic Regulator has also decided that motor home dump point charges should continue to apply to dump points located outside caravan parks.

The Economic Regulator approves TasWater’s proposal to apply the fixed sewerage (full service) target tariff (ie one ET) in respect of motor home dump points.

The Economic Regulator requires TasWater to only apply the approved motor home dump point fixed sewerage charges to dump points located outside caravan parks.

5.3.17 Moving customers directly to target tariffs

TasWater’s proposed Price and Service Plan outlined a number of circumstances where it proposed moving customers directly to the relevant target tariff or applying the price constraints to transition customers to target tariff.

In its Draft Report the Economic Regulator expressed concerns about both the list of circumstances and the explanations provided by TasWater to justify its proposed treatment of customers to whom the various circumstances applied.

In particular, the Economic Regulator considered that the tests for determining if a customer is to be transitioned or moved directly to the target tariff include:

- Has the customer changed?
- Has the property’s predominant use change?
- Has the service provided by TasWater changed?
- Were the services previously paid for?
- Is what the customer has been paying cost reflective?
- Is the customer currently paying above or below the target tariff?

Since the release of the Draft Report the Economic Regulator has liaised with TasWater to address these concerns resulting in the following revised table setting out the circumstances under which customers will either be moved directly to target or be transitioned to target.

Table 5.7: Schedule of events which will result in customers either being moved directly to the target tariff or continuing to transition to the target tariff

Scenario	Basis of change	Target Tariff/s Applied	Transition to Target Tariff/s under price constraints
Change in the property's predominant use	Property change	✓	
Altered connection arrangements due to successful development application	Connection change	✓	
Previously unconnected properties connect to water and/or sewerage infrastructure (including new sub-divisions)	Connection change	✓	
Where a customer's property is already connected to water and/or sewerage infrastructure, but is currently not receiving charges (previously un-billed customer)	Customer change	✓	
Newly discovered connection(s) to existing infrastructure	Connection change		✓
Changes to existing connection points, ie change of connection size, including installation of sub-meters	Connection change		✓
Existing water service customer should also be receiving a fire service charge	Connection change		✓
New trade waste customer (applying for a consent)	Customer change	✓	
Existing sewerage service customer who should be receiving a trade waste charge (previously unbilled trade waste)	Customer change		✓
Adhesions (unless part of a development application)	Property change		✓
Amalgamation	Property change		✓
Demolition resulting in land becoming vacant	Property change		✓
Change of ownership	Customer change	✓	
Change from a permanent boil alert to a portable water supply (applies to variable charge only)	Service supplied change	✓	

The Economic Regulator requires TasWater to amend its final Price and Service Plan to include a clear explanation as to the process it intends following and the tests that must be met before moving a customer directly to the relevant target tariff.

The Economic Regulator also requires TasWater’s final Price and Service Plan to reflect the descriptions outlined in Table 5.7 of this Final Report of the circumstances whereby customers may either be moved directly to target or be transitioned to target.

5.4 Miscellaneous services

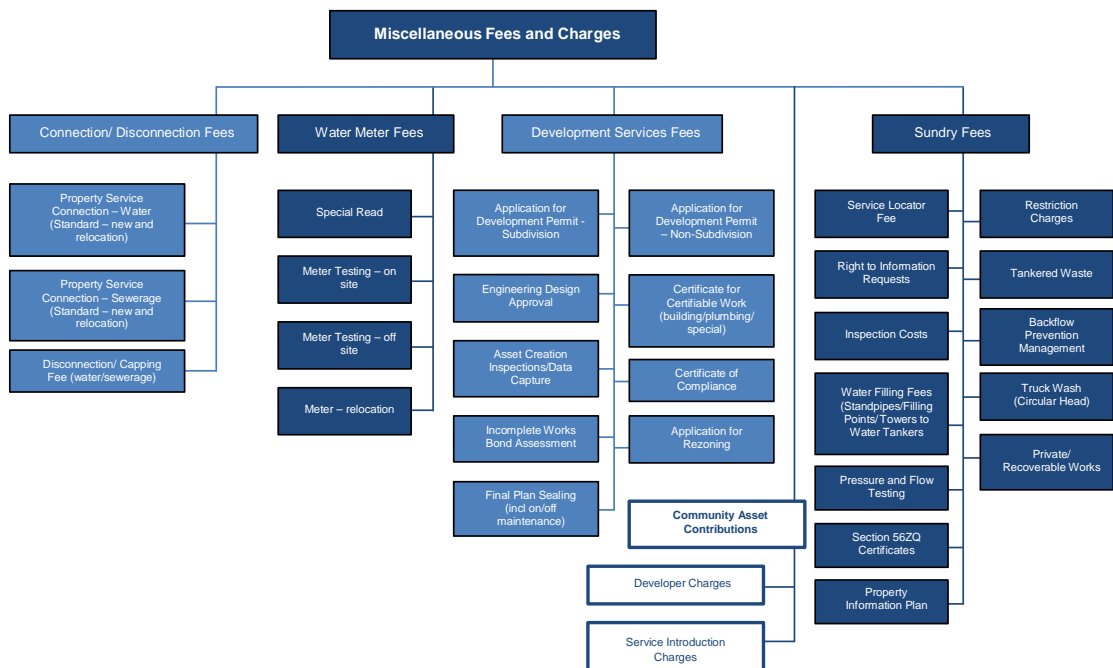
Miscellaneous fees and charges are all fees and charges that may be charged by TasWater which are not fixed charges, variable charges, developer charges or service introduction charges. As with other regulated charges, miscellaneous fees and charges must be determined according to the Pricing Principles in the Industry Act and the Pricing Regulations and be included in TasWater’s proposed Price and Service Plan.

Additionally, for each proposed miscellaneous services fee, TasWater must include in its proposed Price and Service Plan, forecasts of the estimated number of transactions for each financial year of the second regulatory period.

The key assumptions that underlie these forecasts must also be included in TasWater’s proposed Price and Service Plan.

TasWater provided the following diagram in its proposed Price and Service Plan to outline the various miscellaneous fees and charges TasWater was intending to levy.

Figure 5.1 Breakdown of miscellaneous fees and charges



TasWater's proposed rates for each proposed miscellaneous fee and charges for each year of the second regulatory period are set out in Table 5.8 and Table 5.9.

Table 5.8 Miscellaneous fees and charges (nominal \$)

Miscellaneous fees and charges	2015-16 (\$)	2016-17 (\$)	2017-18 (\$)
Water connections			
Standard 20mm connection	2 032.69	2 083.50	2 135.59
Standard 25mm connection	2 218.57	2 274.03	2 330.88
20mm meter supply & installation	253.86	260.21	266.72
Wastewater connections			
Standard 100mm sewerage connection	1 481.69	1 518.73	1 556.70
Disconnection			
Standard disconnection (water and/or sewerage)	423.40	433.98	444.83
Relocation			
Standard water connection relocation – under 3 metres	423.40	433.98	444.83
Water connection relocation – greater than 3 metres	POA	POA	POA
Fire service			
Fire service installation	POA	POA	POA
Water metering fees			
Special meter reads	52.35	53.65	55.00
Meter testing - onsite	70.38	72.14	73.95
Meter testing - offsite	POA	POA	POA
Meter downsizing (50mm to 20mm)	342.47	351.03	359.81
Meter downsizing (all others)	POA	POA	POA
Sundry fees			
Service locator fee	92.91	95.24	97.62
Right of information request	25 fee units	25 fee units	25 fee units
Inspection costs	53.56/hr	53.56/hr	53.56/hr
Property Information Plan	42.20	43.25	44.33
Pressure and flow testing	92.91	95.24	97.62
Section 56ZQ request	25 fee units	25 fee units	25 fee units
Restriction charge	92.99	95.31	97.70
Backflow prevention management	POA	POA	POA
Administration fee (for late payment)	5.00	5.13	5.25

5.4.1 Connection/disconnection fees, water meter fees and sundry fees

As part of the 2012 Price Determination Investigation each of the previous regulated entities proposed a number of miscellaneous fees and charges as part of their respective proposed Price and Service Plans and stated that they were determined on a cost recovery basis. In the time available to the Economic Regulator, the Economic Regulator was unable to verify whether the fees were actually cost reflective.

With respect to its proposed values for miscellaneous fees and charges, TasWater advised that these fees and charges had been built up based on the various costs incurred by TasWater in providing the service. For example, in determining the fee for a standard water connection, TasWater has included the cost of labour, excavation equipment, pipes, plumbing supplies, pavement reinstatement and vehicle costs associated with travel to the site.

Whilst noting that TasWater proposed significant fee reductions in some cases compared to the 2014-15 fees, the Economic Regulator did not consider TasWater's justification to be adequate and conducted a benchmarking exercise to compare TasWater's proposed charges with charges imposed by comparable providers on mainland Australia.⁸

In some cases, the Economic Regulator was unable to locate a charge for a similar service provided by a comparable provider or other providers charged a similar fee but on a different basis eg for a water meter installation Wannon Water excludes the cost of actually installing the meter which is up to the customer to arrange via their own plumber.

Where services were directly comparable, the Economic Regulator found that:

- TasWater's proposed special meter read was substantially higher than the charges imposed for these services by the comparable providers.
- TasWater's proposed Property Information Plan fee was four times higher than the charges approved for 2014-15.
- TasWater's proposed fees for a 20mm water meter installation was comparable to the charge for this service by comparable providers.
- TasWater's proposed fees for water connection (standard 20mm connection), meter assessment (onsite), pressure and flow testing and Restriction were lower or comparable with the fees charged for those services by comparable providers.
- TasWater's proposed hourly inspection fees were lower than those charged by comparable providers.

⁸ The Economic Regulator compared TasWater's proposed fees and charges with those charged by Barwon Water, Goulburn Valley Water, North East Water and Wannon Water.

The Economic Regulator also found that TasWater’s proposed standard water connection fee (20mm connection) was over 25 per cent lower than Barwon Water’s fee for that service. The Economic Regulator also noted that TasWater’s proposed sewer (standard connection) fee is almost 40 per cent lower than its 2014-15 charge for the same service.

Based on the outcomes from the benchmarking exercise, the Economic Regulator notes that some of TasWater’s proposed miscellaneous fees and charges are higher than fees and charges imposed by comparable providers, others are lower than those charged by comparable providers whilst the remainder are around the inter-jurisdictional average. As a result, the Economic Regulator does not have a sound basis for deciding whether or not TasWater’s proposed miscellaneous fees and charges are cost reflective.

The Economic Regulator also noted that some of TasWater’s proposed fees are to be determined on a “price on application (POA)” basis. The Economic Regulator considered this appropriate provided that the fee is determined on a cost reflective basis as in some cases it is accepted that costs involved may vary due to, for example, the location of the property, the amount of materials required and the time taken to complete the job. The Economic Regulator notes that customers will have the right to query such fees through TasWater’s complaints handling process and, if not then satisfied, may raise the issue with the Ombudsman.

TasWater also proposed increasing its proposed miscellaneous fees and charges by 2.5 per cent per annum. The Economic Regulator agrees with this approach on the understanding that these increases account for forecast increases in the costs of delivering the respective services.

The Economic Regulator approves TasWater’s proposed miscellaneous charges and fees.

The Economic Regulator also approves TasWater’s proposal to increase its miscellaneous fees and charges by 2.5 per cent per annum for each of the 2016-17 and 2017-18 financial years.

5.4.2 Development Assessment Service Fees

TasWater’s proposed Price and Service Plan outlined a number of development assessment service fees it intends charging with respect to the costs it incurs in processing development, subdivision and building and plumbing applications.

Table 5.9 Development assessment service fees (nominal \$)

	2015-16 (\$)	2016-17 (\$)	2017-18 (\$)	Inc GST
Rezoning				
Minor	\$228.00	\$233.70	\$239.54	Y
Medium	\$456.00	\$467.40	\$479.09	Y
Major	\$983.00	\$1 007.58	\$1 032.76	Y
Significant	\$1 242.00	\$1 273.05	\$1 304.88	Y

	2015-16 (\$)	2016-17 (\$)	2017-18 (\$)	Inc GST
>10Ha incurs an additional fee of \$/Ha	\$240.00	\$246.00	\$252.15	Y
Development applications – non subdivision				
Minor	\$197.00	\$201.93	\$206.97	Y
Medium	\$327.00	\$335.18	\$343.55	Y
Major	\$629.00	\$644.73	\$660.84	Y
Significant	\$1 061.00	\$1 087.53	\$1 114.71	Y
Development applications – subdivision				
Minor	\$240.00	\$246.00	\$252.15	Y
Medium	\$456.00	\$467.40	\$479.09	Y
Major	\$975.00	\$999.38	\$1 024.36	Y
Significant	\$1 234.00	\$1 264.85	\$1 296.47	Y
>50 lots incurs an additional fee of \$/lot above the significant charge	\$27.00	\$27.68	\$28.37	Y
Certificate for certifiable works (building & plumbing applications)				
Minor	\$144.15	\$147.75	\$151.45	N
Medium	\$227.17	\$232.85	\$238.67	N
Major	\$273.00	\$279.83	\$286.82	N
Significant	\$380.00	\$389.50	\$399.24	N
CCW Exemption	36.94	\$37.86	\$38.81	N
Engineering design approval				
Minor	\$166.00	\$170.15	\$174.40	Y
Medium	\$237.00	\$242.93	\$249.00	Y
Major	\$273.00	\$279.83	\$286.82	Y
Significant	\$380.00	\$389.50	\$399.24	Y
>50 lots incurs an additional fee of \$/lot above the significant charge	\$28.22	\$28.93	\$29.65	Y
Certificate of compliance – BA's & PA's				
Minor	\$135.43	\$138.82	\$142.29	N
Medium	\$135.43	\$138.82	\$142.29	N
Major	\$135.43	\$138.82	\$142.29	N
Significant	\$135.43	\$138.82	\$142.29	N

	2015-16 (\$)	2016-17 (\$)	2017-18 (\$)	Inc GST
Asset creation inspection/data capture				
Minor	\$111.00	\$113.78	\$116.62	Y
Medium	\$289.00	\$296.23	\$303.63	Y
Major	\$1 048.00	\$1 074.20	\$1 101.06	Y
Significant	\$1 505.00	\$1 542.63	\$1 581.19	Y
Final plan sealing including on/off maintenance				
Minor	\$130.00	\$133.25	\$136.58	Y
Medium	\$216.00	\$221.40	\$226.94	Y
Major	\$216.00	\$221.40	\$226.94	Y
Significant	\$216.00	\$221.40	\$226.94	Y
Incomplete works bond assessment				
Minor	\$303.00	\$310.58	\$318.34	Y
Medium	\$303.00	\$310.58	\$318.34	Y
Major	\$303.00	\$310.58	\$318.34	Y
Significant	\$319.60	\$327.59	\$335.78	Y

TasWater's proposed Price and Service Plan also detailed the criteria TasWater's intends applying in classifying, and charging for, development assessment services. The criteria are shown in the following table:

Table 5.10 Development assessment services classification criteria

Classification	Thresholds	
	Re-zoning (Ha)	Subdivision of Land (Lots) ^{Note 1}
Minor	<0.4	2
Medium	0.4 – 1.0	3-10
Major	>1.0 – 3.0	11-25
Significant	>3.0	>25 ^{Note 2}

Notes:

1. Total lots in the subdivision/boundary adjustment.
2. Development with major infrastructure (eg sewage pump station, water pump station, reservoir, pressure reducing station) defaults to significant.

Table 5.11 Development Assessment Services classification criteria - Non-subdivision/building applications/plumbing applications

Classification	Thresholds
Minor ^{Note 1}	Single dwelling/extension/alteration One-two units/town houses Auxiliary dwelling/dependence unit Shed/garage/carport Demolition Shop refit Light industrial/commercial/retail site less than 0.15Ha Minor extension to commercial/light industrial/retail New connections Change of use
Medium ^{Note 2}	Three-10 dwellings/units/town houses/dependence units Light industrial/commercial/retail site between 0.15 and 0.3Ha New/modified backflow protection devices New/modified fire protection/metering services Restricted or wayside water connection
Major ^{Note 3}	11-30 dwellings/units/townhouses/dependence units Industrial/commercial/retail site between 0.3Ha and 1.5Ha
Significant ^{Note 4}	>30 dwellings/units/town houses/dependence units Heavy industrial/commercial/retail site in excess of 1.5Ha Effluent reuse/development within buffer areas

Notes:

1. *Minor is 0-6 ETs (where ET is the equivalent tenement as defined in the Water Services Association of Australia – Sewerage Code 2002).*
2. *Medium is 6-30 ETs.*
3. *Major is 31-90 ETs.*
4. *Significant is >90 ETs.*

TasWater’s proposed Price and Service Plan indicated that, in deriving the fees it proposed charging for these services, it had considered:

- the time TasWater staff need to assess and provide the requested advice;
- land size;
- the total number of allotments; and
- the development’s water supply/sewerage requirements.

This statement suggested that the proposed fees were based on an analysis of the costs of delivering the various services. However, TasWater’s proposed Price and Service Plan subsequently states that its proposed development assessment fees and charges had been derived by standardising the 2012-15 regional charges and indexing for inflation. As noted in section 5.4.1, for the 2012 Price Determination Investigation the Economic Regulator did not have sufficient time to verify whether the previous regulated entities’ miscellaneous charges were in fact cost reflective. Relying on the 2012-15 regional charges as the basis for the proposed fees does

not, therefore, provide a sound basis for suggesting that TasWater’s proposed fees are cost reflective.

On that basis, the Economic Regulator undertook a benchmarking exercise to compare these proposed fees with the amounts comparable mainland service providers charge for these types of services.

However, due to the differing criteria adopted by other service providers, the Economic Regulator was unable to identify charges for similar services that would provide a robust and useful basis to assess against TasWater’s proposed development assessment service fees. The Economic Regulator has decided therefore to approve TasWater’s proposed development assessment fees.

In the Draft Report, the Economic Regulator noted that TasWater’s classification criteria with respect to development assessment services fees refers to an EP (equivalent population) which is a defined term in WSAA’s Sewerage Code. In its submission on the Draft Report, TasWater noted that its intention was that the development assessment classification criteria would refer to ETs rather than EPs. Noting that TasWater is not proposing any other changes to the criteria the Economic Regulator considers this change to be appropriate.

The Economic Regulator approves TasWater’s proposed development assessment services fees.

The Economic Regulator also requires TasWater to replace, in its development assessment classification criteria, the references to Equivalent Population (EP) with references to Equivalent Tenements (ETs).

5.5 Forecasts of demand, customers and miscellaneous services

The amount of forecast regulated revenue for each financial year of the second regulatory period depends on tariffs, customer numbers, and water usage and demand for miscellaneous services for each year.

TasWater was required, under section 4.10 of the PSP Guideline, to provide in its proposed Price and Service Plan customer numbers, water consumed and the number of transactions for which a miscellaneous fee applied in respect of each financial year of the first regulatory period and forecasts for the same parameters for the second regulatory period.

5.5.1 Customer forecasts

TasWater did not provide customer numbers, in respect of each financial year of the first regulatory period in its proposed Price and Service Plan as required by the PSP Guideline.

TasWater stated that it utilised a number of sources for growth projections including the Australian Bureau of Statistics, the Tasmanian Department of Treasury and Finance, specific council area studies, council land use strategies (to identify available residential and industrial land areas) and engaged in specific discussions

with councils and stakeholders. As such, TasWater proposed adopting an annual growth rate of 0.5 per cent over the second regulatory period. Table 5.12 shows TasWater’s forecast number of 20mm water connections and one ET sewerage connections.

Table 5.12 TasWater’s forecast number of water and sewerage connections

	2015-16	2016-17	2017-18
Number of equivalent 20 mm water connections	255 646	256 711	257 939
Number of one ET connections	238 667	240 098	241 245

The Economic Regulator notes that Treasury released its population projections⁹ for Tasmania in December 2014. These replace the Tasmanian population projections that Treasury prepared in 2008 for the Demographic Change Advisory Council which were used as a basis for customer growth forecasts for the first regulatory period. Treasury released three revised population projections - low, medium, and high - of which the medium series, with an average growth rate of 0.3 per cent per annum, is based on assumptions that are most similar to recent trends.

Furthermore, TasWater notes that, according to the Australian Bureau of Statistics, private dwellings in Tasmania have an average of 2.4 people per household. Consequently, based on a one to one ratio, population growth alone is not an ideal indicator of forecast growth in connections as it does not factor in the number of people per household.

The Economic Regulator also notes that in Table 33¹⁰ of its proposed Price and Service Plan, TasWater shows its forecast of new connections based on building approvals. This table shows forecasts of 613, 628 and 644 new connections for residential and non-residential combined for each financial year of the second regulatory period (an annual increase of approximately 0.25 percent). These numbers are substantially below the 0.5 per cent annual increases shown in Table 5.12 of this Report which, for water connections, equates to 1 065 new (equivalent 20 mm) connections in 2016-17 alone.

The Economic Regulator therefore considers TasWater’s annual customer growth rate of 0.5 per cent to be excessive, and in the absence of more reliable data, has decided that an annual growth rate of 0.3 per cent should be applied to forecast growth in the number of customer connections.

For the purposes of estimating its revenue, the Economic Regulator requires TasWater to adopt an annual growth rate of 0.3 per cent to forecast growth in the number of customer connections over the second regulatory period.

⁹ <http://www.treasury.tas.gov.au/domino/DTF/DTF.nsf/v-ecopol/397D0680E5DCC583CA257CEC0005F727>

¹⁰ TasWater’s proposed *Price and Service Plan*, 2015-18, p.58.

5.5.2 Water demand forecasts

TasWater did not provide details of water demand in respect of each financial year of the first regulatory period in its proposed Price and Service Plan, as required by the PSP Guideline.

However, the Economic Regulator notes that annual Water and Sewerage performance reports for the previous regulated entities (aggregated) for 2012-13 and for TasWater for 2013-14 provided the following details in respect to water and sewerage volumes:

Table 5.13 Water and sewerage volumes from annual performance reports

	2012-13	2013-14
Total water volume (ML)	57 618	55 441
Total sewerage volume (ML)	51 131	57 621

In its proposed Price and Service Plan TasWater forecast the following water and sewerage volumes for the second regulatory period:

Table 5.14 TasWater’s forecast of water and sewerage volume

	2015-16	2016-17	2017-18
Total water volume (ML)	57 964	58 817	59 683
Total sewerage volume (ML)	49 944	50 431	50 925

TasWater did not provide an explanation of the reasons for the variations between the reported volumes for 2012-13 and 2013-14 and the forecast volumes for the second regulatory period.

In addition, TasWater did not explain why the forecast growth in the volume of water and sewerage over the second regulatory period is greater than its forecast growth rate of 0.5 per cent per annum ie TasWater’s forecast water volume increases of 1.5 per cent per annum and forecast sewerage¹¹ increases of one per cent per annum for the second regulatory period.

The Economic Regulator contends that without supporting justification TasWater’s forecast water, and therefore, sewerage volume increases are excessive and therefore has decided that the same growth rate as used to forecast the number of connections, ie 0.3 per cent, should be adopted in forecasting growth in water and sewerage volumes over the second regulatory period.

For the purposes of estimating its revenue, the Economic Regulator requires TasWater to adopt an annual growth rate of 0.3 per cent to forecast growth in water and sewerage volumes over the second regulatory period.

¹¹ The increase in sewerage is a corollary to the increase in forecast water volume as sewerage volume is generally based on a proportion of water usage.

5.5.3 Forecast of the number of miscellaneous transactions

TasWater did not include actual numbers of transactions for each miscellaneous service for each financial year of the first regulatory period nor did it provide forecasts of the estimated number of transactions for each proposed miscellaneous services fee for each financial year of the second regulatory period in its proposed Price and Service Plan, as required by the PSP Guideline. The Economic Regulator requested TasWater to provide the required information, resulting in TasWater providing the information in Table 5.15. However, this information only included forecasts of sundry fees and did not include forecasts relating to water connections, wastewater connections, relocation, fire service or water metering fees. Additionally TasWater did not include details of the key assumptions that underlie these forecasts, as required by the PSP Guideline.

Table 5.15 Forecast of transaction numbers for miscellaneous fees and charges

Miscellaneous fees and charges by transaction type	2015-16	2016-17	2017-18
Special Read	5 100	5 115	5 131
Section 56ZQ request	7 000	7 021	7 042
Section 56W Consent	140	140	141
Service Locator Fee	492	493	495
Pressure & Flow Testing	5	5	5
Property Information Plan	3	3	3
Restriction Charge	350	351	352

The Economic Regular notes that the number of miscellaneous fees and charges transactions is forecast to increase by 2.5 per cent per annum in contrast to TasWater's forecast growth in connections of 0.5 per cent per annum. This implies that customers demand for miscellaneous services is increasing. However, TasWater has not provided an explanation for the higher forecast growth in the number of miscellaneous fees and charges transactions compared to the forecast growth in the number of connections.

In the absence of a justification for the higher forecast growth in the number of transactions for miscellaneous fees and charges, the Economic Regulator has decided that TasWater is to adopt forecast growth of 0.3 per cent per annum with respect to the number of miscellaneous fees and charges transactions during the second regulatory period.

For the purposes of estimating its revenue, the Economic Regulator requires TasWater to adopt an annual growth rate of 0.3 per cent to forecast growth in the number of miscellaneous fees and charges transactions over the second regulatory period.

5.6 TasWater's proposed price transition arrangements

5.6.1 Proposed price transition

TasWater's proposed Price and Service Plan states that during the second regulatory period it is focusing on continuing to transition customers from the different pricing regimes that were in place prior to the reform of the water and sewerage industry to a single tariff schedule.

TasWater's proposed Price and Service Plan also states that it wants to accelerate the pace of the transition to ensure tariff equity is achieved as soon as possible, while avoiding subjecting customers to price shocks, but generate sufficient revenue to achieve financial sustainability and fund substantial investment in compliance improvement projects.

In its proposed Price and Service Plan TasWater also states that its proposed price transition arrangements for the second regulatory period will result in all residential customers paying the same price for the same service by 1 July 2018, leaving a small group of commercial, industrial and institutional customers to transition to target tariffs by 2020. TasWater has proposed the following price transition arrangements for the second regulatory period:

- Customers above their respective fixed target tariffs as at 30 June 2015 will come down by one third of the gap to the 2017-18 fixed target tariff in each year of the regulatory period.
- Residential customers below their respective fixed target tariffs as at 30 June 2015 will see a maximum annual increase to their combined fixed service charges (water and sewerage) of no more than \$100 or 10 per cent, whichever is the greater, until both fixed water and sewerage target tariffs are reached.
- Non-residential customers below their respective fixed target tariffs as at 30 June 2015 will see the combined \$100 side constraint increased in proportion to their connection size and their number of ETs.
- Customers on fixed target tariffs will face price increases of six per cent per annum which is a continuation of the approach that applied through the first regulatory period.
- Customers below the target variable rate will see equal annual increases across the three years of the period so that they arrive at the target rate by 1 July 2017.

- Trade waste customers will transition to their respective target tariffs by going up or down by one third of the gap to the 2018 target tariffs in each year of the second regulatory period depending upon whether they are above or below target tariff.

The Economic Regulator queried the basis of the proposed annual increases and TasWater advised that a six per cent increase provided it with sufficient revenue to fund its proposed annual Capex program whilst enabling the majority of customers to transition to target tariffs by the end of the second regulatory period.

5.6.2 Proposed target fixed water and sewerage tariffs

TasWater's proposed target fixed water and sewerage tariffs for each financial year of the second regulatory period are shown in the following tables:

Table 5.16 TasWater's proposed target fixed water tariffs per connection for full service customers (\$)

Water Connection Size	2015-16	2016-17	2017-18
20mm	293.24	310.84	329.48

*The fixed water target tariff for each connection size is calculated by multiplying the fixed water target tariff for a 20mm water connection by the relevant multiplier in **Error! Reference source not found.***

Table 5.17 TasWater's proposed target fixed sewerage tariffs for full service customers per ET (\$)

Number of ETs	2015-16	2016-17	2017-18
1 ET	562.68	596.44	632.24

The target fixed sewerage charge for each connection is calculated by multiplying the target fixed sewerage for one ET by the applicable number of ETs.

5.6.3 Target variable water charges

TasWater's proposed target variable water charges for each financial year of the second regulatory period are shown in the following tables:

Table 5.18 TasWater's proposed target variable water charges per kilolitre of water (\$)

	2015-16	2016-17	2017-18
Full service (ie water of drinking water quality)	0.9711	0.9954	1.0202

5.7 Assessment of forecast revenue against revenue limits

In Chapter 4 the Economic Regulator calculated three revenue limits - upper, statutory and lower - for each financial year of the second regulatory period. The upper and statutory limits are the maximum revenue TasWater is allowed to earn from providing regulated services in each financial year and are the sum of depreciation, Opex, and the cost of both debt and equity capital. The lower limit is the sum of debt financing costs, operating and maintenance expenditure and an

asset renewal annuity, and is an estimate of the minimum revenue necessary for TasWater to be financially viable.

TasWater proposed values for the various components of the revenue limits. The Economic Regulator assessed TasWater's proposed values, taking into consideration information and data provided in:

- TasWater's Proposed Price and Service Plan;
- TasWater's Data Collection Template;
- information provided for National Performance Reporting;
- TasWater's revenue model and annual report;
- information and data provided by TasWater in response to the Economic Regulator's requests for information since publishing its Draft Report;
- current financial market data; and
- Jacobs' recommendations with respect to Capex and Opex.

As a result of this assessment, the Economic Regulator has decided on alternative values for the following components:

- Capex;
- Opex;
- third party contributions;
- depreciation;
- WACC;
- opening RAB for new assets;
- debt servicing costs; and
- asset renewal annuity.

Consequently, the three revenue limits presented in the Economic Regulator's Draft Report differed to those provided by TasWater in its proposed Price and Service Plan.

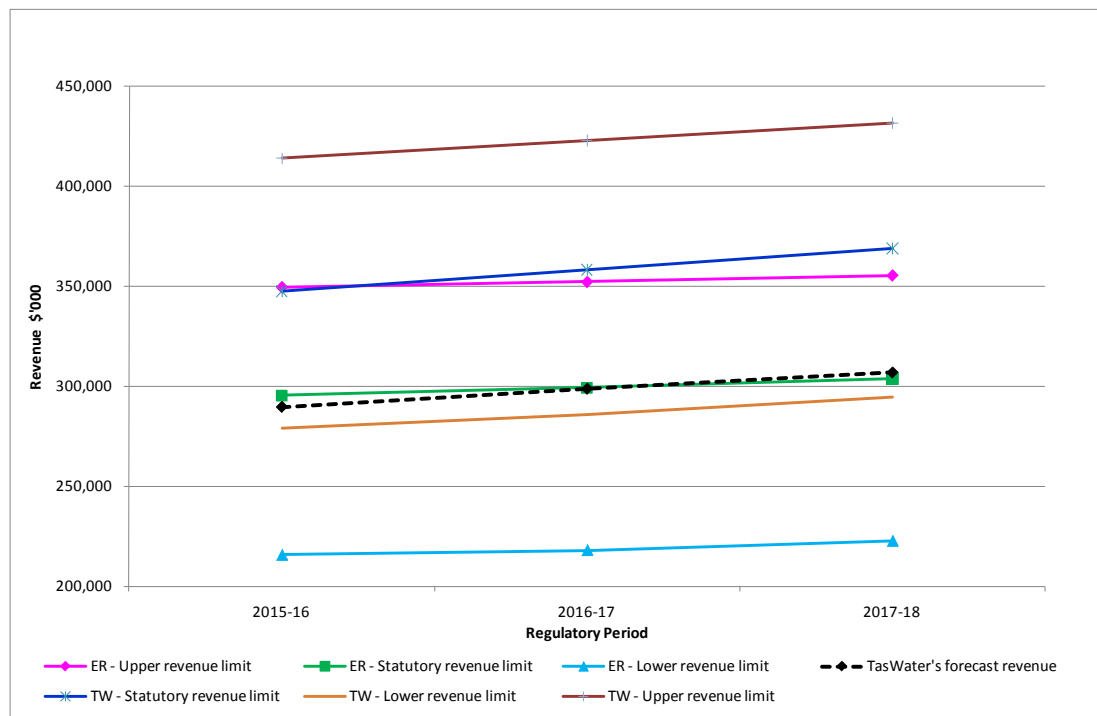
For this Final Report, the Economic Regulator reviewed the revenue limit components (as outlined in Chapter 4) and compared the revised revenue limits with TasWater's revenue limits, and with TasWater's forecast revenue for each year of the second regulatory period. The results of this analysis are set out in Table 5.19 and Figure 5.2.

TasWater's forecast revenue was based on its proposed price transition arrangements (section 5.6) and its forecasts of customer numbers, demand for water and of the number of transactions (section 5.5).

Table 5.19 TasWater’s forecast revenue compared to the three revenue limits calculated by TasWater and as calculated by the Economic Regulator (\$’000s)

	2015-16	2016-17	2017-18
TasWater’s forecast revenue	296 204	300 699	308 855
Upper revenue limit			
TasWater	414 056	422 912	431 662
Economic Regulator	349 770	352 306	355 474
Statutory revenue limit			
TasWater	347 582	358 406	369 123
Economic Regulator	295 442	299 324	303 839
Lower revenue limit			
TasWater	279 110	285 775	294 928
Economic Regulator	215 733	218 141	222 824

Figure 5.2 Comparison of TasWater’s forecast revenue, the three revenue limits as calculated by TasWater, and the three revenue limits as calculated by the Economic Regulator



The Economic Regulator notes that TasWater's forecast revenue (based on TasWater’s proposed price transition mechanism) reaches the statutory revenue limit in 2016-17 and exceeds that limit in 2017-18.

5.8 Economic Regulator’s assessment of TasWater’s price transition proposal and alternative price transition scenarios

5.8.1 Assessment criteria

TasWater’s proposed price transition arrangements have been assessed by the Economic Regulator against a number of criteria including:

- whether TasWater’s forecast revenue during the second regulatory period was above the lower revenue limit;
- the extent to which the impacts of price increases upon customers are managed; and
- the ability to achieve price reform consistent with the price reform priorities for the second regulatory period as discussed in section 5.2.

5.8.2 Assessment of TasWater’s price transition proposal

For its Draft Report, the Economic Regulator assessed TasWater’s price transition proposal in terms of the assessment criteria outlined in section 5.8.1 and noted that it met the requirements set out in that section. Specifically:

- TasWater’s revenue during the second regulatory period was forecast to be above the lower revenue limit;
- the impacts of price increases on customers are managed through the application of price constraints similar to the price constraints approved for the first regulatory period; and
- the adoption of TasWater’s price transition proposal would result in all residential customers and 95 per cent of non-residential moving to the target tariffs by 30 June 2018 consistent with the price reform priorities for the second regulatory period.

However, the Economic Regulator was concerned about TasWater’s proposal with respect to fixed water target tariffs and the extent of the buffer between TasWater’s forecast revenue and the lower revenue limit calculated by the Economic Regulator (the Economic Regulator also notes that TasWater’s forecast revenue also exceeds TasWater’s calculation of its lower revenue limit for both 2016-17 and 2017-18).

These issues, and the Economic Regulator’s responses, are discussed in the following sections.

5.8.2.1 *Assessment of TasWater’s proposed fixed water target tariff transition*

As noted in its Draft Report, the Economic Regulator supports the application of price constraints to manage annual price increases for customers and accepts TasWater’s proposed price constraints for transitioning customers currently paying fixed water and sewerage and variable charges under their respective target tariffs and charges. In particular, the Economic Regulator notes that price constraints of

the same magnitude as those proposed by TasWater applied during the first regulatory period and are considered to be acceptable for managing price transitioning for customers.

In its Draft Report, the Economic Regulator also noted that TasWater's proposed fixed water target tariff in 2015-16 is less than the three regional fixed water target tariffs applying in 2014-15 before rising in 2016-17 and 2017-18 in line with the proposed annual uplift of six per cent as shown in Table 5.20.

Table 5.20 Fixed water charges - comparison of current regional target tariffs and TasWater's proposed state-wide target tariffs

	Fixed water target tariffs			
	2014-15	2015-16	2016-17	2017-18
Fixed water charge per connection (20mm)				
Northern region	\$322.00			
North Western region	\$432.02	\$293.24	\$310.84	\$329.48
Southern region	\$305.97			

The reduction in the proposed fixed water target tariff in 2015-16 would result in a large number of customers who, after transitioning for three years under the current price transition mechanism, are at or under their respective target fixed water tariff in 2014-15, being classified as over the fixed water target tariff in 2015-16. Based on TasWater's proposed price transition arrangements these customers would potentially now transition down to the 2017-18 target fixed water tariff over three years. As noted in its Draft Report, the Economic Regulator was concerned that customers could potentially be confused by TasWater's reduction in fixed water target tariffs.

In its submission on the Economic Regulator's Draft Report, TasWater stated that it believed that setting a flat target risks sending the wrong message to consumers when target prices are likely to need to increase again in the future. However the Economic Regulator does not consider TasWater's argument against a flat target rate to be compelling or that it would be simpler for TasWater to explain its proposed fixed water charges to customers.

5.8.2.2 *Comparison of revenue received with revenue forecasts for the first regulatory period*

In its Draft Report, the Economic Regulator noted that the actual revenue for the previous regional corporations for 2012-13 and TasWater's actual revenue for 2013-14 and forecast revenue for 2014-15 exceeded the relevant forecasts by significant amounts.

In response to TasWater's submission on this issue, the Economic Regulator reviewed its calculations and identified that there were several instances where nominal values had been compared to real values and unregulated revenue had been included. It was also identified that the forecasts used for its revenue comparisons did not account for a material amount of Southern Water's revenue

(‘supplementary income’)¹² ie the revenue forecasts adopted for the revenue comparisons were lower than was actually the case.

Allowing for these adjustments, the Economic Regulator recalculated its revenue comparisons and found that revenue will actually be under-recovered by a total of \$7.18 million for the first regulatory period.

5.8.3 Alternative price transition scenarios

As provided for in the Economic Regulator’s PSP Guideline, the Economic Regulator requested TasWater model two alternative scenarios to ascertain:

- whether customers paying above 2014-15 target tariffs could transition to target tariffs more quickly than TasWater proposed; and
- the impact of removing TasWater’s proposed reduction in target fixed water tariffs in 2015-16.

In assessing whether TasWater has the capacity to bring customers down to target sooner than it proposed in its proposed Price and Service Plan the Economic Regulator has considered only the gap between TasWater’s forecast revenue for the second regulatory period and the Economic Regulator’s calculation of TasWater’s revenue limits.

Under Alternative Scenario 1, customers above the target fixed tariffs as at 30 June 2015 would be brought down by half of the gap to the 2016-17 target in each financial year of the regulatory period (meaning customers above target transition to target one year earlier than proposed by TasWater). The target fixed water tariff would be the same for the three years of the second regulatory period, set at \$329.48 (TasWater’s target fixed water tariff for 2017-18) while the target fixed sewerage tariff is the same as in TasWater’s proposed price transition arrangements.

Under Alternative Scenario 2, customers paying above the target fixed tariffs as at 30 June 2015 would be brought straight down to the target tariff on 1 July 2015. The target fixed water tariff would be the same for the three years of the second regulatory period, set at \$329.48 (TasWater’s target fixed water tariff for 2017-18) whilst the target fixed sewerage tariff is the same as in TasWater’s proposed price transition arrangements.

Under each of the alternative price transition scenarios the approach to transitioning customers paying below target tariffs and customers paying less than the variable water target are the same as in TasWater’s proposed price transition arrangements.

The key differences between TasWater’s proposed price transition arrangements and the Economic Regulator’s alternative scenarios are therefore:

¹² Southern Water, *Price and Service Plan 2012-2015*, page 180.

- the timeframes for bringing customers paying above target tariffs down to target tariffs; and
- the removal of TasWater’s proposed reduction in target fixed water tariffs for 2015-16 (see Table 5.20).

5.8.4 Comparison of forecast revenue under each Alternative Price Scenario to the revenue limits

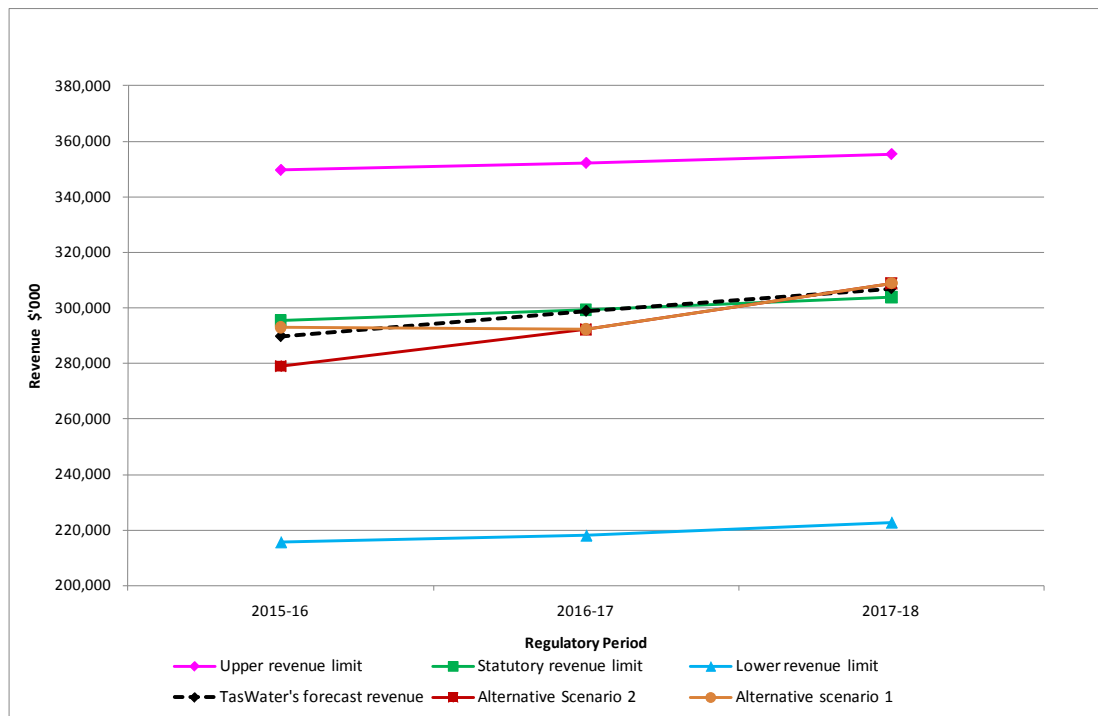
A forecast of revenues under each Alternative Price Scenario and TasWater’s forecast revenue is provided in the following table.

Table 5.21 TasWater’s forecast revenue and forecast revenue under Alternative Price Scenario’s 1 and 2 (\$ ‘000s)

	2015-16	2016-17	2017-18
TasWater’s forecast Revenue	296 204	300 699	308 855
Alternative Scenario 1	293 118	292 222	308 906
Alternative Scenario 2	278 979	292 223	308 876

Figure 5.3 provides a comparison between the respective outcomes from Alternative Price Scenarios 1 and 2, TasWater’s forecast revenue and the three revenue limits calculated by the Economic Regulator in Chapter 4.

Figure 5.3 Comparison of revenue under each Alternative Price Scenario and TasWater’s forecast revenue with the Economic Regulator’s calculation of revenue limits



The Economic Regulator notes that all revenue forecasts (ie revenue under TasWater’s proposed price transition and each of the Economic Regulator’s Alternative Scenarios) exceed the Economic Regulator’s calculation of the statutory

revenue limit for 2016-17 and 2017-18. However, as noted above, this outcome is based on the application of the growth forecasts outlined in TasWater's proposed Price and Service Plan and the Economic Regulator expects that the application of the Economic Regulator's revised growth forecasts will result in TasWater's 2016-17 and 2017-18 revenue being below the respective statutory revenue limits for those years.

In summary, noting the assessment criteria outlined in section 5.8.1, the Economic Regulator will require TasWater to adopt the price transition mechanism provided under Alternative Scenario 2 on the basis that:

- Price increases for customers with a 20mm water connection and one ET, who are paying below target are capped at the greater of \$100 or 10 per cent (for water and sewerage fixed charges combined). For non-20mm water connections and non – one ET water and sewerage connection the price cap increased proportionally based on water connection size and the number of ETs.
- Customers who as at 30 June 2015 are paying above target tariffs will be brought down to target fixed tariffs on 1 July 2015.
- TasWater's forecast revenue under Alternative Scenario 2 exceeds the Economic Regulator's calculation of TasWater's lower revenue limit by a significant margin across all three financial years of the second regulatory period and also exceeds TasWater's calculation of the lower revenue limit in 2016-17 and 2017-18 by \$6.4 million and \$13.9 million respectively (in 2015-16, TasWater's forecast revenue is less than its lower revenue limit by \$0.1 million).

The Economic Regulator requires TasWater's final Price and Service Plan to reflect the price transition mechanism provided under Alternative Price Scenario 2 for each year of the second regulatory period.

5.8.5 Economic Regulator's price transition mechanism and prices

The Economic Regulator has decided that the same price transition mechanisms as set out in TasWater's proposed Price and Service Plan will apply for the second regulatory period to the following services:

- sewerage target tariffs;
- price constraints on customers transitioning up to target tariffs;
- variable water charges; and
- transition arrangements for customers transitioning up to variable water target tariffs.

For the second regulatory period, the Economic Regulator has however decided on different:

- fixed water target tariffs; and
- transition arrangements for customers above target tariffs,

compared to those proposed by TasWater in its proposed Price and Service Plan.

The Economic Regulator has decided that TasWater must adopt the following fixed water target tariffs for each financial year of the second regulatory period:

Table 5.22 Economic Regulator’s fixed water target tariffs per connection for full service customers (\$)

Water Connection Size	2015-16	2016-17	2017-18
20mm	329.48	329.48	329.48

As a result of the Economic Regulator’s change to TasWater’s fixed water target tariff, the target tariffs linked to the fixed water target tariff (ie service charges, the fixed water target tariff for limited service customers and the fixed water target tariff for fire service customers) will also change for each financial year of the second regulatory period compared to the target tariffs proposed by TasWater.

The Economic Regulator requires TasWater to adopt the Economic Regulator’s fixed water target tariffs as set out in Table 5.22 of this Final Report.

6 SERVICE PROVISION

This Chapter outlines TasWater’s proposed approach and the Economic Regulator’s subsequent decisions with regard to the provision of regulated water and sewerage services to customers and includes discussion of:

- serviced land;
- customer contracts;
- policies; and
- service replacement.

6.1 Serviced land

6.1.1 Background

Serviced land is land that TasWater will permit to be connected to its infrastructure.

The identification of serviced land is important as it determines TasWater’s obligation to connect and supply customers. Serviced land also underpins policies and arrangements with respect to service extension and expansion, service charges, service introduction, service replacement and, potentially, developer charges.

6.1.2 Legislative requirements

Section 56U(1)(b) of the Industry Act requires a regulated entity’s proposed price and service plan to include a description of the land (identifiable by individual title or locality) it will permit to be connected to its water or sewerage infrastructure ie a description of serviced land.

In addition to complying with section 56U(1)(b) of the Industry Act, TasWater must also comply with clause 2.2 of the Customer Service Code which requires a regulated entity to connect a property to its existing infrastructure if:

- the property is within 30 metres of that infrastructure; and
- the person requests the regulated entity to connect the property to the infrastructure; and
- the person has paid, or has agreed to pay, all applicable fees for connection; and
- the person has complied with all reasonable terms and conditions of connection imposed by the regulated entity; and

- the connection is required to be made by the provisions of the Customer Service Code, a customer charter made in accordance with the Customer Service Code, or a policy contained in an approved price and service plan of the regulated entity; and
- the physical characteristics or location of the property are not such as to require the application of unusual or unusually costly infrastructure, design, or installation techniques in order for the connection to be made; and
- no plan of subdivision, or other instrument of a type approved by the Economic Regulator, specifies that connection to the regulated entity's infrastructure, or provision of regulated services by the regulated entity, will not occur.

6.1.3 Identifying serviced land – factors and considerations

The Economic Regulator's PSP Guideline also outlined the following parameters which may be used by TasWater to determine and justify what land is serviced land:

- geographical and hydrological factors;
- network capacity;
- system capacity (ie treatment plants);
- relevant planning considerations; and
- other justifications based on technical considerations.

The PSP Guideline also stated that TasWater is also required to:

- publish separate descriptions of serviced land for water services and sewerage services;
- continue to make descriptions of serviced land for both water and sewerage services publicly available eg on the entity's website or at a fixed address; and
- ensure that the description of serviced land is updated and published on a regular and ongoing basis ie on at least a monthly basis or when serviced land boundaries change.

6.1.4 TasWater's proposed approach to serviced land

In its proposed Price and Service Plan, TasWater noted that it had undertaken a desktop-based approach to the identification of its serviced land area which was guided by a state-wide set of business rules that address issues such as minimum flow, static pressure and proximity to infrastructure mains.

TasWater proposed identifying serviced land on an individual title basis. Further, TasWater has assessed each title for a single tenement connection. In the event that multiple tenements are required TasWater proposed that additional assessments will need to be undertaken.

With respect to water services TasWater proposed using the following parameters to assess whether the property meets minimum water flow and pressure standards:

- Design Flow: 20L/min
- Static Pressure: 250kPa (25m)

Table 6.1 outlines the application of these standards and the outcomes in terms of whether land is identified as serviced land (whether with a full service or a limited service) or as unserviced land for the purposes of water service provision.

Table 6.1 TasWater’s definition of water services for the purposes of identifying serviced land

Titles with Full Service	Titles with Limited Service	Titles that are Unserved
<ul style="list-style-type: none"> ▪ Are within 30m of TasWater reticulation main, can receive treated water^{Note 1} and meet the minimum flow and pressure standards. ▪ Are currently connected, receiving treated water^{Note 1}, meet the minimum flow and pressure and are not within 30m of a TasWater reticulation main. 	<ul style="list-style-type: none"> ▪ Receive untreated water; or ▪ Are currently connected and: <ul style="list-style-type: none"> ○ Do not meet the minimum flow or pressure standards; or ○ Directly connected to a trunk main. 	<ul style="list-style-type: none"> ▪ Are not within 30m of a TasWater reticulation main; or ▪ Require an easement over private land; or ▪ Are within 30m but do not meet minimum flow or pressure standards.

Note:

1. Treated water for the purposes of serviced land includes disinfected and treated water supplies and excludes raw water supplies.

With respect to wastewater services, in the first instance TasWater proposes assessing whether a gravity connection is possible and in undertaking this assessment considering whether there is a positive fall (ie > 0°) from the property to the reticulation main.

Table 6.2 outlines the outcomes of this assessment process in terms of whether land is identified as serviced land (whether with a full service or with a private pump station service) or as unserviced land for the purpose of sewerage service provision.

Table 6.2 TasWater’s definition of gravity wastewater services for the purpose of identifying serviced land

Titles with Full Service	Titles with Private Pump Station Service	Titles that are Unserviced
<ul style="list-style-type: none"> ▪ Are within 30m of TasWater reticulation main and are able to connect via a gravity connection; or ▪ Are within 30m of a TasWater low pressure main. 	<ul style="list-style-type: none"> ▪ Are within 30m of a TasWater reticulation main but cannot connect via a gravity connection. 	<ul style="list-style-type: none"> ▪ Are not within 30m of a TasWater reticulation main; or ▪ Require an easement over private land.

With respect to land identified as unserviced land, TasWater proposed that owners contact TasWater to discuss the feasibility of connecting the property to existing infrastructure and notes that, depending on the outcomes of an engineering assessment, fees and charges may apply in these cases.

TasWater also identified a number of non-standard systems which it also proposes will require an engineering assessment to determine the requirements for a connection.

Despite providing a list of factors and considerations relevant to the identification of serviced land, TasWater’s proposed Price and Service Plan did not provide the required description of serviced land with the exception of a sample map of serviced land for the town of Deloraine.

TasWater subsequently submitted a full set of draft serviced land maps in respect of both water and sewerage services on 19 November 2014. TasWater noted that each map contained a disclaimer indicating that the map is draft only and should not be used for planning or decision making purposes. The draft maps are available on the Economic Regulator’s website.

TasWater also noted in its proposed Price and Service Plan that the final set of serviced land maps would be available by the end of February 2015 after the completion of hydraulic engineering assessments. TasWater also undertook to publish, on its website, the final maps no later than 1 July 2015.

6.1.5 Assessment of TasWater’s approach to determining serviced land

TasWater’s proposed methodology for identifying unserviced land was generally compliant with the requirements of the Customer Service Code. Identifying titles that are not within 30 metres of a TasWater reticulation main as ‘unserviced’ complies with clause 2.2 of the Customer Service Code. The Economic Regulator also considers that land needing an easement over private land is justification for identifying a title as unserviced, given the requirement under clause 2.2 that ‘the physical characteristics or location of the property are not such as to require the application of unusual or unusually costly infrastructure, design, or installation techniques in order for the connection to be made’.

In its Draft Report the Economic Regulator noted that, potentially, TasWater’s proposed minimum flow and pressure requirements could satisfy the requirements

of clause 2.2 of the Customer Service Code as an unusual cost. However, TasWater's proposed Price and Service Plan did not provide any justification for the use of these minimum flow and pressure figures. In its Draft Report the Economic Regulator noted that, in the absence of supporting information, it did not intend approving TasWater's proposed minimum water flow and minimum water pressure figures as a valid basis upon which to exclude properties or parts of properties from serviced land.

TasWater's submission on the Draft Report stated that its proposed minimum flow and pressure standards were based on the standards outlined in TasWater's Supplement to the Water Services Association of Australia's *Water Supply Code of Australia*. Having considered this additional information the Economic Regulator considers it appropriate for TasWater to apply its proposed minimum flow and pressure standards in deciding whether a property or part of a property is within serviced land. The Economic Regulator also notes that the TasWater Supplement is currently available on TasWater's website.

The Economic Regulator approves TasWater applying the minimum water flow and minimum water pressure figures outlined in TasWater's Supplement to the Water Services Association of Australia's Water Supply Code of Australia in determining whether a property or part of a property is within serviced land.

The Economic Regulator requires TasWater to publish TasWater's Supplement to the Water Services Association of Australia's Water Supply Code of Australia together with any other additional relevant information that would assist customers and stakeholders in determining whether their property or part of their property is within serviced land.

In its Draft Report, the Economic Regulator noted that the draft serviced land maps provided by TasWater on 19 November 2014 did not consistently identify serviced land by title, as proposed by TasWater in its proposed Price and Service Plan. On a number of maps, lines showing different levels of service, crossed land title boundaries. However, TasWater's submission on the Draft Report outlined the benefits of not identifying serviced land by title. Specifically, different levels of service within a property's title boundaries are able to be shown as in some cases the minimum flows and pressures may not be available at some parts of the property. The Economic Regulator supports TasWater's proposal to allow serviced land boundaries to exist within titles on the basis that it provides additional information to customers.

The Economic Regulator approves TasWater allowing serviced land boundaries to exist within property titles.

In its Draft Report the Economic Regulator also noted that the categories of land in the draft serviced land maps did not match those used in Tables 1 and 2 in Attachment B1 of TasWater's proposed Price and Service Plan (ie the proposed plan uses the terms 'titles with full service', 'titles with limited service' and 'titles that are unserviced'; whereas the maps use 'serviced', 'partial service' and 'not serviced'). The Economic Regulator therefore intended requiring TasWater to

ensure that the categories of land used in the finalised versions of its state-wide service land maps were consistent with those used in the proposed Price and Service Plan. However, these issues have been addressed in the updated serviced land maps provided by TasWater on 3 March 2015 (available on the Economic Regulator's website). The Economic Regulator will however require TasWater to ensure that the categories noted in future serviced land maps continue to be consistent with the categories approved in TasWater's Price and Service Plan for the second regulatory period.

The Economic Regulator requires TasWater to ensure that the categories of land used in the finalised and future versions of its state-wide service land maps are consistent with those used in TasWater's approved Price and Service Plan.

Based on submissions received on its Draft Report, the Economic Regulator accepts that the Draft Report did not provide sufficient clarity on the Economic Regulator's capacity to approve changes to serviced land boundaries. In this regard, it is expected that all increases in serviced land would be made in accordance with the Service Extension and Expansion Policy and/or the Service Introduction Policy which are approved by the Economic Regulator as part of its approval of TasWater's Price and Service Plan. These increases do not require the prior approval of the Economic Regulator. Reductions in serviced land will need to be approved by the Economic Regulator provided such proposals are consistent with the service replacement process set out in section 6.3 of the Final Report. TasWater is however required to publish regular updates to the descriptions of serviced land.

As to the timing of the publication of updated descriptions of serviced land, TasWater's Draft Report submission indicated a preference for updates to be published on a quarterly basis. However, the Regulator will require TasWater to publish updates to serviced land as soon as possible after changes are made and, in any case, on at least a monthly basis to provide certainty for customers and so as customers are in a position to make decisions based on up-to-date information.

With respect to any future changes to the description of TasWater's serviced land, the Economic Regulator requires TasWater to provide an undertaking in its Price and Service Plan to ensure that the description of serviced land is updated, published and made available to the public as soon as possible after changes are made and, in any case, on at least a monthly basis.

The Economic Regulator notes that TasWater still has significant work to complete in relation to the description of serviced land, with the final versions of the maps not due to be published until after the release of the Economic Regulator's Final Report and Price Determination. However, given the importance of TasWater's serviced land policy as a foundation for the water and sewerage pricing and service system, the Economic Regulator will consider auditing the methodology and the correct application of TasWater's identification of serviced land at some point in the future.

The Economic Regulator requires TasWater to provide in its Price and Service Plan, the finalised versions of its state-wide serviced land maps, as well as an undertaking to make the final version of those maps available to the public from 1 July 2015.

6.1.6 Connecting properties outside serviced land

As outlined above, TasWater does not have an obligation to connect a property to its infrastructure if that property is outside serviced land. However, at the same time, there is nothing preventing TasWater from entering into an arrangement with a property owner to connect a property outside serviced land. Depending on the nature of the connection, the terms and conditions of the agreement to connect the property will be based on TasWater's Service extension and expansion policy (referred to in section 6.2.7), Developer charges policy (see section 6.2.5) and/or Service introduction policy (see section 6.2.8).

TasWater stated in its proposed Price and Service Plan that unconnected properties that do not fall within the standard definitions will be identified as unserviced land. Property owners in these areas will need to contact TasWater if they wish to be connected to TasWater's infrastructure to organise an engineering assessment to see if a connection is feasible.

6.2 Customer contracts and policies

TasWater was required, under various legislative and regulatory instruments, to include in its proposed Price and Service Plan a series of draft policies and a draft customer contract. The policies required to be provided are as follows:

- Connection policy;
- Service charges policy;
- Service extension and expansion policy;
- Service introduction charges policy;
- Developer charges policy;
- Sub-metering policy;
- Trade waste charges policy; and
- all other policies relating to TasWater's interactions with customers and potential customers (which included, in this instance, TasWater's 'financial hardship policy' and its 'customer complaints, enquiries and disputes management policy').

With the exception of the Developer charges policy', the Economic Regulator assessed these documents as part of its price determination investigation. The Economic Regulator's focus in this regard was one of compliance and accuracy including those drafting errors which render the document non-compliant.

The review of the draft developer charges policy included in TasWater’s proposed Price and Service Plan was deferred pending the result of post Draft Report discussions with TasWater and the Economic Regulator’s consideration of submissions received on the Draft Report in relation to developer charges. Matters pertaining to the agreed developer charges methodology are further discussed under section 6.2.5 of this Final Report.

In addition, there have been supplementary matters considered since publication of the Economic Regulator’s Draft Report, and subsequent consultation period, with respect to TasWater’s draft sub-metering and trade waste charges policies. These issues are further discussed under sections 6.2.4 and 6.2.6 respectively of this Final Report.

In this Final Report, the Economic Regulator has indicated its decision to require TasWater to address all non-compliance related matters by re-drafting documents in accordance with the requirements set out in this Final Report.

6.2.1 Customer contracts

Division 4 of the Industry Act requires a regulated entity to develop a customer contract for regulated services. It is also a requirement that the customer contract be prepared in accordance with the Water and Sewerage Industry Customer Service Code.

A customer contract is defined in the Industry Act as being the *“contract between a regulated entity and a customer for the provision of regulated services to the customer, which includes standard terms and conditions of service”*.

The Economic Regulator is required under the Industry Act to consider any customer contract in making a price determination that is to apply to a regulated entity in respect of a regulated service.

In accordance with section 65 of the Industry Act, and the Economic Regulator’s PSP Guideline, TasWater included, in its proposed Price and Service Plan, the customer contract that it proposes using during the second regulatory period.

The Economic Regulator subsequently reviewed the draft customer contract for compliance with the provisions of the Customer Service Code.

As part of that assessment, the Economic Regulator identified a number of non-compliance issues throughout the contract document.

The review process also identified that a number of terms had been defined in the customer contract but not actually used within the document. Such defined terms are, therefore, redundant and should be removed.

The Economic Regulator offered TasWater comments with respect to the issues it identified and suggested that TasWater remove those terms which had been defined but not subsequently used within the draft customer contract. Furthermore, the Economic Regulator suggested that TasWater carry out thorough quality assurance

of its draft customer contract to ensure consistency in the use of terms and correct referencing to all other source documents.

The Economic Regulator's comments did not, however, extend to matters pertaining to the legality or enforceability of the customer contract as it is TasWater's responsibility to manage these issues. Rather, the feedback was more general in nature, focusing on the customer contract's compliance, overall drafting and structure.

In addition, there were not any issues raised as part the consultation process on the Economic Regulator's Draft Report with respect to the accuracy and compliance of TasWater's draft customer contract which have resulted in any subsequent amendments to the Economic Regulator's position on these matters.

The Economic Regulator requires TasWater to revise its draft customer contract to ensure full compliance with relevant provisions of the Customer Service Code.

6.2.2 Connection policy

The point where a customer's pipes connect to a regulated entity's water and sewerage infrastructure is known as the connection point.

It is a requirement under section 56U(1)(a) of the Industry Act, and the Economic Regulator's PSP Guideline, that a regulated water and sewerage entity's proposed Price and Service Plan include a connection policy.

The draft connection policy, as submitted by TasWater, states that it outlines the circumstances in which TasWater will permit an owner of land to connect, relocate or adjust a connection to TasWater's water and/or sewerage infrastructure and describes the land (serviced land), whether by individual title or locality, that TasWater will permit to be connected to its water and/or sewerage infrastructure.

However, as drafted, TasWater's connection policy does not cover:

- where a property is outside TasWater's serviced land and expansion is required to connect the property to TasWater's water and sewerage infrastructure; or
- where a property within TasWater's serviced land is being subdivided; or
- where there is a change in land use within TasWater's serviced land.

The above situations have the potential to increase demand on the capacity of TasWater's water and sewerage infrastructure and are, therefore, addressed by TasWater under its Service extension and expansion policy and its Service introduction charges policy, or by a contract entered into in accordance with section 61 of the Industry Act.

Under TasWater’s draft connection policy, a property will be permitted to connect to water and/or sewerage infrastructure if it meets the connection requirements as outlined in the Customer Service Code and complies with the following criteria:

- the property is within TasWater’s serviced land;
- a title is issued for that property or consent has been provided by the land owner;
- if necessary, a certificate for certifiable work is obtained;
- a TasWater Application for Water and Sewerage Connections form has been completed and submitted; and
- the applicable fees relating to connection, as listed in TasWater’s approved schedule of tariffs have been paid.

The draft connection policy submitted by TasWater was reviewed by the Economic Regulator for compliance against the relevant regulatory and legislative provisions (as noted above).

As an outcome of this compliance review, a number of instances of non-compliance with obligations outlined the Industry Act and the PSP Guideline were identified.

Specifically, the draft connection policy does not specify the connection charges to apply to properties within serviced land, as required under clause 4.8.1 of the PSP Guideline. Nor does the draft policy address matters pertaining to the relocation of a connection or adjustment of a connection and is, therefore, in contravention of section 56U(1)(a) of the Industry Act.

The draft connection policy only deals with initial connection requests and does not detail the criteria for, nor charges associated with, adjustment of a water or sewerage connection or the relocation of a water or sewerage connection. Accordingly, TasWater’s draft connection policy must be amended.

With respect to specifying the connection charges to apply to properties within serviced land, and as an example, TasWater may choose to include a list of all connection charges proposes applying. Alternatively, TasWater may choose to simply provide additional text which directs the reader to where the connection charges information may be obtained (for example, on TasWater’s website).

The Economic Regulator also noted that, regarding TasWater’s obligations under section 56U(1)(b) of the Industry Act, TasWater did not include, in its proposed Price and Service Plan, a description of the land it will permit to be connected to its water infrastructure or sewerage infrastructure (that is, a description of ‘serviced land’). TasWater subsequently provided the required description to the Economic Regulator on 20 November 2014. Matters pertaining to serviced land are further discussed under section 6.1 of this Final Report.

There were not any issues raised as part of the consultation on the Economic Regulator’s Draft Report with respect to the accuracy and compliance of TasWater’s

draft connection policy which have resulted in any subsequent amendments to the Economic Regulator’s position on these matters.

The Economic Regulator requires TasWater to amend its draft connection policy to ensure its legislative compliance. That is, TasWater must re-draft its draft connection policy so that it:

- (1) also outlines the circumstances in which TasWater will permit an owner of land to relocate or adjust a connection to TasWater’s water infrastructure or sewerage infrastructure; and***
- (2) specifies the connection charges to apply to properties within serviced land.***

Notwithstanding the absence of charging information within its draft connection policy, and the omission of any discussion of relocation or adjustment of connection arrangements, TasWater put forward, within its proposed Price and Service Plan, the following connection fees for the second regulatory period:

- property service connection - **water** (standard 20mm connection) – for new water service connections or a relocation of an existing water connection;
- property service connection - **water** (standard 25mm connection) – for new water service connections or a relocation of an existing water connection;
- property service connection – **water** (non-standard connection) – for new water service connection, which is not a standard connection;
- property service connection – **sewer** (standard 100mm connection) – for new sewerage service connection to residential or relocation of an existing sewerage connection; and
- property service connection - **sewer** (non-standard connection) - new sewerage connection or relocation of an existing sewerage connection.

TasWater’s proposed fee amounts for connection or relocation of a water service or sewerage service are shown in the following tables.

Table 6.3 Fees for connection or relocation - water

Type of charge		2015-16 (\$)	2016-17 (\$)	2017-18 (\$)
Standard connection	20mm	2 032.69	2 083.50	2 135.59
Standard connection	25mm	2 218.57	2 274.03	2 330.88
Non-standard connection		POA	POA	POA

Table 6.4 Fees for connection or relocation - sewerage

Type of charge		2015-16 (\$)	2016-17 (\$)	2017-18 (\$)
Standard connection	100mm	1 481.69	1 518.73	1 556.70
Non-standard connection		POA	POA	POA

The Economic Regulator noted that TasWater has proposed the introduction of a fee for connection or relocation of a 25mm water connection. This was not a connection size for which charges were proposed, nor subsequently approved, in the Economic Regulator's 2012 Price Determination.

Furthermore, the previous regulated entities had, as part of the first Price Determination, obtained approval to only apply a fee for connection yet TasWater has proposed to apply charges for connection as well as charges for the relocation of water and sewerage connections for the second regulatory period. As noted in Table 6.3 and Table 6.4, the charges to apply for relocation are to be the same as the fee amounts proposed for connection alone.

Most notably, TasWater's proposed fee for connection or relocation of a 100mm sewerage connection has decreased by approximately one third compared to the fee amount approved for the connection of that type of property service connection for the first regulatory period. The proposed connection and relocation charges to apply to standard 20mm connections for water are noted as being marginally less than the connection fee amounts approved for that connection type for the first regulatory period. Such decreases indicate TasWater's move to introduce more cost reflective charging.

TasWater has also proposed that the fees for connection or relocation of a water service or a sewerage service be indexed at 2.5 per cent per annum (CPI of 2.5 per cent has been adopted by TasWater for the second regulatory period).

TasWater's proposed approach to determining charges for the connection and relocation of non-standard and larger water and sewerage connections on a cost recovery basis is consistent with the current arrangements, approved as part of the Economic Regulator's 2012 Price Determination. Furthermore, and as is presently the case, should customers raise concerns about whether the charges are not cost reflective, then such matters will be dealt with through the complaints handling procedures of TasWater; complaints to the Ombudsman; and/or possible compliance action by the Economic Regulator.

The Economic Regulator requires TasWater to:

- (1) adopt, in its final Price and Service Plan, the proposed connection and relocation of connection fees for 2015-16, as outlined in Table 6.3 and Table 6.4 of this Final Report, and that those fees be increased by 2.5 per cent per annum over the second regulatory period to account for inflation. It is noted that the proposed connection fees and relocation of connection fees apply only to 20mm water, 25mm water and 100mm sewerage connections; and***
- (2) determine charges for connection and relocation of connection for non-standard and larger water and sewerage connections on a cost recovery basis.***

6.2.3 Service charges policy

In its Draft Report, the Economic Regulator found that TasWater's proposed service charges approach was consistent with the Industry Act and the Pricing Regulations. However, TasWater's proposed Price and Service Plan contained limited supporting arguments justifying its proposed approach to service charges. To address this deficiency and assist TasWater in providing a response to the Draft Report, the Economic Regulator undertook further research and analysis into the respective arguments for and against the imposition of service charges. The results of this research were set out in section 6.2.3 of the Economic Regulator's Draft Report and are reproduced in the following sections.

6.2.3.1 Background

A water and/or sewerage service charge is a charge levied where there is an ability to access a service even if there is not yet a physical connection to a regulated entity's water and sewerage infrastructure. The Industry Act allows, but does not require, an entity to impose service charges for water and sewerage services on owners of property within serviced land, based on the entity's description of serviced land. Those liable to pay service charges fall within the definition of customers under the Industry Act and are therefore covered by the entity's customer contract.

Service charges have traditionally applied in most parts of Tasmania, having been imposed by the majority of local government authorities prior to the regional water corporations being established and, subsequently, TasWater. Service charges remain controversial, however, with some property owners forced to pay for a service without using or wishing to use the service.

In its proposed Price and Service Plan for the second regulatory period, TasWater proposed a service charge comprising the full fixed water target tariff and 60 per cent of the fixed sewerage target tariff. TasWater's reason for imposing a sewerage service charge at a reduced rate is due to the fact that no sewage is being discharged by unconnected customers and therefore the variable cost component of the fixed sewerage charge is avoided.

In its Draft Report the Economic Regulator noted that TasWater had advised that it did not intend imposing service charges on customers in limited water quality/supply areas. Following release of the Economic Regulator's Draft Report, TasWater advised the Economic Regulator that it will continue to impose a service charge on property owners in limited service or limited supply areas. The Economic Regulator will require TasWater to note this in its service charges policy and insert a mirroring statement in its final Price and Service Plan.

TasWater has proposed the continued application of service charges on the basis that:

- it is appropriate for all customers who can connect to a service to contribute to the cost of the network; in part because it is an important factor in minimising prices in sparsely populated geographical areas; and
- revenue collected from levying the charge is not insignificant and it allows services to be provided on a more cost effective basis.

In the 2015-16 financial year, water service charges are forecast to apply to 7 656 customers whilst sewerage service charges are forecast to apply to 8 428 customers.

It is the Economic Regulator's responsibility to assess the regulated entity's service charges policy, up against the entity's description of serviced land, the requirements of section 68A, and the Pricing Principles.

Given that the Pricing Principles can, in the context of service charges, be interpreted broadly, the following section reviews how service charges are applied in other Australian jurisdictions and presents the arguments for and/or against the imposition of service charges. This information assists in assessing the appropriateness of the service charge arrangements proposed by TasWater.

6.2.3.2 Arguments for water and sewerage service charges

Table 6.5 Service Charges by Jurisdiction

	TAS	VIC	SA	QLD	NSW	WA	ACT	NT
SERVICE CHARGE IMPOSED?	✓	All except some metro/regional service providers	✓	✓	Gosford City, Wyong Councils only	✓	✓	✓
WATER SERVICE CHARGE RATE: <small>Note 1</small>	100%	50%-100%	Residential: 100% Commercial: minimum rate or % of land value	100%	100%	100%	100%	100%
SEWERAGE SERVICE CHARGE RATE: <small>Note 2</small>	60%	50%-100%	100% or % of land value, whichever is higher.	50%-100%	GCC: 100% WC: 75%	75% or % of Gross Rental Value	100%	100%

Notes:

1. % of 20mm Fixed Water Rate
2. % of Fixed Sewerage Rate

As set out in Table 6.5, water and sewerage service charges apply in each Australian state and territory. There are a number of arguments commonly used by service providers and/or regulators to justify the imposition of service charges.

One such argument is that service charges reflect the costs of the regulated entity complying with regulatory requirements. In Queensland, water and sewerage service providers are required under section 164 of the *Water Supply Act 2008 (Qld)* (Queensland Water Supply Act) to ensure that all properties within serviced land have the ability to connect to the service provider’s infrastructure. From a service provider’s perspective, the most efficient way to meet this requirement is to build the capacity in the network to accommodate all potential customers in a service area, even though a portion of that service area may initially contain vacant/unconnected lots. This is because it is costly to replace trunk mains at a later date on a case-by-case basis. Section 165 of the Queensland Water Supply Act also allows the service provider to recover from a customer the reasonable cost of complying with section 164. With this in mind, the Queensland Competition Authority (QCA) position is that service charges represent the recovery of the reasonable costs of complying with a regulatory requirement.¹

A second and related argument is that, if service charges were not to apply, there would be a problem of cross-subsidisation whereby connected customers would pay for the additional capacity reserved for unconnected property owners. At least a

¹ Queensland Competition Authority, *SEQ Long Term Regulatory Framework - Pricing Principles*, March 2014, p. 48.

portion of these unconnected property owners could be engaging in “land banking”² and, therefore, having the costs of their investments subsidised by connected customers. In this context, service charges not only prevent cross-subsidisation, but in deterring land banking also encourage property development in areas serviced by existing water and sewerage networks.

These arguments are particularly relevant to areas experiencing high levels of residential growth, such as the ACT. In such instances, those liable to pay a service charge are typically owners of vacant lots created as part of new developments. The service charge encourages property development and ensures that each property owner is contributing to the collective water and sewerage infrastructure costs associated with the development. In most scenarios, a property will be constructed within a year of vacant land being purchased. It is typical therefore that the costs of paying the service charge over that timeframe will be factored into the total costs of buying and constructing a property. When considered in this context, the overall cost of the service charge is relatively minor and tacitly accepted by the property owner. Information provided to the Economic Regulator by the ACT’s Independent Competition and Regulatory Commission suggests that, for these reasons, water and sewerage service charges are relatively uncontroversial in the ACT.

A final argument in favour of service charges is that they are offset by the assumed increase in a property’s value that occurs from the property’s potential to access water and sewerage infrastructure. This argument is made explicit in the majority of Australian jurisdictions by service providers/regulators. There are, however, several caveats to this argument.

While it may be true that access to infrastructure will increase a property’s capital value, this will only benefit the owner of a property at the time the service is first made available to that property. This is because any increase in a property’s market value as a result of access to infrastructure will be paid for by the next owner(s) at the time of purchase. The increase to property value at the time of purchase will, therefore, offset any increase to the property value at the time of sale for that person(s).

An alternative argument is that, were service charges to be removed from currently serviced areas, this would be unequitable on two accounts. Firstly, the value of unconnected/vacant properties in current serviced land may rise relative to those in non-serviced land. For example, vacant land with access to water and sewerage infrastructure, without any offsetting service charge costs, would presumably be a more valuable investment than the same vacant land without any access to such infrastructure. Property owners outside of serviced land may therefore find it unfair that those within serviced land have value added to their property without any offsetting costs in the form of service charges. Secondly, were service charges to be removed, the service provider would have to recover this loss of revenue from existing customers. Potentially then, removing service charges would have the effect

² Land banking is the act of holding land or buying pre-developed parcels of land for future sale or development, typically for the purpose of making capital gains on the value of the land.

of connected customers subsidising the increase in some unconnected customer's property value.

6.2.3.3 *Arguments against water and sewerage service charges*

The review of service charges across Australia has identified the following three categories of arguments against water and sewerage service charges:

- those relating to specific geographic and historic circumstances which make service charges not feasible;
- those relating to the broader negative economic impacts of service charges; and
- finally, those that draw on equity principles.

Geographic/historical factors are particularly relevant in Victoria and NSW, both of which are geographically diverse and contain a number of service providers. As a result, the imposition of service charges is not uniformly practiced across the States. In Melbourne and Sydney, services charges appear not to apply as a standalone tariff. Rather, the vast majority of properties in the cities have long established water meters and are connected to infrastructure by default. As all metered properties incur the standard fixed charge, there is little rationale for imposing a service charge for vacant or unconnected/unmetered properties.

In regional Victoria, services charges are either imposed at 50 per cent of the standard fixed rates, or in a number of cases, not at all. In New South Wales, Hunter Water Corporation does not impose service charges, whereas Gosford City Council and Wyong Shire Council do.

Information from ESC Victoria indicates that there are a number of reasons why certain water and sewerage service providers in Victoria may choose not to impose service charges. In areas with a high proportion of unconnected properties that do not require water and/or sewerage services all year round (eg holiday homes), it would be neither economical nor equitable to impose service charges. Owners of these properties will often prefer to use a non-reticulated water and sewerage system when required, rather than pay an annual charge. There would also be problems with customer traceability and associated billing issues were service charges to be imposed in these areas.

Another reason why some regional Victorian service providers do not impose service charges appears to be due to their historical absence, along with low growth levels in population and property development. For service providers in such areas, the costs – political, economic and administrative – of introducing a service charge may outweigh the benefits. For example, Grampians-Wimmera-Mallee Water imposes a service charge only in designated growth towns, where a 'development rate' of \$174.14, roughly 50 per cent of the standard fixed water tariff, applies.

In terms of broader economic impacts of imposing service charges, the Essential Services Commission of South Australia (ESCOSA) has discussed the issue in detail, in its *Draft Inquiry into Reform Options for Drinking Water and Sewerage Pricing* (Draft Inquiry Report).

ESCOSA raises concerns in its Draft Inquiry Report that the practice of imposing service charges may encourage over-investment on behalf of service providers – in this case South Australian Water Corporation (SA Water). It states that:

This practice can result in over-investment by SA Water, as it allows SA Water to levy a charge simply as a consequence of laying a pipeline next to a property, regardless of whether or not any service is required.³

If service charges were to be removed, ESCOSA also argued that the “inappropriate distributions of costs and uneconomic investments, which can lead to perverse economic outcomes, are unlikely to occur”.⁴

Should service charges be removed, ESCOSA estimates that the initial loss in revenue (\$10.8m per annum) would lead to annual water and sewerage bill increases of approximately \$8 per customer respectively.⁵ However, the Draft Inquiry Report went as far as suggesting that, in the long run, the impacts on customers’ bills may be offset by more efficient investments on behalf of SA Water which in turn will translate into cost savings.

ESCOSA’s Draft Inquiry Report also suggested that imposing service charges changes the economics of free choice, creating incentives for those liable to pay service charges to connect to SA Water’s infrastructure rather than remain with non-reticulated systems. Not only does this potentially penalise these people, but it discourages potential water saving measures that may occur through the usage of non-reticulated water systems. This is particularly the case in areas with limited overall water supplies.

In its Final Inquiry Report, ESCOSA has recommended that customer’s who choose not to connect to SA Water’s network should not be required to pay a service charge on the basis that:

- people should be able to choose whether or not they receive a service. Whilst customers should be aware of, and should pay for, the private and social costs that arise from their consumption, payment for water and sewerage services should only be required from a customer when they receive that service; and
- imposing a service charge acts as a very substantial barrier to entry as any alternative service provider will not only need to be cheaper, but cheaper by at

³ Inquiry into Reform Options for SA Water’s Drinking Water and Sewerage Prices, Draft Inquiry Report, ESCOSA, 16 July 2014, p. 113.

⁴ Inquiry into Reform Options for SA Water’s Drinking Water and Sewerage Prices, Draft Inquiry Report, ESCOSA, 16 July 2014, p. 116.

⁵ Inquiry into Reform Options for SA Water’s Drinking Water and Sewerage Prices, Draft Inquiry Report, ESCOSA, 16 July 2014, p. 116.

least the amount of the fixed charges before they stood any chance of being considered as an alternative supplier⁶.

The Economic Regulator acknowledges the validity of ESCOSA's first reason for recommending the removal of service charges. However, in the Tasmanian context, the likelihood of a competitor entering the Tasmanian water and sewerage market is considered to be very low.

6.2.3.4 *Service charges pricing discussion*

The above discussion provides a basis on which to assess TasWater proposed service charges tariff structure (tariff structure). This section narrows the scope of this assessment by placing the above discussion into the relevant legislative and regulatory context. As TasWater is, by legislation, not prevented from imposing service charges, the discussion predominately concerns the arguments that may affect the charges that are ultimately to be set by the Economic Regulator.

Firstly, TasWater's proposed service charge target tariff structure is consistent with subsection (1)(a) of section 68 of the Industry Act: *a regulated entity is to be provided with a reasonable opportunity to recover the efficient costs of complying with a regulatory requirement*. Such a regulatory requirement can be found under the *Customer Service Regulations*, Regulation 6(1), which stipulates that a regulated entity is to ensure that any property within 30 metres of its infrastructure is able to be connected, providing a number of conditions are met. To comply with this regulation, a service provider needs to ensure there is enough capacity in the network such that all property owners in a service area can connect upon request. Under the proposed Price and Service Plan, all property owners within serviced land pay for these fixed costs, either via a service charge or fixed water and/or sewerage charge. This is essentially the same argument that is used by the QCA to support service charges in Queensland.

Arguments concerning land banking and cross-subsidisation are also relevant to TasWater's proposed service charges tariff structure. The proposed tariff structure arguably promotes property development and therefore has a positive economic influence by providing disincentives for land banking in areas serviced by existing water and sewerage networks. Any reduction in current service charges would also advantage those engaging in land banking in service areas relative to those in non-service areas. Similarly, property owners who remain unconnected after a service is introduced to their area will potentially have their property value increased at a 'reduced cost'. Consequently, when and where TasWater decide to introduce their services would potentially be more controversial than would be the case with higher costs for unconnected customers. In terms of cross-subsidisation, any reduction in service charges would be paid for by an increase in the bills of connected customers. In summary, some members of the community may find the

⁶ Inquiry into Reform Options for SA Water's Drinking Water and Sewerage Prices, Final Inquiry Report, ESCOSA, 16 December 2014, p. 65.

arrangements that naturally take place as a result of reducing service charges to be unequitable.

In theory then, there are several arguments that support approving TasWater's proposed service charges. However, it is important to consider what any reduction of the proposed charges would mean in terms of customer bill impact. Using TasWater's forward estimates of revenue to be raised from service charges in the 2015-16 financial year, it is possible to infer how a reduction in the service charge would impact upon the bills of connected customers.

TasWater forecasts that \$2.2 million will be raised from water service charges and \$2.8 million will be raised from sewerage service charges in 2015-16. Based on the estimated 255 646 customers paying the fixed charge for water services in 2015-16, a water service charge reduction of 50 per cent would equate to a \$4 bill increase for these customers. Based on the estimated 238 967 customers paying the fixed sewerage charge in 2015-16, a 50 per cent reduction of the sewerage service charge would lead to an increase of nearly \$6 per bill for these customers. Together, reducing the water and sewerage service charge target tariffs by 50 per cent would mean an approximate \$10 increase in the average customer bill.

While the potential significance of this bill impact is likely to vary according to the customer, this is likely to be mitigated somewhat by the price constraints that will apply for the second regulatory period. A reduction in the service charge would be but one factor in price movements for water and sewerage services.

It is also important to consider whether the arguments for the imposition of service charges are practically sound in the Tasmanian context. Unlike some other Australian jurisdictions, it is questionable whether Tasmania is experiencing the types of residential growth likely to attract large scale land banking. On the contrary, service charges apply in many cases to long-established communities which contain holiday homes and property owners who might otherwise opt for non-reticulated water and/or sewerage systems (thereby forgoing the costs of connecting to and utilising TasWater's infrastructure). In such cases, the freedom of choice over service provision is constrained by service charges. This is due to the economic inefficiency implied in using non-reticulated systems while also paying the standard fixed rate for access to reticulated infrastructure. It should also be noted that any growth in property value as a result of access to water and/or sewerage infrastructure is redundant for those who do not wish to sell their properties in the future. In fact, in cases where service charges apply to those who neither require nor benefit from access to water and/or sewerage services, it is arguable that connected customers are the ones being subsidised via service charges.

This leads to the broader economic arguments against imposing service charges, which are also relevant to the Economic Regulator's assessment of TasWater's proposed service charge structure.

Section 68(1)(c) of the Industry Act states that *"the price is to provide effective incentives to promote economic efficiency, reduce costs or otherwise improve productivity with respect to a regulated service."* With the points raised in ESCOSA's Draft Inquiry in mind, it is questionable whether the proposed service charges

promote economic efficiency on behalf of the entity. Rather than promote economic efficiency, service charges may instead encourage the provision of services to areas where demand for these services is relatively low.

For new network investment, it should be noted that these concerns may already be mitigated by TasWater's draft service introduction charges policy. In its draft service introduction charges policy, TasWater states that it will require 80 per cent community support for the introduction of water and/or sewerage services before undertaking a detailed plan for the introduction of a service. It is therefore arguable that TasWater has already adopted policies designed to avoid overinvestment.

6.2.3.5 Service charges policy compliance discussion

The Economic Regulator assessed TasWater's draft service charges policy for consistency and compliance with the obligations and principles as outlined in section 68A of the Industry Act, and the Economic Regulator's PSP Guideline. One instance of non-compliance was identified from this review.

TasWater stated in its proposed Price and Service Plan that customers to whom a service charge applies will pay the same amount they would expect to pay upon connection. In other words, those customers without a connection in limited supply areas will pay a reduced service charge. However, the PSP Guideline (clause 4.8.2) explicitly directs TasWater to specifically address the application of services charges to different customer classes in its service charges policy. TasWater's draft policy did not include any discussion in this regard.

The Economic Regulator's review of TasWater's proposed Price and Service Plan also identified some inconsistencies in the use of the term 'services charges', which may confuse readers. TasWater uses the term 'fixed service charges' to denote the fixed charges for water and sewerage charges for connected customers. The term 'service charge' should be used exclusively to denote the charge levied on unconnected customers within serviced land.

6.2.3.6 Summary

In accordance with the Industry Act, a regulated entity may impose service charges for water services and sewerage services in accordance with the description of serviced land provided as part of its proposed Price and Service Plan. As noted in the above discussion, there are arguments to support TasWater's proposal to continue to impose service charges being consistent with the Industry Act and Pricing Regulations. However, the Economic Regulator notes that the arguments presented in the above discussion that support a reduced level of service charges are equally consistent with the Industry Act and Pricing Regulations.

Submissions received on the Economic Regulator's Draft Report in relation to this issue did not present any new arguments either for or against TasWater imposing service charges.

The Economic Regulator has therefore decided that, as TasWater is legally able to impose service charges and a decision to remove service charges would result in

the burden of those charges being transferred to other customers, TasWater should be permitted to continue to impose these charges.

Additionally, consistent with the Economic Regulator’s decision to require TasWater to adopt its proposed 2017-18 fixed water target tariffs for the duration of the second regulatory period (see section 5.8.5 of this Final Report), TasWater is also required to apply the following service charge target tariffs during the second regulatory period:

Table 6.6 Economic Regulator’s service charge target tariff – water and sewerage

	2015-16 (\$)	2016-17 (\$)	2017-18 (\$)
Water service charge	329.48	329.48	329.48
Sewerage service charge	337.60	357.88	379.32

The Economic Regulator found that TasWater’s draft service charges policy was largely compliant apart from not discussing the application of service charges to different customer classes.

Based on its assessment of TasWater’s proposed Price and Service Plan, the Economic Regulator accepts TasWater’s proposed service charges structure.

The Economic Regulator requires TasWater to apply the service charge target tariffs set out in Table 6.6 of this Report.

Based on its assessment of TasWater’s discussion on services charges in section 7.2 of its proposed Price and Service Plan, the Economic Regulator requires TasWater to address the inconsistent use of the term “service charge(s)”. Where the fixed charge for water and sewerage is intended to be used, it should be referred to as a “fixed charge” in accordance with clause 4.5.1 of the PSP Guideline.

In respect to different customer classes, the Economic Regulator requires TasWater to:

- (1) note its intention to continue to charge limited service customers a service charge in its service charge policy; and***
- (2) make a mirroring statement in the services charges section of its final Price and Service Plan.***

6.2.4 Sub-metering policy

TasWater is required to charge a variable charge for a water service with the variable charge payable for each unit of water delivered to the property to which the variable charge relates. To enable it to measure the volume of water delivered to each property TasWater installs a meter at each connection point.

With respect to strata title schemes, due to the existence of interposing pipes on all or on part of common property, individual lots are generally not connected directly to

TasWater’s infrastructure. However, section 3A of the Industry Act states that strata title lot owners are TasWater’s customers on the basis that individual lots would be connected to TasWater’s infrastructure if not for the interposing pipes.

Generally, TasWater’s infrastructure connects to a strata tile scheme via a single connection point with internal pipe work within the strata scheme connecting individual lots to the connection point. TasWater will install a meter (referred to as the master meter) at the connection point to the strata scheme but the master meter does not provide information on the volume of water delivered to individual lots. To measure the volume of water delivered to individual lot requires each lot to be metered. The installation of meters in addition to a master meter is referred to as sub-metering.

The legislation does not address the issue of whether strata title properties must be sub-metered. TasWater must therefore specify under what circumstances a strata title property must be, or, may be sub-metered and explain the costs involved.

The PSP Guideline required TasWater to include in its proposed Price and Service Plan:

- a discussion of its current approach to sub-metering;
- an explanation and justification of any differences between its current policy and the policy it proposed for the second regulatory period; and
- a sub-metering policy.

The sub-metering policy was required to address:

- the circumstances in which TasWater will require sub-metering of strata titled properties;
- the circumstances in which sub-metering of strata titled properties is optional;
- where sub-metering is optional, the process for strata title owners to follow in deciding whether or not to proceed with sub-metering; and
- TasWater’s position with regards to sub-metering multi-unit properties; and
- billing arrangements for multi-unit and strata titled properties.

TasWater’s proposed Price and Service Plan did not contain a sub-metering policy nor did it provide a discussion of the entity’s current approach to sub-metering or explain and justify any differences between TasWater’s current policy and proposed policy for the second regulatory period.

After the Economic Regulator brought this matter to TasWater’s attention TasWater submitted additional information, including a “metering policy” in late October 2014. Although the information received did not specify TasWater’s current sub-metering arrangements it did include TasWater’s proposed approach to sub-metering for the second regulatory period.

However, as the PSP Guideline only requires TasWater to provide a sub-metering policy the Economic Regulator did not intend to review and/or approve any component of the policy which dealt with metering more generally. Therefore the Economic Regulator assessed the draft policy for compliance and appropriateness with respect to its application from the perspective of sub-metering only.

TasWater's proposed metering policy included an intention to allow developers of new strata schemes the option of installing either a single master meter, or a master meter with sub-meters. Where a developer were to chose not to install sub-meters TasWater proposed advising the developer to install pipe work which would allow sub-meters to be installed at a later date. In its Draft Report the Economic Regulator proposed not approving this condition unless TasWater could provide sufficient justification for this proposal in its final Price and Service Plan and identify the legislative authority under which TasWater believes it is able to introduce such arrangements.

Therefore the Economic Regulator proposed in its Draft Report that TasWater must re-draft the policy to: be a standalone sub-metering policy; improve its readability, functionality and accuracy; and address the requirements of the PSP Guideline.

In its Draft Report, the Economic Regulator stated that it considered that TasWater's proposed sub-metering policy was confusing in parts and concluded that it would be difficult for a customer to read and understand the application of the policy to their individual circumstances. The Economic Regulator also noted that the proposed policy did not address the process for existing strata title owners to follow in deciding whether or not to proceed with sub-metering, as is required in the PSP Guideline, or, once a decision to sub-meter was made, what the process was for installing sub-meters. In this respect, the Economic Regulator considered that the term 'process' denoted undertaking a series of actions or steps to achieve a particular end.

6.2.4.1 Issues raised in submissions

In contrast to the contents of its metering policy, TasWater's submission on the Economic Regulator's Draft Report stated that it would require all new strata scheme developments to have a master meter and sub-meters. TasWater subsequently provided a copy of its proposed sub-metering policy to the Economic Regulator which included this requirement. The Economic Regulator noted therefore that TasWater's proposed sub-metering policy no longer refers to the original proposal that developers would have the option of not installing sub-meters in new strata title developments and that, where it was decided not to install sub-meters, the developer would be required to provide for the future installation of sub-meters.

Based on the other submissions received on the Economic Regulator's Draft Report and the Economic Regulator's own experience in dealing with queries and complaints about sub-metering, it was apparent that customers are confused about TasWater's approach to sub-metering. It was also apparent that the sub-metering policy in force during the first regulatory period did not address all possible metering arrangements nor does it specify when and how fire services charges are to be applied to strata schemes.

The Economic Regulator considers that TasWater's proposed sub-metering policy is confusing in parts and concluded that it would still be difficult for a customer to read and understand the application of the policy to their individual circumstances. In addition, the Economic Regulator noted that the proposed policy does not address the process for strata title owners to follow in deciding whether or not to proceed with sub-metering, as required in the PSP Guideline.

The Economic Regulator therefore requires TasWater's final sub-metering policy to:

- specify that a separate meter for common property is optional in that, if a separate meter for common property is not installed, then the difference between the volume measured at the master meter and the sum of the individual sub-meters is deemed to be the water usage for the common property;
- specify that if a sub-meter is installed to measure usage for common property there may be additional costs for lot owners;
- explain how the State Government concessions are applied to strata title lot owners;
- note that, as installing sub-meters and undertaking meter reading in multi-unit properties are unregulated services, owners of such properties have the option of using a third party to undertake these services;
- explain clearly the differences between the requirements for new multi-unit properties and the requirements for existing multi-unit properties;
- explain how fire services charges will be applied in strata title schemes;
- describe all possible metering configurations and the associated applicable billing arrangements including where a strata scheme has both master metering and direct connections that are separately metered.
- separately outline the billing arrangements when:
 - (a) the volume measured by the master meter is greater than the sum of the volumes measured by the sub-meters; and
 - (b) the volume measured by the master meter is less than the sum of the volumes measured by the sub-meters.
- specify that the minimum size of a sub-meter is 20mm and explain that each lot owner will be liable for:
 - (a) the target tariff fixed charges based on the relevant sub-meter size;
 - (b) variable charges based on their own usage;
 - (c) a proportion of any applicable common property water consumption;
 - (d) a proportion of any usage measured by the master meter which is greater than the sum of the usage measured by the sub-meters; and

- (e) a proportion, if applicable, of the fixed charge relating to a meter for common property.
- explain why, and under what circumstances, TasWater may decide to install a master meter where lots in a strata scheme already have individual meters and clearly state the implications for lot owners if a master meter is installed ie lot owners will be liable for any usage measured by the master meter which is greater than the sum of the usage measured by the sub-meters;
 - specify that TasWater can impose variable charges on a body corporate in accordance with Regulations 17(2) and 18(1) of the Pricing Regulations;

The Economic Regulator will also require TasWater to provide an undertaking in its final Price and Service Plan that it will develop and make available supporting documentation that will set out a high level description of the process and procedure to be followed by strata title owners in deciding whether or not to install sub-meters. This documentation is to include, but not be limited to:

- (a) the need to arrange for a vote of lot owners on whether to install sub-meters and to obtain all lot owners' agreement before proceeding;
- (b) explaining any differences in process or treatment compared to standard arrangements; and
- (c) describe what the bill will look like. For example, will charges in respect of common property be a separate line item or will the bill be based on a standard bill with a specific list of differences.

The Economic Regulator will further require TasWater to provide an undertaking in its final Price and Service Plan that all relevant sub-metering documents (including application forms, diagrams, guidelines etc) will be made available on TasWater's website.

The Economic Regulator requires TasWater to revise its proposed metering policy to:

- (1) be a standalone sub-metering policy;***
- (2) address the comments and questions raised by the Economic Regulator (as forwarded to TasWater simultaneous to the release of the Economic Regulator's Draft Report for public consultation) to ensure the policy's compliance, accuracy and readability; and***
- (3) address the sub-metering issues listed in section 6.2.4.1 of this Final Report.***

The Economic Regulator requires TasWater to include, in its final Price and Service Plan, discussion of its current approach to sub-metering, an explanation and justification of any differences between TasWater's current policy and the policy it proposes for the second regulatory period and any other requirements specified in the PSP Guideline.

The Economic Regulator also requires TasWater to provide, in its final Price and Service Plan, an undertaking that it will develop, and make available on its website, supporting documentation that will set out a high level description of the process and procedure to be followed by strata title owners in deciding whether or not to install sub-meters.

The Economic Regulator further requires TasWater to include, in its final Price and Service Plan, an undertaking that it will publish, and provide links to, all relevant sub-metering documents (including application forms, diagrams, guidelines etc) on its website.

6.2.5 Developer charges policy

In examining this issue the Economic Regulator noted in its Draft Report that it is not responsible for industry or economic development and considered it more appropriate that the State Government or councils, as TasWater's owners, develop policies relating to economic development separate to policies and approaches relating to pricing matters.

Developer charges include headworks charges, assets gifted by developers and cash payments made by developers to TasWater for the construction of new reticulation works.

A developer charges policy is required to be included in a regulated entity's price and service plan to be approved by the Economic Regulator. This policy covers arrangements for developers gifting assets or paying cash for the construction of new reticulation works and for setting headworks charges. The developer charges policy must be consistent with the requirements of the Industry Act and Regulation 20 of the Pricing Regulations and requires TasWater to estimate the amount of the developer charge and explain how it has been calculated.

TasWater's draft developer charges policy, as included in its proposed Price and Service Plan, was not reviewed for compliance with the relevant legislative and regulatory provisions. The Economic Regulator will work with TasWater to ensure it drafts a compliant developer charges policy. TasWater's Price and Service Plan will be required to include the final version of that policy. The Economic Regulator will also require TasWater to provide, on or before 1 July 2015, a mechanism for developers to obtain estimates of any developer charges associated with potential developments together with an explanation of how the amount of the charge was determined.

6.2.5.1 *TasWater's proposed approach to developer charges*

In its proposed Price and Service Plan, TasWater proposed that developer charges include the following three components:

- Headworks – a capital contribution towards consumption of capacity in water or sewerage network, or its expansion, which results from a development. These charges are usually levied on a per property/lot basis in a subdivisional development;

- Works internal – any infrastructure which is internal within a subdivision, up to the property boundary, is installed at a developer’s cost and gifted (ie contributed) to TasWater; and
- Works external – where a development requires standalone assets (eg a pump station) to be installed to support the development, at the developer’s cost.

TasWater also proposed continuing the current arrangements whereby charges associated with works internal and works external will be recovered on a cost reflective basis through direct payment or gifting of assets.

The Economic Regulator requires TasWater to retain the current arrangements for developer charges associated with works internal and works external.

In relation to headworks charges, TasWater outlined in its proposed Price and Service Plan its intention to depart, for the most part, from the current net present value (NPV) methodology. TasWater’s draft policy involved removing headworks charges for all development that is in areas where there is sufficient existing capacity or is consistent with TasWater’s immediate infrastructure growth plans. In addition, TasWater proposed introducing ‘out of sequence charges’ for developments that require TasWater to bring forward works ahead of schedule and introducing ‘isolated development charges’ if the proposed development is outside of TasWater’s growth plans.

A summary of its approach to headworks charges, as outlined in TasWater’s proposed Price and Service Plan, is provided below:

- No charge where a proposed development lies within the existing network capacity or is consistent with TasWater’s immediate infrastructure growth plans that would deliver the required capacity.
- An ‘Out-of-Sequence’ Development’ charge equivalent to the funding cost for undertaking planned works earlier than would otherwise be the case where a proposed development is within TasWater’s 10 year Capex plan but is brought forward to cater for the new development.
- An ‘Isolated Development Charge’ would apply where a proposed development is outside TasWater’s 10 year Capex plan, with the developer paying all infrastructure costs for their development.

6.2.5.2 State Government Headworks Waiver

The State Government introduced its Headworks Waiver on 1 April 2014, which provides support to new developments by waiving headworks charges for qualifying developments.

The scheme is designed to stimulate economic development by bringing forward pending and new developments. Accordingly, it applies:

- only to the headworks component of developer charges; and

- to developments where headworks become due and payable within the eligibility period 1 April 2014 and 31 March 2016 inclusive.

6.2.5.3 Approach to headworks charges approved under the 2012 price determination investigation

As part of its 2012 price determination investigation the Economic Regulator approved the previous regulated entities' developer charges policies which specified that the entities would adopt a NPV methodology for determining headworks charges. During the 2012 price determination investigation the Economic Regulator considered that a NPV methodology for determining headworks charges was appropriate as it considered that this approach satisfied the Pricing Principles (referred to in section 5.1 of this Final Report).

The key principle of the NPV methodology is that the cost of providing water and sewerage services for a specific development area is fully recovered from the development through a combination of upfront charges and future periodic charges without placing an additional financial burden on existing customers. This includes full cost recovery from new customers regardless of whether the development is a green field site or redevelopment of a brown field site.

In applying this approach, two similar areas may therefore have different developer charges based on whether the water and sewerage system in the respective area has spare capacity to accommodate the increased demand that will result from the development. This locational price signalling was considered critical to the justification for regional-based postage stamp pricing in the 2012 price determination investigation.

The NPV methodology requires a regulated entity to identify geographical areas, called headworks zones. The value of the assets required to service the specific area is identified as is the amount the regulated entity will receive in periodic charges in excess of operating requirements. Using the NPV methodology, the costs and revenues are reconciled to a single value by discounting them to today's dollars. The headworks charge is calculated as the difference between the value of the assets required to service the headworks zone and the amount to be funded by periodic charges over a specified time period (as calculated by the present value of the periodic charges).

Table 6.6 demonstrates how, under current arrangements, headworks charges vary considerably across Tasmania.

Table 6.6 TasWater 2014-15 headworks charge per ET (selected locations only)

	Water (\$)		Sewerage (\$)
Beauty Point	551	Wayatinah	80
Granton (west)	617	Smithton	673
King Island	1 684	Scottsdale	896
Smithton	3 394	Devonport	3 156
Tunbridge	11 754	Woodbridge	8 196
Conara	33 909	Exeter	8 255

According to TasWater’s Corporate Plan, total revenue from headworks charges has exceeded \$3 million per annum in recent years. The revenue received from these charges is not included in TasWater’s RAB as this contribution to assets was funded externally.

The inclusion of ‘sunk’ assets, particularly where their depreciated value is still high, in the headworks charges can result in a disincentive for developers to locate their developments where they can take advantage of existing capacity. The NPV approach can result in situations where locations that have received new infrastructure and that planning authorities consider appropriate for development are disadvantaged compared to areas where new infrastructure investment has not occurred and development is considered less appropriate.

The argument that least cost provision of services generally entails utilising existing capacity where possible before investing in network augmentation provides an incentive to depart from the NPV methodology and to consider approaches that encourage developments to occur where it is least costly.

It should be noted that TasWater will be required to continue to calculate service introduction charges (see Section 6.2.8 of this Final Report) based on a NPV methodology to ensure that existing customers do not subsidise the addition of new ones where a service is introduced. Service introduction charges are not levied on new developments to which developer charges apply.

6.2.5.4 Other possible approaches to headworks charges

In relation to TasWater’s proposed approach to calculating and imposing headworks charges, the Economic Regulator noted, in its Draft Report, that it is important that TasWater develop a robust and transparent process for determining whether there is excess capacity within the network and whether a proposed development is ‘in sequence’.

The Economic Regulator therefore identified three further approaches that could be applied to the calculation and imposition of headworks charges, based on its review of approaches adopted in other jurisdictions and its own analysis. These options reflected alternative views on which costs are properly attributable and recoverable from new developments under various scenarios.

The three options are as follows:

- Standardised headworks charges – this approach would apply a flat rate charge and would be consistent with an overriding rationale of maintaining a simplified system that treats all customers in a similar manner.
- Uniform nominal headworks charging except for isolated developments – similar to the standardised charging approach above, this approach would apply a flat rate charge (at a lower ‘nominal’ rate) to all locations except for locations that are either not currently within TasWater’s serviced land (see Section 6.1) or are not direct extensions to TasWater’s serviced land. Developers of these isolated projects would face headworks charges calculated according to the NPV based on the infrastructure TasWater would

be required to provide and the future revenue it would receive from those assets. The nominal rate would be lower than the standardised flat rate charge.

- Within serviced land approach – this approach would apply a low/nominal flat rate charge to all developments within serviced land and a higher flat rate charge to all developments that constitute extensions to TasWater’s serviced land. Developers of isolated projects would, once again, face headworks charges calculated according to the NPV based on the infrastructure TasWater would be required to provide and the future revenue it would receive from those assets.

6.2.5.5 Assessment of possible approaches to headworks charges

The Economic Regulator’s criteria for assessing possible approaches to headworks charges included ensuring that the approach is consistent with the statutory Pricing Principles. In this regard, the Economic Regulator considered it desirable that the approach to headworks charges is:

- cost reflective;
- transparent;
- provides certainty for developers; and
- is simple to administer.

A summary of the different headworks charging approaches considered by the Economic Regulator as outlined in its Draft Report together with their respective advantages and disadvantages is included in Table 6.7 and Table 6.8.

Table 6.7 Summary of headworks charging approaches

Charging approach for Headworks	Network Capacity and Development Scenarios			
	No new capacity required in near future	New capacity required in near future – in-sequence	New capacity required in near future – out-of-sequence	New capacity required in near future – ‘isolated’ development
IPART NPV approach – current situation	NPV calculation based on existing assets	NPV calculation based on existing and required assets	NPV calculation based on existing and required assets	NPV calculation based on assets required
‘Out-of-sequence costs only’ approach – TasWater proposed	No charge	No charge	NPV calculation based on cost of bringing works forward	Developer pays full cost
Standardised Headworks charging	Standardised flat charge*	Standardised flat charge*	Standardised flat charge*	Standardised flat charge*
Uniform nominal charging except for isolated developments	Nominal flat charge^	Nominal flat charge^	Nominal flat charge^	NPV calculation based on assets required
‘Within serviced land’ approach	Nominal flat charge^ (within serviced land) Standardised flat charge* (extension to serviced land)	Nominal flat charge^ (within serviced land) Standardised flat charge* (extension to serviced land)	Nominal flat charge^ (within serviced land) Standardised flat charge* (extension to serviced land)	NPV calculation based on assets required

* In its Draft Report, the Economic Regulator proposed that this charge could be set at around \$2500 per ET per service. This would reflect the approximate median charge currently set by TasWater for headworks per service (ie water and sewerage). The headworks charge applied by many other water and sewerage authorities that use a standardised charge in other jurisdictions is also approximately \$2 500 per service.

^ In its Draft Report, the Economic Regulator proposed that this charge could be set as low as \$0 - \$250 per service, particularly if it is evident that very few locations within serviced land will need network augmentation in the near future.

Table 6.8 Summary assessment of potential headworks charges options

Option	Advantages	Disadvantages
IPART NPV approach - Current approach	Fully recovers costs (ie lower customer bills for recurrent charges)	Potential to send inappropriate locational price signals Complex to administer and difficult to understand
Out-of-sequence costs only – TasWater proposed	May send locational price signal based on existing capacity In areas with existing capacity, existing customers benefit from zero charging because fixed costs are spread over a larger customer base Less complex to administer Reasonably easy to understand	Likely tension between cost recovery and application of efficient pricing principles under the Industry Act (as likely to lead to very few headworks payments) Inequitable for developers to pay all costs for isolated developments (given the expected future revenue stream to TasWater) Over time will transfer significant revenue burden to existing customers as there will be minimal headworks charges netted off the RAB relative to current arrangements Determining existing capacity and when new capacity may be required may be problematic, non-transparent and lead to implementation in ways not intended Useful, accurate and robust sequencing plans may be difficult to develop and maintain and lead to complexity, lack of transparency and uncertainty
Standardised Headworks charging	Simple to administer and understand Provides certainty to developers	Does not provide any locational price signals which may encourage development in areas that are expensive for TasWater to service Inconsistent with cost reflective pricing principles under the Industry Act
Uniform nominal charging except for isolated developments	Simple to administer and understand Provides certainty to developers	Locational price signals limited to isolated developments only Inconsistent with cost reflective charging principles under the Industry Act
'Within serviced land' approach	Less complex to administer Reasonably easy to understand May send more appropriate locational price signals Economic Regulator already approves serviced land boundaries which are likely to be better defined and therefore less open to uncertainty and lack of transparency than asset 'sequencing' plans Better capacity for third party review of whether locations are in/not in serviced land compared to whether locations are in/not in asset 'sequencing' plans	Locational signals are not linked to capacity and may not reflect whether additional headworks are required Serviced land boundaries exist at a point in time and don't account for future planned extensions to serviced land

In its Draft Report, the Economic Regulator noted that, in principle, most aspects of TasWater's proposed approach to headworks charges were considered to be consistent with the Pricing Principles.

TasWater's approach recognised that new developments can impose costs in the form of extensions or upgrades to its network and that existing customers benefit when new customers connect. This benefit arises because fixed costs are spread over a larger customer base and supports the argument that a headworks charge not be imposed upon developments occurring in areas within the existing network capacity.

However, in order to implement its proposal, a key prerequisite would be for TasWater to develop a Strategic Asset Management Plan outlining capital plans to meet planned growth. In its Draft Report, the Economic Regulator noted a concern that these plans could result in the revenue derived from headworks charges being almost negligible ie these plans could be prepared in such a way that resulted in no (or very few) new developments being classified as 'out-of-sequence' or unplanned, and therefore subject to headworks charges. The effect on customer bills of not imposing headworks charges would be an increase of approximately \$5.60 per bill per annum after five years and increasing by a further \$1.10 per bill year on year.⁷

TasWater stated in its proposed Price and Service Plan that one rationale for the proposed shift in approach was the need for a headworks charges policy that "incentivises development in line with strategic land use planning"⁸.

The Economic Regulator acknowledged in its Draft Report that, prior to the announcement of the State Government's current headworks waiver, there was a perception in the building industry that the level of headworks charges was detrimental to economic growth and investment across the residential and commercial sectors.

The Economic Regulator considered, however, that measures that support economic activity are more appropriately funded by the relevant level of government and not by TasWater's customers.

The Economic Regulator considered it inequitable to require developers to pay all the headworks costs associated with 'isolated' developments given the expected future revenue stream to TasWater. However, the Economic Regulator also acknowledged that a major risk to TasWater associated with isolated developments was that of 'stranded assets' ie where an investment is made which fails to generate the expected cash flows. After the costs of managing these stranded assets are taken into account these developments may actually have a negative NPV.

The Economic Regulator considered that if an isolated development was considered to be 'high risk', this risk could be managed by applying a loading to the developments' headworks charge reflecting the probability of the assets being

⁷ Frontier Economics unpublished report (February 2014), commissioned by TasWater.

⁸ TasWater, *Proposed Price and Service Plan 2015-18*, p.83.

stranded ie the more speculative the development is, the greater the risk of stranding and consequently the higher the headworks charge.

Table 6.8 shows that the various ways in which costs are attributable and recoverable from new developments under the options proposed in the Economic Regulator’s Draft Report result in each approach having its own advantages and disadvantages. Further, there is no perfect solution that will satisfy all stakeholders’ objectives and legislative requirements on how to apply developer charges. In addition, the appropriate level of developer contributions in areas of modest growth with a large existing population is likely to be different from that in a high growth area with a limited existing population base.

In summary, the Economic Regulator considered that:

- some proportion of growth related costs should be recovered upfront from developers rather than over time from customers through recurrent charges;
- there are benefits in a headworks charging approach that is simple and provides certainty and a relatively level playing field for developers; and
- a sensible headworks charging approach should encourage developers to use existing capacity where it exists before requiring TasWater to invest in network augmentation.

In its Draft Report, the Economic Regulator therefore proposed requiring TasWater to adopt the ‘within serviced land’ approach as it provided a balance between certainty, transparency, cost reflective pricing and the recovery of the cost of providing water and sewerage services from those who benefit from the services.

The Tasmanian Government’s submission on the Draft Report stated its preferred approach is that headworks charges not be imposed in locations where existing or planned capacity is utilised.

TasWater’s submission stated that it remained committed to the headworks charging approach outlined in its proposed Price and Service Plan (involving headworks charges being imposed only in locations where there isn’t any existing capacity and development is not consistent with TasWater’s immediate infrastructure growth plans). However, TasWater now considered that headworks charges should not be applied at all during the second regulatory period given that the current timing of the development of its Strategic Asset Management Plan⁹ creates a degree of uncertainty with its preferred longer-term approach.

Whilst TasWater did not provide any indication of the extent or location of unutilised capacity that exists within its network, the Economic Regulator accepts that

⁹ TasWater’s Asset Management Plan is to be submitted to the Economic Regulator by 30 June 2015 and is to be subject to an independent audit by 31 August 2015.

developments within serviced land benefit existing customers when new customers connect because fixed costs are spread over a larger customer base.

In relation to developments that represent extensions to serviced land, the Economic Regulator accepts that many of these developments are also likely to utilise existing capacity.

The Economic Regulator requires TasWater to not impose a headworks charge for developments within serviced land.

The Economic Regulator requires TasWater to not impose a headworks charge for developments occurring outside of serviced land but that utilise existing capacity.

However, the Economic Regulator considers that for a headworks charging approach to encourage the use of existing capacity, some locational price signals must be applied and be linked to capacity. Therefore, for any development that represents both an extension to serviced land and requires TasWater to undertake works (not covered by ‘works external’ arrangements), the Economic Regulator considers that TasWater should impose a headworks charge on the component of that development that cannot be satisfied by existing capacity. The Economic Regulator also considers that the NPV methodology is an appropriate methodology to apply in making this calculation.

The Economic Regulator also considers it appropriate that TasWater continues to adopt the NPV methodology for determining headworks charges for isolated developments.

For developments relating to extensions to serviced land or to isolated developments, the Economic Regulator acknowledges that there may be relatively few occasions where the application of a headworks charge is necessary as the developer charges associated with works internal and works external may, in some instances, incorporate all necessary works.

The Economic Regulator approves TasWater imposing a headworks charge, calculated using the NPV methodology, on the component of a development that cannot be satisfied by existing capacity for developments occurring outside serviced land. This incorporates developments relating to extensions to serviced land and to isolated developments.

Following the release of this Final Report, the Economic Regulator will work with TasWater to ensure it drafts a compliant developer charges policy. TasWater’s final Price and Service Plan will be required to include the final version of that policy.

The Economic Regulator requires TasWater to draft a compliant developer charges policy and to include the final version of that policy in its final Price and Service Plan.

6.2.6 Trade waste charges policy

Trade waste means the liquid waste generated by any industry, business, trade or manufacturing process. As the definition of “sewage” under section 3 of the Industry Act includes trade waste, the disposal, removal and treatment of trade waste is a regulated service.

In accordance with the Economic Regulator’s PSP Guideline, TasWater was required to develop a trade waste charges policy outlining how it intends categorising and treating trade waste customers.

The PSP Guideline also specifies that TasWater’s price and service plan is to describe and justify any changes to its current trade waste policy and submit the policy it is proposing to apply during the second regulatory period. If TasWater proposes departing from the currently approved arrangements it is required to outline how the proposed arrangements better meet the Pricing Principles.

The PSP Guideline further stipulates that TasWater’s trade waste charges policy must include an undertaking that prices negotiated with Category 3 and Category 4 trade waste customers will reflect a reasonable price transition period recognising the time it would take for a trade waste customer to implement appropriate pre treatment if it intended to do so. This requirement was also articulated in the Final Report of the Economic Regulator’s 2012 Price Determination Investigation.

As discussed, TasWater was required to submit a draft trade waste charges policy for the Economic Regulator’s approval. However, as part of its proposed Price and Service Plan, TasWater submitted both a draft liquid trade waste policy and a draft liquid trade waste charges policy. In its Draft Report, the Economic Regulator signalled its intention to require TasWater to amalgamate the two draft policies into a single draft trade waste charges policy for approval. Notwithstanding this intention, the Economic Regulator reviewed both submitted draft policies for compliance with all obligations under the relevant regulatory and legislative instruments. This review identified numerous instances of non-compliance with the PSP Guideline.

The Economic Regulator requires TasWater to amalgamate its draft liquid trade waste policy and its draft liquid trade waste charges policy into a single draft trade waste charges policy for the Economic Regulator to approve.

The draft trade waste charges policy put forward in TasWater’s proposed Price and Service Plan was largely the same as the existing policy and charging arrangements. The most significant change relates to the modification of trade waste customer categories using a risk assessment of trade waste impacts on the sewerage system as the basis for categorising and calculating trade waste charges. Since the merger of the regional entities, TasWater has reviewed trade waste prices and practices to improve consistency and compliance. As part of this process, TasWater has been working with customers to increase their understanding of the risks trade waste discharge poses for sewerage systems, the environment and public health and safety. As well as helping customers to identify ways of reducing the volume and strength of waste being disposed of through the sewerage system (through appropriate pre-treatment), TasWater believes that by educating customers

and implementing a 'polluter pays' principle, customers are encouraged to take more responsibility in meeting their trade waste obligations.

Under the previous regulated entities' respective Price and Service Plans the Economic Regulator approved four categories of trade waste customers: Category 1, 2, 3 and 4. Category 1 and 2 trade waste customers were those customers assessed as having low grade or low to medium volumes of waste and the prices paid by those customers were regulated. Category 3 and 4 trade waste customers were higher risk in terms of their impact on the sewerage network and were not price regulated although the service received by those customers constituted a regulated service.

Category 1 and 2 trade waste customers were treated as tariff customers covered by a standard regulated contract under section 60 of the Industry Act (and, therefore, covered by the Code) with approval to discharge trade waste by virtue of a trade waste consent which was an addendum to the contract. On the other hand, Category 3 and 4 trade waste customers were required to enter into trade waste agreements in accordance with section 61 of the Industry Act in recognition of the fact that these customers had the ability to negotiate with the regulated entity. It was also recognised at that time that in the longer term the provision of trade waste services to large customers is often not a monopoly service as the customer may elect to pre-treat its trade waste to sewage quality waste. However, it was also accepted that arrangements to pre-treat trade waste would take time to implement and the Economic Regulator considered that, in the interim, there was a risk that the previous regulated entities may be able to exploit their monopoly status with large trade waste customers. As a result the previous entities were required to provide undertakings to mitigate this risk for Category 3 and 4 trade waste customers.

In its proposed Price and Service Plan, TasWater proposed refining the trade waste customer categories using a technical and commercial risk assessment of trade waste impacts on the sewerage system as the basis for categorising and calculating trade waste charges. More specifically, it was proposed that the existing Category 2 be split into three sub-categories to more accurately categorise trade waste customers according to their demand on the sewerage system and, therefore, the cost of delivering trade waste services to those customers.

The new risk assessment in the proposed Price and Service Plan is based on a method outlined in the *WSAA Australian Sewerage Quality Management Guideline 2012* (WSAA Guideline), which results in the previous Category 2 trade waste customers being divided into three sub-categories (2A, 2B and 2C). TasWater's proposed Price and Service Plan outlined that a customer's overall risk score is to be based on the following factors:

- the type of business activity being undertaken;
- the substances involved;
- any pre-treatment occurring; and
- the volume of trade waste being discharged.

The following table sets out TasWater’s forecast of the number of trade waste customers in each category for the second regulatory period together with the number of trade waste customers in each category as forecast as part of the 2012 price determination investigation:

Table 6.9 Number of trade waste customers – comparison of 2012 and 2015 forecasts

Category	TasWater’s 2014 forecast of number of customers during 2015-18 ()	Previous regulated entities 2012 forecast of number of expected customers in 2014-15 ()
1	869	3 184
2A	2 104	
2B	243	2 644
2C	251	
Total	3 467	5 828

As shown in Table 6.9, whilst the forecast number of Category 2 trade waste customer has remained constant, the forecast number of Category 1 trade waste customers is expected to drop significantly. The Economic Regulator sought an explanation from TasWater as to the reason for the reduction in the number of Category 1 trade waste customers and was advised that the original forecasts for the first price and service plan were based on various data sources including council information, Australian Business Register records and available land use codes. These estimates were higher than the actual number of Category 1 customers that have subsequently been identified by TasWater.

Whilst TasWater’s proposed Price and Service Plan provided information on the methodology underlying the adoption of the new customer categories, it did not provide sufficient information on how the policy would actually work in practice, especially in relation to the allocation of customers into different categories. On the latter point, TasWater’s proposed Price and Service Plan provided only a general reference to the categorisation being based on the principles set out in the WSAA Guideline.

The Economic Regulator also noted the inconsistent use of terms and document titles within TasWater’s draft trade waste policy, as was the case with a number of TasWater’s other draft policies. As an example, in the ‘Associated Documents/References’ section of TasWater’s draft liquid trade waste charges policy reference is made to the ‘Liquid Trade Waste Guideline’ yet this document is referred to in TasWater’s draft liquid trade waste policy as the ‘TasWater Trade Waste Guideline’. Correctly citing source or reference documents is paramount to ensuring the legality and accuracy of the policy documents and also to avoid confusing customers about their obligations.

The Economic Regulator requires TasWater to amend its draft liquid trade waste policy to correct the inconsistent use of terms and document titles.

The Economic Regulator informed TasWater of the shortcomings of its proposed Price and Service Plan with respect to trade waste and required TasWater to provide further information and/or explanation.

In response to the Economic Regulator's request for further clarification about the operation of its draft trade waste policy in general and the categorisation of customers in particular, TasWater provided a presentation on its draft trade waste policy.

TasWater's presentation also included a demonstration of a prototype of an Excel spreadsheet model it was developing (a Trade Waste Category Calculator) to allow trade waste customers to self-assess their respective trade waste category and the associated annual charges.

The Economic Regulator noted that, in using the proposed Trade Waste Category Calculator, the customer was required to only enter the type of business activity they were engaged in from a drop down list together with their anticipated annual water consumption.

The Economic Regulator requires:

- (1) TasWater to provide, on its website, a final version of its Trade Waste Category Calculator so that it is available to trade waste customers and the public generally; and***
- (2) that the Trade Waste Category Calculator links to relevant policies and other supporting materials released by TasWater in relation to trade waste to assist customers in understanding their trade waste obligations and in undertaking the self assessment process.***

As explained above, TasWater's proposed categorisation of trade waste customers has been based on a risk based approach, outlined in the WSAA Guideline. However, the Economic Regulator understands that the WSAA Guideline is not publically available.

The Economic Regulator requires TasWater to clearly outline, and publish, the methodology on which it has based its trade waste customer categorisation in its trade waste charges policy.

During consultation on the Economic Regulator's Draft Report, issues were raised about the accuracy of TasWater's proposed 'trade waste discharge factor'¹⁰. In response, TasWater advised that it has adopted trade waste discharge factors from the NSW Department of Water and Energy (April 2009) – *Liquid Trade Waste Regulation Guidelines*. TasWater also noted that these discharge factors have been directly matched to the relevant trade waste activities used by TasWater where applicable. However, TasWater also advised that, in some cases, a direct match

¹⁰ A trade waste discharge factor is the percentage of metered water consumption considered to represent the volume of trade waste discharged to the sewer.

may not be available, or additional assumptions may have been made in determining the discharge factors. In these instances the Economic Regulator has decided that TasWater will be required to disclose details of the departures from the *Liquid Trade Waste Regulation Guidelines* together with the reasons for adopting revised factors. In its submission TasWater has also undertaken to investigate and collect additional data during the second regulatory period. The Economic Regulator considers this to be an appropriate way of improving the accuracy of TasWater's trade waste discharge factors.

The Economic Regulator requires TasWater to disclose details of any instances where it has departed from the discharge factors specified in the NSW Department of Water and Energy's (April 2009) Liquid Trade Waste Regulation Guidelines together with a justification for the adoption of any revised factors.

The Economic Regulator also requires TasWater to include in its Price and Service Plan an undertaking to collect data during the second regulatory period with the objective of improving the accuracy of its trade waste discharge factors.

Another submission on the Draft Report questioned TasWater's decision to impose trade waste charges on owners rather than tenants. Upon request, TasWater explained that it had adopted this approach as it provided administrative efficiencies for both TasWater and the customer and also gave TasWater greater security of revenue. The Economic Regulator considers TasWater's approach to be appropriate noting that it complies with the relevant legislative requirements.

The Economic Regulator's review of TasWater's proposed Price and Service Plan identified issues in relation to the proposed treatment of Category 3 and 4 trade waste customers. The Economic Regulator expects that a regulated entity's trade waste charges policy would detail the entity's position on, and relevant procedures concerning, its interactions with all trade waste customers. However, TasWater's draft liquid trade waste charges policy related only to Category 1 and Category 2 trade waste customers ie TasWater's proposed Price and Service Plan did not discuss trade waste arrangements for Category 3 and Category 4 trade waste customers. Furthermore, the draft liquid trade waste charges policy did not include an undertaking that prices negotiated with Category 3 and Category 4 trade waste customers would reflect a reasonable transition period recognising the time it would take for a trade waste customer to implement appropriate pre-treatment if it intended to do so. As a result, the draft policy was not compliant nor did it provide a means by which TasWater's trade waste customers could gain an understanding of their respective obligations with respect to trade waste.

During the course of the investigation the Economic Regulator also reminded TasWater of the requirement to demonstrate how the proposed charges for Category 3 and 4 trade waste customers reflected a reasonable transition path for those customers. In response, TasWater provided a presentation to the Economic Regulator which outlined how Category 3 and 4 customers would be treated under the next regulatory period. TasWater explained that volume charges approved by

the Economic Regulator for the first regulatory period would continue to be used (ie charges are based on the cost to treat a kilolitre of wastewater) and that mass load charges for pollutants taken from *NSW Liquid Trade Waste Guidelines 2009* and CPI-based indexation would also be added to the charge. TasWater explained that the intention was to apply full cost charges to all Category 3 and 4 customers with pre-treatment milestones included in specific Industrial Transitional Agreements with those customers.

In response to a request from the Economic Regulator, TasWater also gave an example of a transition path for a Category 3 or Category 4 customer as one where the customer had been previously approached about trade waste compliance by a regional corporation but had not made any attempt to comply with its trade waste obligations. In this example, there wasn't any data available on produced waste quality nor had the customer undertaken any onsite pre-treatment. In a situation such as this, TasWater proposes charging 10 per cent of cost in the first year, require sampling points to be installed and impose short term sewer acceptance limits. In the second year TasWater proposes increasing the charge to 40 per cent of cost and add additional compliance requirements, such as the installation of an attenuation tank, discharge flow meter and automated pH correction. The third year would see the charge increased to 70 per cent of cost and an increased compliance monitoring program introduced. The fourth year would see the price transition to 100 per cent of cost and would require long term sewer acceptance limits to be met.

The Economic Regulator considers that TasWater's proposed transition path with respect to Category 3 and 4 trade waste customers, as explained in the above example, appears to be reasonable.

The Economic Regulator requires TasWater to include, in its final Price and Service Plan and in its trade waste charges policy, an undertaking that prices negotiated with Category 3 and Category 4 trade waste customers will reflect a reasonable transition period (and explaining what this transition period entails) recognising the time it would take for a trade waste customer to implement appropriate pre-treatment if it intended to do so.

With respect to Category 1 and Category 2 trade waste customers, TasWater's proposed Price and Service Plan outlined that customers above the target tariff at the start of the period will transition down by one third of the gap to the 2018 target tariff in each year of the second regulatory period, and customers below target will transition up to the target tariff in the same manner.

In addition to the target tariffs, TasWater has proposed continuing charging Category 1 and Category 2 trade waste customers an application fee and non-compliance fees similar to the price structure approved in 2012. The application fee is standardised and is intended to cover the average time required to assess a trade waste application. TasWater also proposes continuing to levy non-compliance charges, enabling the recovery of costs associated with a trade waste customer failing to comply with the conditions of an agreement or consent, or failing to obtain approval for discharge of trade waste to sewer. The multipliers used to calculate the non-compliance charges are applied to reflect either a minor or major non-compliant

event. Minor non-compliance refers to single event which does not have a significant impact on the sewer. Major non-compliance events are those that are expected to cause significant impact on the sewerage network, the receiving environment or public health and safety. TasWater’s proposed trade waste charges for the 2015-18 regulatory period are outlined in the following table:

Table 6.10 Proposed Trade Waste Charges for the 2015-18 regulatory period

Trade Waste Category	Application Fee	Target Tariff	Non-Compliance Charge (Minor)	Non-Compliance Charge (Major)
1	\$134.80	\$520.76	\$1 041.54	\$1 562.28
2A	\$134.80	\$853.60	\$1 707.16	\$2 560.76
2B	\$134.80	\$1 197.80	\$2 395.60	\$3 593.40
2C	\$134.80	\$1 796.40	\$3 592.84	\$5 389.28

TasWater considers that the proposed fees are reflective of the expected infrastructure and operational costs incurred by compliant businesses that have been required to install pre-treatment within the second regulatory period. TasWater proposes that it will index trade waste charges for Category 1, Category 2A, Category 2B and Category 2C trade waste customers by 2.5 per cent each year. The Economic Regulator notes that the indexation rate of 2.5 per cent per annum is consistent with TasWater’s proposed rate for the indexation of miscellaneous charges and is broadly reflective of recent Consumer Price Index changes.

The Economic Regulator also notes that, compared to the fees approved in 2012, the proposed application fee for Category 2 trade waste customers has halved and that the non-compliance charges (major) are substantially lower than those approved by the Economic Regulator for the first regulatory period.

The Economic Regulator was unable to identify any directly comparable pricing structures for other service providers to benchmark against and has decided, based on the preceding discussion, to approve TasWater’s proposed trade waste charges.

The Economic Regulator approves:

- (1) the proposed trade waste charges in respect of Category 1, Category 2A, Category 2B and Category 2C trade waste customers for the 2015-16 financial year, as outlined in Table 6.10; and***
- (2) the annual indexation of TasWater’s proposed trade waste charges for Category 1, Category 2A, Category 2B and Category 2C trade waste customers by 2.5 per cent for each of the 2016-17 and 2017-18 financial years.***

6.2.7 Service extension and expansion policy

Section 56J of the Industry Act requires TasWater, as a regulated entity, to include in its proposed Price and Service Plan a policy that sets out the circumstances in which TasWater will extend and expand its water infrastructure and sewerage

infrastructure. It is also a requirement that this policy include the terms and conditions that will apply to such an extension or expansion.

The Economic Regulator's PSP Guideline replicates these legislative provisions, specifying that TasWater's extension and expansion policy must:

- distinguish between expansion and an extension;
- set out the circumstances in which TasWater will extend and expand its water infrastructure and sewerage infrastructure, including the circumstances in which it will extend or expand its water infrastructure or sewerage infrastructure at the request of a person;
- include the terms and conditions that will apply to such an extension or expansion;
- explain how extensions and expansions will be paid for; and
- be consistent with the Pricing Principles outlined in section 4.1 of the PSP Guideline.

As noted in section 4.7 of the PSP Guideline, the land which TasWater will permit to be connected to its water infrastructure or sewerage infrastructure (serviced land) must be described in the TasWater's connection policy developed under section 56U(1)(a) of the Industry Act. TasWater's approach to connecting land that is outside serviced land to TasWater's infrastructure must also be described in TasWater's extension and expansion policy.

TasWater's extension and expansion policy is to, therefore, take into account serviced land as discussed in section 4.7 of the PSP Guideline and its connection policy developed under section 56U(1)(a) of the Industry Act.

In addition, TasWater's extension and expansion policy is to be consistent with its developer charges policy prepared in accordance with Regulation 8 of the Pricing Regulations and the PSP Guideline.

TasWater included a draft service extension policy as an attachment to its proposed Price and Service Plan. As with the other policies provided, the Economic Regulator reviewed TasWater's draft service extension policy for compliance against the relevant regulatory and legislative requirements.

First and foremost, and as the title of the draft policy would suggest, the Economic Regulator identified that the policy document did not include any discussion with respect to the expansion of TasWater's water infrastructure and sewerage infrastructure. In this way, the draft policy contravened the Industry Act and PSP Guideline.

The draft policy did not fulfil the requirements of the Economic Regulator's PSP Guideline as it did not describe TasWater's approach to connecting land that is outside serviced land to TasWater's infrastructure. In addition, the draft policy required qualification of intent or process with respect to certain matters, including

the liability for payment for service extension and service expansion. More generally, the draft policy provided limited information and lacked clarity for customers (or potential customers) on TasWater’s procedures and conditions to be imposed with respect to extension. The Economic Regulator’s review process also identified defined terms not being used within the policy document. These defined terms are redundant and the Economic Regulator suggests these terms be removed by TasWater.

The Economic Regulator subsequently offered TasWater comments with respect to the aforementioned issues to assist it in developing a fully compliant and functional service extension and expansion policy for submission as part of TasWater’s final Price and Service Plan.

In addition, there were no issues raised as part the consultation process on the Economic Regulator’s Draft Report with respect to the accuracy and compliance of TasWater’s draft service extension policy which have resulted in any subsequent amendments to the Economic Regulator’s position on these matters.

The Economic Regulator requires TasWater to revise its draft service extension policy to:

- (1) meet the obligations of the Industry Act and PSP Guideline by addressing matters pertaining to service expansion; and***
- (2) address the comments and questions raised by the Economic Regulator (as forwarded to TasWater simultaneous to the release of the Economic Regulator’s Draft Report for community consultation) to ensure the policy’s compliance and accuracy.***

6.2.8 Service introduction charges policy

The Pricing Regulations state a price determination may require a regulated entity’s price and service plan to include a policy in respect of service introduction charges. The policy must be consistent with the requirements of the Pricing Regulations and specify how the regulated entity will determine and apply service introduction charges consistent with the Pricing Principles.

TasWater has structured its service introduction charges policy in terms of ‘introduction of service’ and ‘service introduction charges’.

6.2.8.1 Introduction of service

‘Service introduction’ refers to the construction of water infrastructure and/or sewerage infrastructure to provide reticulated water and/or sewerage services in areas not previously receiving those services. The Economic Regulator noted that the definition provided in TasWater’s draft service introduction charges policy was different from the above, and contained confusing terminology. The Economic Regulator subsequently provided comments to TasWater directly about these issues.

In its draft service introduction charges policy, TasWater stated that a service introduction proposal will only proceed if it is deemed commercially viable. TasWater proposes for the second regulatory period that, in order to meet the commercial viability test, 80 per cent of property owners in a proposed service area must support the introduction of water and/or sewerage services to that area. TasWater also stated that it will require 80 per cent of property owners to enter into a contract committing to a property service connection before a proposed service introduction will advance to a detailed design stage.

Any contract entered into by TasWater and a person outside of serviced land is neither a customer contract nor a contract entered into under section 61 of the Industry Act (defined as a contract with a customer that is not a customer contract). Therefore, such a contract is not regulated by the Economic Regulator. However, the Pricing Regulations stipulate a number of requirements that an entity must fulfil in respect to the owner of a property to which a service introduction charge relates. TasWater has stated its intentions to fulfil these requirements in its draft service introduction charges policy.

TasWater noted that, where the absence of water and/or sewerage services is causing significant and/or wide scale environmental harm and/or public health issues, as identified by the relevant industry regulator/s, it may consider the introduction of new water services and/or sewerage services to areas not within serviced land. TasWater notes that a funding model for such projects has not yet been determined.

The Economic Regulator considers that this principle is consistent with the Pricing Principles for two reasons. Firstly, in accordance with section 68(1)(a) of the Industry Act, a regulated entity is to be given a reasonable opportunity to recover the efficient costs it incurs in providing a regulated service. Secondly, noting the preceding point, the circumstances under which a service is introduced for environmental and/or public health reasons may not be consistent with the standard service introduction process¹¹. A degree of flexibility is therefore required in determining a funding model for a service introduction based on public health and/or environmental issues.

The Economic Regulator requires TasWater to re-draft its definition of ‘service introduction’ as stated in its service introduction charges policy, with the definition provided in the PSP Guideline being the preferred option.

6.2.8.2 Service introduction charges

A ‘service introduction charge’ is defined in the Pricing Regulations as *“a charge, in respect of a property, that relates to the installation, alteration or utilisation of assets by a regulated entity so as to enable the provision by the entity of a regulated service to the property but does not include –*

¹¹ For example, if a relevant government agency or body determines that the introduction of reticulated service is necessary for public health and/or environmental reasons, but the regulated entity is unable to gain the threshold 80 per cent community commitment to a service connection.

- a) *a connection charge; or*
- b) *a fixed charge; or*
- c) *a developer charge.”*

TasWater proposed that service introduction charges will be calculated based on the NPV of the cost of providing the assets specific to the service introduction, less the present value of the amount to be recovered through upfront and ongoing water and/or sewerage charges imposed on the customers who are to receive the benefit of the new service/s (ie the service area customer base). The present value of the upfront and ongoing water and/or sewerage charges imposed on those customers is calculated based on the minimum percentage of 80 per cent of property owners that are required to commit to a service before a service introduction will proceed.

Consistent with the Pricing Principles, the policy states that the owner of a property subject to a service introduction charge may pay the charge over a period of 12 months or, at the owner’s request, over a period of less than 12 months.

The Economic Regulator notes that the definition of service introduction charge in the Pricing Regulations implies that a property owner is liable to pay the service introduction charge from the date on which that property is able to connect to and use a regulated service. However, as this policy is to be a public document, the Economic Regulator requires TasWater to make this explicit.

Finally, the Economic Regulator has identified one instance of non-compliance with the service introduction charges section of TasWater’s proposed Price and Service Plan. The PSP Guideline states that a proposed price and service plan must include an undertaking by the regulated entity that it will calculate and publish proposed service introduction charges per property, per service, prior to undertaking community consultation on any intended service extension that will be subject to service introduction charges. No such undertaking has been included in TasWater’s discussion of the service introduction process.

The Economic Regulator requires TasWater to:

- (1) amend the definition of ‘service introduction charge’ to mirror that defined in the Pricing Regulations;***
- (2) clarify the preconditions for imposing a service introduction charge on an owner of a property eg upon connection, upon service availability, prior to service availability etc; and***
- (3) include an undertaking that it will calculate and publish proposed service introduction charges per property, per service, prior to undertaking community consultation on any intended service extension subject to service introduction charges.***

6.2.9 Other policies relating to TasWater’s interactions with customers and potential customers

In accordance with the Economic Regulator’s PSP Guideline, TasWater included, in its proposed Price and Service Plan, all of its internally approved policies relating to its interactions with customers and potential customers. Two such policies were provided, namely, TasWater’s policies with respect to complaints and financial hardship. The Economic Regulator reviewed these policies for compliance against the requirements set out in the relevant regulatory and legislative instruments. An overview of the assessment outcomes is provided below.

6.2.9.1 *Complaints, enquiries and disputes management policy*

The Customer Service Code specifies the minimum standards and conditions of service and supply that a regulated water and sewerage entity must comply with, including the adoption of certain policies and procedures.

It is a requirement under the Customer Service Regulations that the Customer Service Code specify that a regulated water and sewerage entity have a policy about customer complaints and the resolution of disputes between customers and the entity.

The Customer Service Regulations provide explicit detail on what must be specified in that policy. Such regulatory obligations have been mirrored in clause 4.1 of the Customer Service Code (Complaints, disputes and customer enquiries) to make clear to an entity what information, at a minimum, must be provided in its complaints, enquiries and disputes policy.

The Economic Regulator identified several areas of non-compliance with TasWater’s draft complaints, enquiries and dispute management policies and brought these to TasWater’s immediate attention. TasWater subsequently chose to re-draft and re-submit the policy. The revised draft was received by the Economic Regulator on 3 October 2014.

The title of the draft policy was amended to be the “Customer complaints, enquiries and disputes management policy” and the revised policy had been extended to cover all requisite inclusions as outlined in clause 4.1 of the Code. A copy of the revised draft policy was subsequently published on the Economic Regulator’s website.

To this end, the Economic Regulator considers TasWater’s draft customer complaints, enquiries and disputes management policy appeared to be consistent with the objectives of the Customer Service Regulations and the Code.

In addition, there were no issues raised as part the consultation process on the Economic Regulator’s Draft Report with respect to the accuracy and compliance of TasWater’s draft customer complaints, enquiries and disputes management policy which have resulted in any subsequent amendments to the Economic Regulator’s position on these matters.

The Economic Regulator requires TasWater to amend its draft customer complaints, enquiries and disputes management policy to ensure its accuracy and compliance with the relevant regulatory instrument.

6.2.9.2 *Financial hardship policy*

The Customer Service Regulations also provide that the Customer Service Code is to specify that a regulated water and sewerage entity have and apply a financial hardship policy to customers who are suffering financial hardship.

The Customer Service Regulations again outline a series of obligatory inclusions with respect to the drafting of an entity's financial hardship policy. The Customer Service Regulations also stipulate the criteria to be met for a customer to be deemed to be suffering financial hardship. Such provisions have been mirrored in clause 6.4 of the Customer Service Code (financial hardship policy).

Upon consideration and assessment of TasWater's draft financial hardship policy, the Economic Regulator identified some instances of non-compliance with provisions of the Customer Service Regulations and the Customer Service Code with respect to what a policy of this nature must specify.

Specifically, it was evident to the Economic Regulator that TasWater's draft financial hardship policy did not adequately identify the criteria it applies in its assessment of whether or not a customer is suffering financial hardship. The policy noted that TasWater "*extends the Hardship Policy to those who are identified either by themselves, by the Corporation or an independent financial counsellor*". Furthermore, that "*the Corporation identifies customers facing financial hardship through its billing process and a customer's payment history*". This does not clarify how a customer is deemed, by TasWater, to be experiencing financial hardship. For example, is there a threshold of how many late payments are received from the customer or the number of requests for payment extension which triggers the application of the financial hardship status?

As noted in its Draft Report the Economic Regulator proposed requiring TasWater to ensure that its financial hardship policy was clear with respect to the indicators which it uses to determine financial hardship eligibility. In addition, the assessment criteria should, at a minimum, reflect the qualifying principles as outlined in clause 6.4.2 in the Code. Specifically, it should be apparent that, for the purposes of TasWater's financial hardship policy, TasWater will deem a customer as suffering from financial hardship if –

- the customer occupies, as his or her principal place of residence, a property in respect of which the person is a customer of TasWater; and
- the customer, an accredited, independent financial institution, or an institution that provides, on a not-for-profit basis, assistance to persons experiencing financial difficulty, has notified TasWater that the customer is suffering financial hardship and is consequently having difficulty, or expects in the near future to have difficulty, in paying an amount of money specified in an account that is or may be issued by TasWater in relation to the property; and

- the customer would, but for financial hardship, pay the amount of money or amount of moneys that are, or may become, due and payable by the customer to TasWater.

It is also a requirement under clause 6.4.3 of the Customer Service Code that TasWater's financial hardship policy contain policies and internal assessment processes for implementation by persons employed or engaged by TasWater to enable those persons to:

- determine a customer's eligibility of financial hardship,
- make an early identification (in this regard); and
- determine the internal responsibilities for the management, development, communication and monitoring of the policy.

With the exception of TasWater noting that it will provide its customer service staff with ongoing training about the financial hardship policy, the policy document did not contain information with respect to additional policies and internal assessment processes for implementation.

Clause 6.4.3 of the Customer Service Code also specifies that the financial hardship policy must:

- state the circumstances in which TasWater will waive or suspend fee and interest payments on outstanding amounts;
- offer information about TasWater's dispute resolution policy;
- detail the circumstances in which the policy will cease to apply to customers; and
- provide for a review mechanism of the policy and its associated procedures.

In its Draft Report, the Economic Regulator noted that these aforementioned requirements have also been omitted from TasWater's draft financial hardship policy.

The Economic Regulator's review also identified some inconsistency in referencing titles of documents throughout the draft policy, which may affect the policy's legality and application.

The Economic Regulator provided comments to TasWater directly about such minor editorial issues. Subject to all of the aforementioned matters being addressed, the Economic Regulator is otherwise satisfied that TasWater's draft financial hardship policy is consistent with the objectives of the Customer Service Regulations and the Code.

In addition, there were no issues raised as part the consultation process on the Economic Regulator's Draft Report with respect to the accuracy and compliance of TasWater's draft financial hardship policy which have resulted in any subsequent amendments to the Economic Regulator's position on these matters.

The Economic Regulator requires TasWater to amend its draft financial hardship policy so that it is fully compliant with the relevant regulatory and legislative instruments.

6.3 Service replacement

6.3.1 Background

Service replacement involves replacing reticulated services with other arrangements, most commonly replacing reticulated water supply with water tanks. The Economic Regulator considers that it is important that a robust framework exists for TasWater to follow when considering whether to replace an existing service.

Any reductions in serviced land due to service replacement proposals will need to be approved by the Economic Regulator prior to that service replacement taking place and, consequently, the serviced land boundary changing.

Service replacement will only be permitted where:

- there are environment or public health issues that need to be addressed; and
- the cost of addressing those concerns through upgrades to the reticulated system is considered uneconomical.

The Economic Regulator does not intend assessing a serviced land reduction proposal, arising from service replacement, from a wider socio-economic or public benefit perspective. Rather, the Economic Regulator's assessment will be based on whether TasWater has followed an appropriate process and whether the proposal has appropriate support.

6.3.2 Regulatory framework

The water and sewerage regulatory framework provides guidance in relation to the requirement for a regulated entity to make customer connections and sets out conditions that apply to the disconnection of customers from reticulated services.

Regulation 8 of the Customer Service Regulations provides that a regulated entity can initiate the disconnection of a reticulated service under certain circumstances, including where the customer has requested or agreed to the disconnection.

Where a service replacement proposal involves disconnecting regulated reticulated services, it is considered that Regulation 8 provides the opportunity to do so. However, the water and sewerage regulatory framework does not explicitly address the issue of service replacement.

On that basis the Economic Regulator stated in its PSP Guideline that it will only approve a service replacement proposal if it is satisfied that:

- the proposal involves the replacement of the current reticulated service with another form of service provision;

- TasWater has examined options other than service replacement, but they were technically not possible or were impractical due to the costs involved (noting that costs can be determined in a number of ways, for example, capital cost per connection);
- the service replacement proposal has been discussed with, and is supported by, all relevant industry regulators, including the EPA, Director of Public Health, the TFS and relevant planning authorities;
- TasWater has consulted with affected customers (particularly any customers identified by the regulated entity under the requirements of the Code as being special needs customers) and the proposal has broad community support; and
- the proposal is consistent with any relevant legislative or regulatory obligations or government policy.

The Economic Regulator further stated that it would not specify limits for what might constitute an ‘uneconomical cost’ or ‘broad community support’, in terms of the requirements above, as these may vary in different circumstances. Rather, the Economic Regulator considers that it is TasWater’s responsibility to justify its position as part of any service replacement proposal.

6.3.3 Outline of TasWater’s proposed service replacement process

TasWater’s proposed Price and Service Plan incorporated its *Small Towns Water Supply Guideline* which outlines TasWater’s proposed approach to the assessment of options for the provision of water services to residents of small towns. TasWater’s proposed strategy for the provision of water services to small towns considered:

- the Australian Drinking Water Guidelines (ADWGs);
- the Tasmanian Drinking Water Quality Guidelines (TDWQG) – which provides two mechanisms for addressing immediate public health risks, including Boil Water Alerts (temporary or permanent) and a Public Health Alert (ie a “Do Not Consume”) notice; and
- DHHS’ requirements.¹²

TasWater’s strategy also outlined a high level process and a broad set of criteria for determining whether to provide treated water in accordance with the TDWQG or whether to consider service replacement (ie replace an existing reticulated system with an appropriate alternative supply source). These categories are outlined in Table 6.11.

¹² The Economic Regulator understands that DHHS would prefer that permanent Boil Water Alert Notices not be considered as long term solutions to address water that was not of drinking water quality.

Table 6.11 TasWater’s proposed criteria for determining whether to provide treated water or consider service replacement

Category	Water treatment or service replacement	Criteria
Category A1	Water treatment	Cost per connection < \$20 000
Category A2	Water treatment	<ul style="list-style-type: none"> ▪ Cost per connection > \$20 000, but – ▪ The town meets at least one of the following key assessment criteria: <ol style="list-style-type: none"> 1. There are at least approximately 100 connections, with more than 60 per cent of the premises occupied. 2. There is a growing population base. 3. The water supplies social services, industries or schools. 4. The water supply is on a major tourist route.
Category B	Service replacement with alternative cost effective supplies such as water tanks, irrigation supplies or other arrangements.	<p>Cost per connection > \$20 000 and the town does not meet any of the other key assessment criteria (listed under Category A2).</p> <p>Alternative options are implemented only after alternative options are discussed with communities, owners and regulators.</p>

TasWater considered that \$20 000 per connection is the threshold above which the cost of upgrading the services is considered worthy of additional investigation/assessment to justify the implementation of a drinking water supply to ADWG standard. In response to the Economic Regulator’s request for justification of this figure, TasWater advised that the \$20 000 per connection threshold had been derived by Ben Lomond Water on the following calculation basis:

- Ben Lomond Water’s Price and Service Plan for 2012-15 included revenue per ET of \$466 based on average annual residential consumption of 200 kilolitres (2012-13 dollars).
- An asset valuation carried out by GHD in respect of Ben Lomond Water’s water treatment plants established a weighted average useful life for those assets of 42 years.
- The revenue that Ben Lomond Water could therefore expect to receive per ET over the life of a water treatment plant asset (in 2012-13 dollars) would be equal to 42 x \$466 = \$19 572 or approximately \$20 000.

TasWater included a threshold of 100 connections above which service replacement would not be pursued as TasWater considered that towns with more than 100 connections are generally less likely to reduce in size to the point of TasWater being left with ‘stranded assets’ (ie infrastructure left with very few, or without any, customers to pay for its maintenance).

TasWater did not propose any process under which the property owners of a community could choose, instead of service replacement, to contribute to the costs

of upgrading their current reticulated service. Therefore, in the absence of such a proposal from TasWater, TasWater will not be able to provide this as an option to communities during the second regulatory period as the methodology for determining any such charge needs to be approved by the Economic Regulator before agreements can be entered into with property owners.

6.3.4 Assessment of TasWater's proposed service replacement process

When TasWater was formed it inherited significant legacy issues from the previous owners of Tasmania's water and sewerage infrastructure, in the form of services which failed, and continue to fail, to comply with contemporary environmental and public health standards.

Water and sewerage infrastructure is costly and, in the case of some small communities, the replacement of reticulated services with alternatives such as rain water tanks may be a more economically efficient means of addressing environmental and public health risks than investing in new or upgraded reticulated service assets. However, the disconnection of a community from a reticulated essential service is not a common occurrence in Australia.

Given the consequences of replacing a reticulated service are significant, the Economic Regulator considers that TasWater's framework for considering whether to replace a service, as well as the processes for implementing alternatives to a reticulated service, needs to be robust to protect the best interests of the communities involved.

The Economic Regulator considers that TasWater's final Price and Service Plan will need to provide detailed guidance for those situations where a regulated reticulated service that does not meet contemporary environmental and/or public health standards might be changed. As part of a proposal to replace a regulated reticulated service, the new supply arrangements must be deemed to lead to an improvement in drinking water quality as compared to the water supplied by the current supply system.

However, in supporting any service replacement framework under which TasWater identifies areas where reticulated service replacement may be examined, the Economic Regulator is not seeking to explicitly identify communities that will, or should have, reticulated services replaced with an alternative service.

Rather, TasWater must engage the community to ensure the process for service replacement is transparent and present evidence of broad community support for any proposal. As part of this, it is expected that proposals presented for consultation with the community and for consideration by industry regulators will include an appropriately detailed assessment of the impacts of the proposal, including costs faced by individual households and businesses.

While it is necessary for TasWater to comply with its regulatory obligations, it is also expected that proposals for reticulated service replacement will be consistent with relevant established policies and initiatives, including regional land use planning

frameworks. It is also expected that any proposal will take account of fire-fighting requirements to TFS's satisfaction.

In maintaining the independence of the various regulators involved in the decision-making process, it is the responsibility of each regulator to determine the basis on which it might assess the extent to which a particular proposal is considered satisfactory.

The Economic Regulator considers that the service replacement process to be included in TasWater's final Price and Service Plan should outline in detail the end-to-end process to provide greater guidance and transparency to affected customers and stakeholders. In particular, the Economic Regulator considers that the process should clearly state that individual customers have an explicit right of review of TasWater's decisions in relation to offers made to them.

6.3.4.1 Economic Regulator's service replacement process

In its Draft Report, the Economic Regulator proposed requiring TasWater to follow a process set out in a series of flowcharts illustrating the service replacement process ie from a high-level flowchart providing an overview of the process to more detailed flowcharts for each stage of the process.

TasWater provided the only submission in relation to the proposed service replacement process as part of consultation on the Economic Regulator's Draft Report.

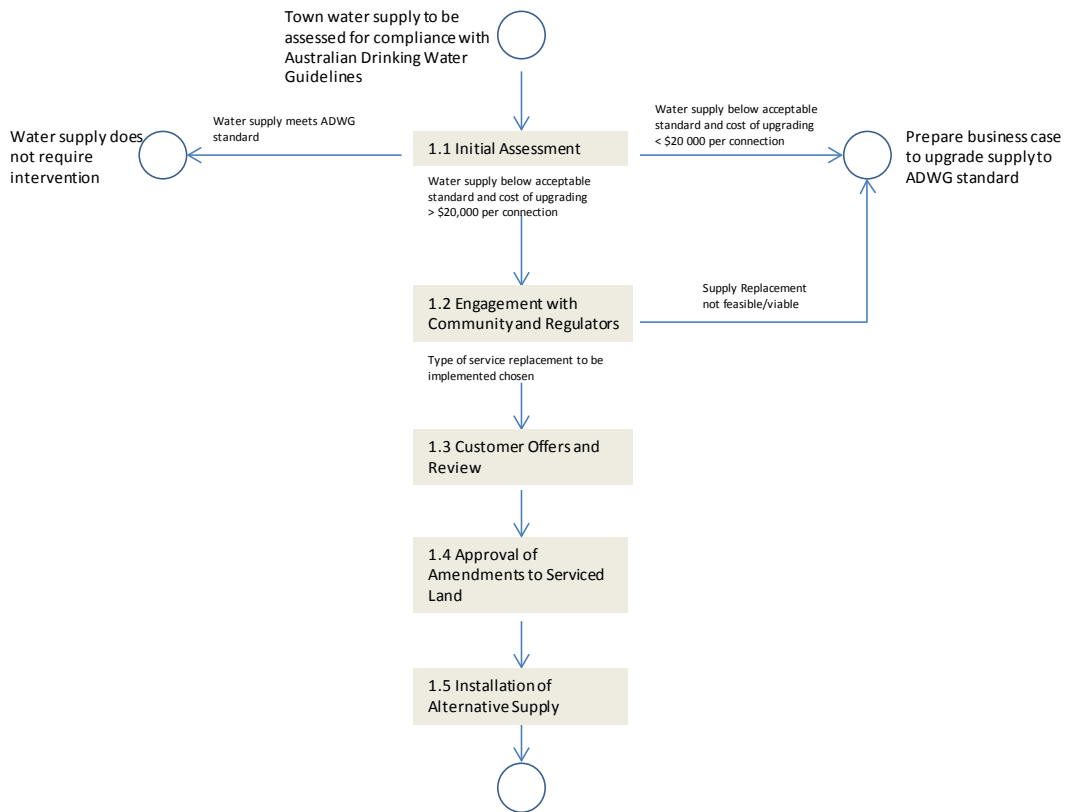
Whilst TasWater suggested some minor changes, which are discussed in the relevant sub-sections below, the Economic Regulator has decided against amending the flowcharts presented in the Draft Report. These flowcharts are re-produced below.

6.3.4.1.1 Service replacement overview

The high-level service replacement process is shown in Figure 6.1 and:

- provides the context for the service replacement process; and
- identifies at a high-level, the relationships between the separate stages of the process.

Figure 6.1 Service replacement overview

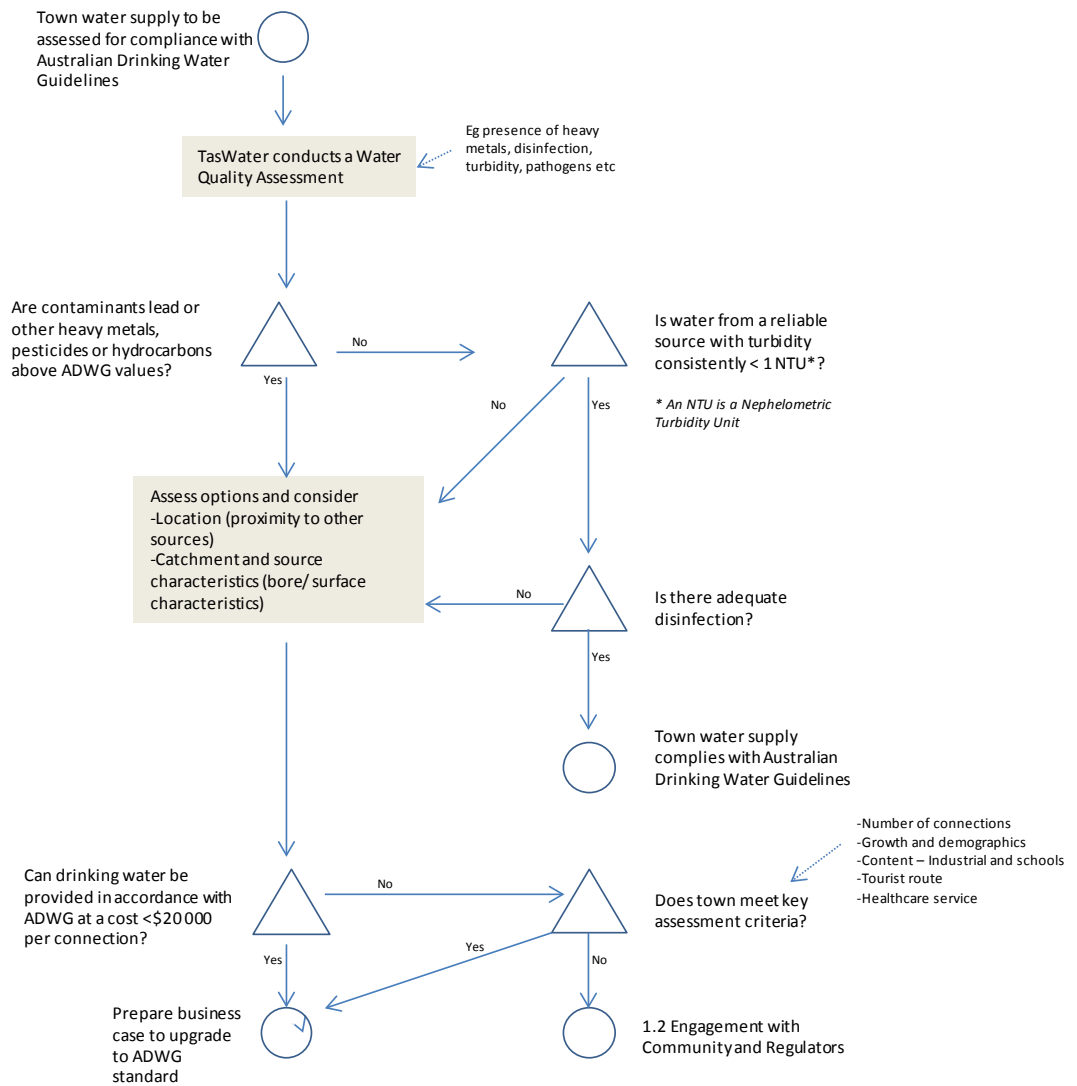


The end-to-end service process replacement process, illustrated at the high level above, is broadly similar to that proposed by TasWater in its proposed Price and Service Plan.

6.3.4.1.2 Initial assessment

Figure 6.2 illustrates the initial assessment process to be undertaken by TasWater and is consistent with the process outlined in the Flowchart at Attachment G2 of TasWater’s proposed Price and Service Plan.

Figure 6.2 Initial assessment



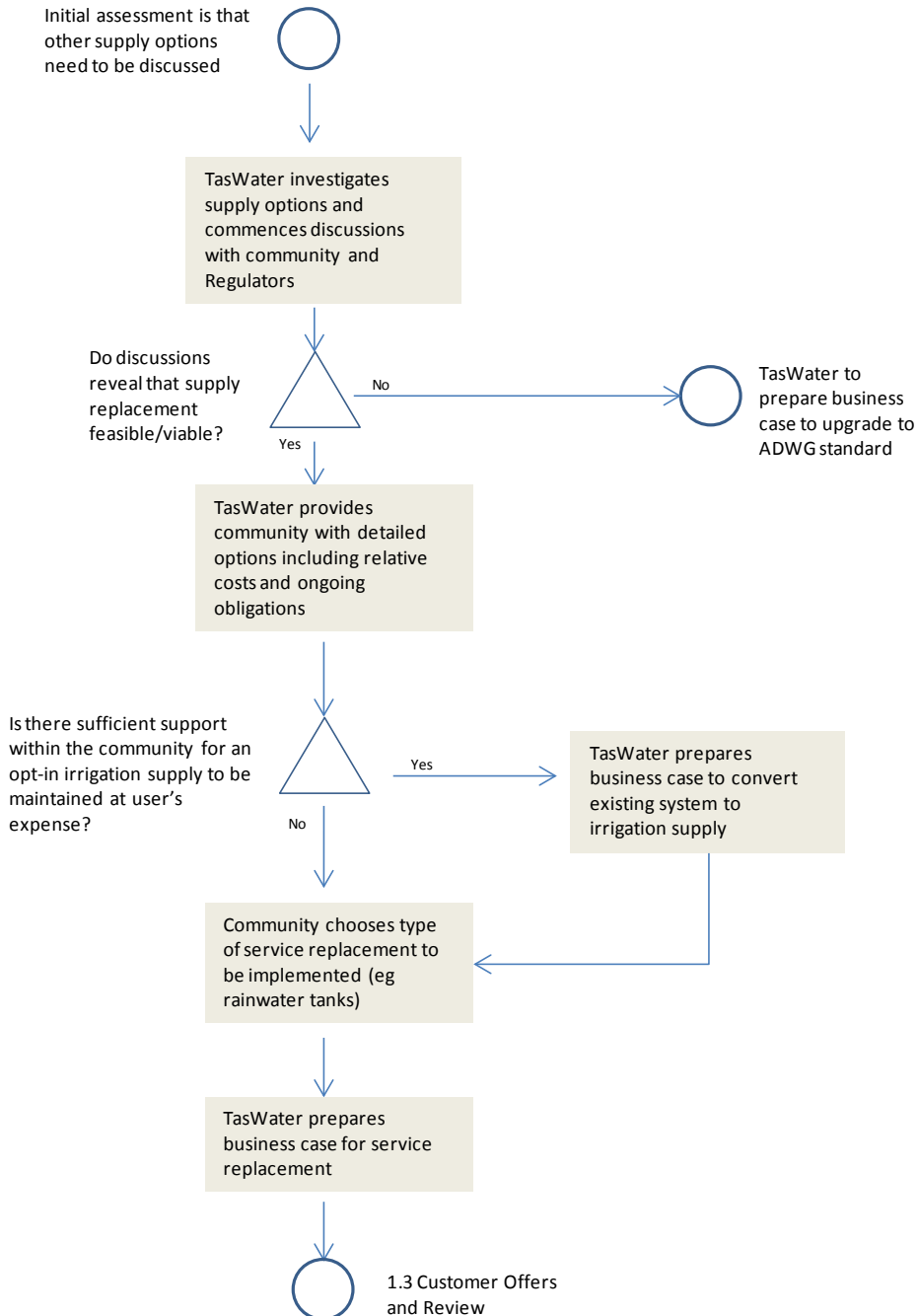
TasWater’s *Small Towns Water Supply Guideline* outlines how TasWater determines the need for improvement actions or replacement supply options for existing water supplies with Permanent Boil Water Alerts and Public Health Alerts. TasWater aims to provide treated water in accordance with its *Water Quality Policy*¹³ for all systems noting that costs may exceed the nominal \$20 000 threshold for water supply systems that meet ‘key assessment criteria’.

¹³ TasWater’s Water Quality Policy is Attachment G1 of its *Proposed Price and Service Plan 2015-18*.

6.3.4.1.3 Engagement with community and regulators

Figure 6.3 illustrates the process TasWater is to adopt in engaging with the affected community and regulators.

Figure 6.3 Engagement with community and regulators



The approach to TasWater engaging with the affected community and regulators, illustrated in Figure 6.3, is broadly similar to that proposed by TasWater in its proposed Price and Service Plan.

If the relevant industry regulators provide in-principle support for service replacement being investigated following initial discussions with TasWater, the

Economic Regulator expects that TasWater would engage early in the process with the community. Initial consultations with the community include but are not limited to:

- presentation of all the service replacement options including detailed costings;
- disclosure of any 'hidden' aspects of service replacement, such as:
 - details on the quality of the replacement supply;
 - the likely costs of re-filling (including water cartage) and maintaining water tanks;
 - the costs associated with potentially retaining the current supply as an irrigation service and responsibility for its maintenance;
- consultation on any specific issues affected by service replacement, such as:
 - any special needs customers as identified in the Customer Service Code;
 - food/accommodation premises including publicly accessible taps;
 - public toilets and hand washing basins;
 - irrigation supplies for parks and recreational facilities;
 - truck fill points and the TFS's fire-fighting needs;
 - community halls and other facilities;
- advice regarding the likely impact of service replacement on property values;
- advice regarding the responsibilities and expectations with respect to local government plumbing works and certificates upon completion of installation of rain water tanks; and
- information on maintaining an existing sewerage service.

It is expected that the community be kept up-to-date as to when decisions on the type of service replacement need to be made. This may include the attendance of regulators, particularly representatives from DHHS, at public meetings. The Economic Regulator expects that TasWater will develop clear documentation outlining any community obligations as a result of service replacement.

In its submission on the Economic Regulator's Draft Report, TasWater sought the Economic Regulator's clarification on whether it considered majority community support is necessary for service replacement to proceed and, if so, whether TasWater has flexibility in determining what support or feasibility/viability looks like.

As stated in its PSP Guideline and its Draft Report, the Economic Regulator will need to be satisfied that the level of community consultation is reasonable. The Economic Regulator does not, however, intend setting a precise threshold for determining whether or not the level of community support is adequate.

6.3.4.1.4 Customer offers and review

Figure 6.4 illustrates the customer offers and review process TasWater is to adopt in engaging with property owners.

Figure 6.4 Customer offers and review

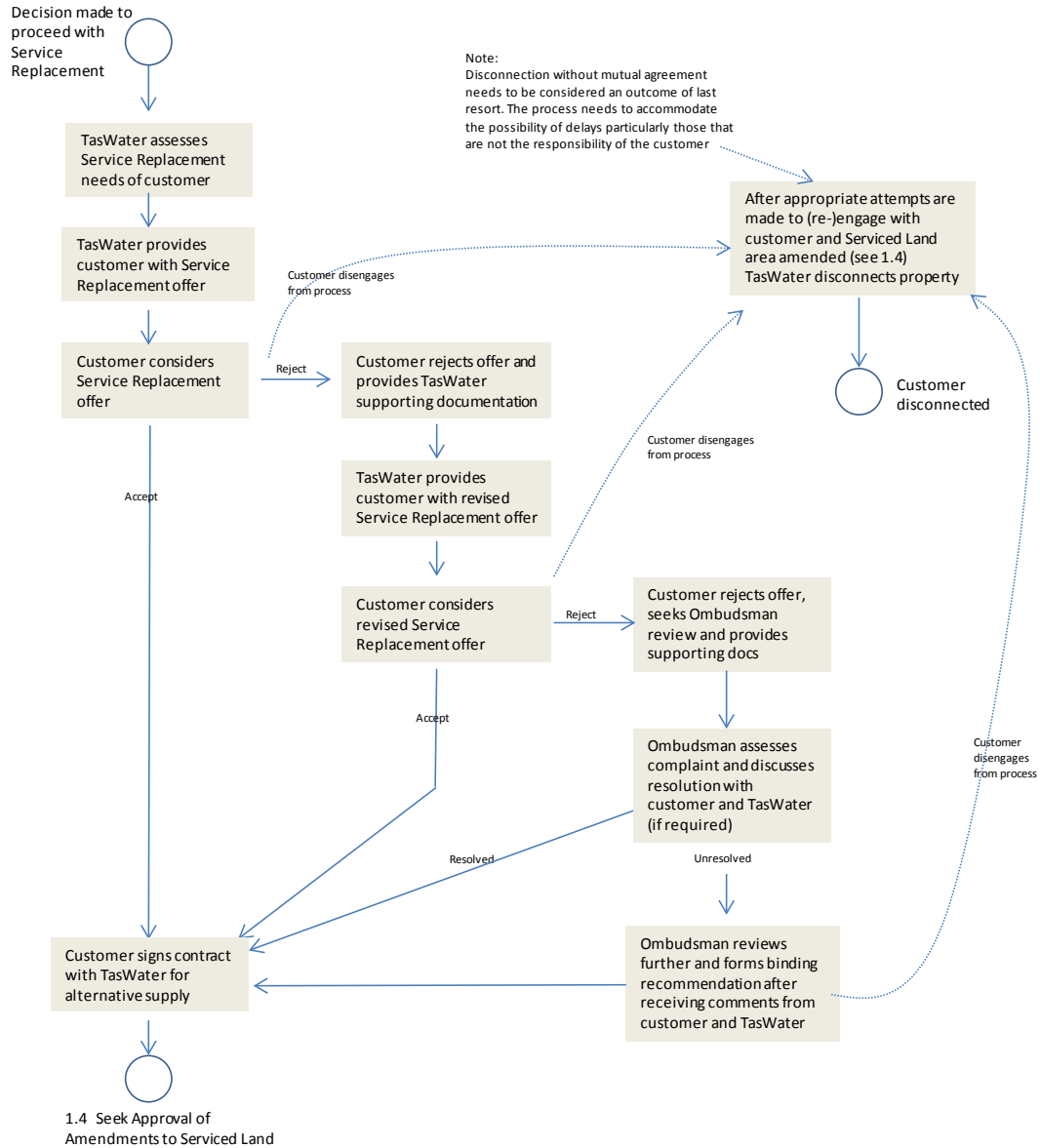


Figure 6.4 contrasts with the approach proposed by TasWater in its proposed Price and Service Plan as the approach now required by the Economic Regulator includes the customer having a right of review of TasWater’s offer of financial compensation. The Economic Regulator considers it important that if a customer feels that TasWater’s service replacement offer is inadequate and is unable to resolve the matter, it is made clear that they have the opportunity to address this through TasWater’s standard complaints handling arrangements and, if still not satisfied, can have this matter reviewed by the Ombudsman.

In providing a property owner with a service replacement offer it is expected that TasWater would, firstly, need to undertake a robust risk and site assessment and apply an accepted methodology in determining the appropriate design of the proposed service replacement option. For example, in the case of rain water tanks, the Economic Regulator expects that offers would be based on an accepted approach to the sizing of the tanks based on appropriate rainfall data.

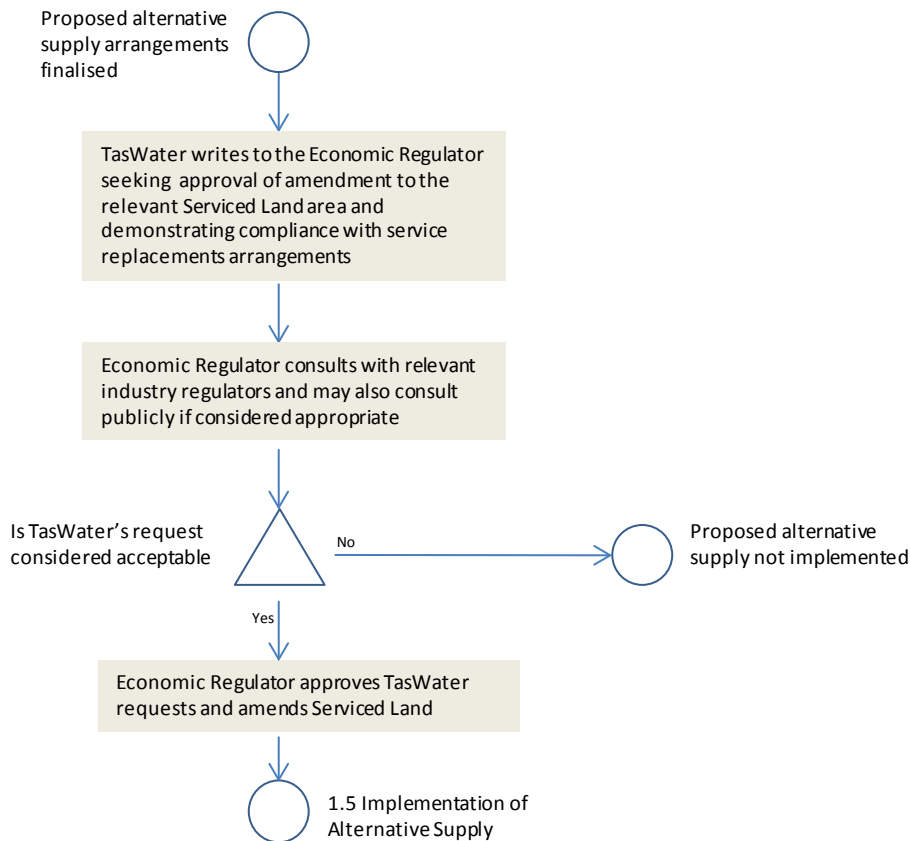
Figure 6.4 provides for an explicit right of review of TasWater's decisions in relation to offers made to individual customers but also utilises the existing complaints handling process whereby complainants should generally lodge and attempt to resolve complaints with TasWater in the first instance before seeking the Ombudsman's review. Should a property owner choose to dis-engage from the process, the process envisages the Economic Regulator approving a change to the serviced land area and subsequent disconnection of the property by TasWater, without prior installation of an alternative supply for the property owner.

Each contract for an alternative supply would need to include a condition precedent which states that the contract is not binding until, and unless, the Economic Regulator has approved a request from TasWater to amend the relevant serviced land boundaries. This will ensure that there is independent oversight of the process prior to customers having any binding contractual obligations.

6.3.4.1.5 Approval of amendments to serviced land

Figure 6.5 illustrates the amendments to serviced land process to be undertaken by TasWater and the Economic Regulator.

Figure 6.5 Approval of amendments to serviced land



While the processes in Figure 6.5 are broadly consistent with the approach outlined by TasWater in its proposed Price and Service Plan, the Economic Regulator considers that the process for seeking amendments to serviced land should only commence when it is established that all property owners have either signed contracts or have chosen to disengage from the process. This contrasts with TasWater’s proposed Price and Service Plan which stated that once the majority of owners have signed contracts, TasWater would seek the Economic Regulator’s approval to amend serviced land. As noted above, the Economic Regulator’s process for seeking amendments will ensure that there is independent oversight of the process prior to customers having any binding contractual obligations.

Once the Economic Regulator has amended the description of serviced land, the contracts signed by property owners and TasWater would become enforceable.

In its submission on the Economic Regulator’s Draft Report, TasWater recommended adding a new step to the Economic Regulator’s proposed process to reflect the Economic Regulator’s approval, prior to individual customers receiving offers from TasWater, for a service replacement proposal to proceed.

However, in proposing a detailed service replacement process requiring TasWater to engage with individual property owners before seeking amendments to serviced land, the Economic Regulator’s process is designed to provide certainty. The process also provides for the industry regulators to play an important role in the investigation of the option of service replacement, and, if the process is followed,

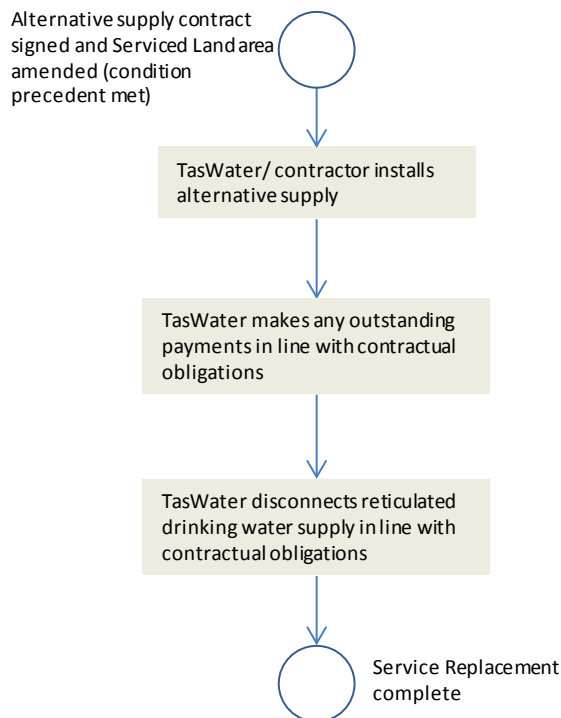
then regulatory compliance can be achieved. Any “approval” provided by industry regulators prior to individual customers receiving offers, could only be conditional on future actions occurring, which would be contrary to the objective of providing certainty.

The Economic Regulator has therefore decided against adding the requested additional step to the service replacement process.

6.3.4.1.6 Installation of alternative supply

Figure 6.6 illustrates the installation of alternative supply process to be undertaken by TasWater and the Economic Regulator.

Figure 6.6 Installation of alternative supply



TasWater’s proposed Price and Service Plan stated that once the majority of owners have signed contracts, TasWater would seek the Economic Regulator’s approval to amend serviced land which would then trigger disconnection of the affected properties.

However as noted in its Draft Report, the Economic Regulator considered that the process leading to the disconnection of properties in a community should only occur when all affected properties have either:

- had an alternative supply installed; or
- their owners have chosen to disengage from the process as set out in Figure 6.4.

The Economic Regulator requires TasWater to adopt the service replacement process outlined in Figures 6.1 to 6.6 inclusive in Chapter 6 of this Final Report.

7 SETTING CUSTOMER SERVICE STANDARDS

7.1 Regulation of customer service standards

The Economic Regulator is responsible for regulating standards and conditions of supply of regulated water and sewerage services. This does not, however, extend to water quality standards, which are the responsibility of the Director of Public Health, or waste water standards which are the responsibility of the EPA.

The regulation of water and sewerage service standards has been undertaken through the specification of minimum service standard targets within the Customer Service Code as well as the determination of transitional service standards as part of the Price Determination processes.

The Economic Regulator's current approach to regulating water and sewerage services may be summarised as:

- establishing the Customer Service Code;
- establishing minimum service standard targets within the Customer Service Code;
- requiring regulated water and sewerage entities to develop customer charters;
- requiring regulated water and sewerage entities to develop transitional customer service standard proposals as part of price and service plans to move towards the minimum service standard targets within the Customer Service Code; and
- establishing a performance reporting framework that, amongst other things, monitors performance against approved transitional service standards and minimum service standard targets.

7.2 Minimum and transitional customer service standards

Minimum service standards are usually developed following consultation with customers on current levels of service and price implications of alternative levels of service provision. However, during the early stages of the water and sewerage industry reform process, this information was largely unknown. That is, the absence of customer service regulation prior to the commencement of reforms for the water and sewerage sector resulted in a general lack of data being collected in relation to customer service. Therefore, the Economic Regulator chose to adopt an alternative approach within the Customer Service Code when it was introduced in July 2010.

The Customer Service Code was initially developed to include a number of minimum service standards that the then regional water and sewerage entities used as targets

for transitioning levels of service provision to an acceptable level over time. The Economic Regulator determined these standards using a benchmarking approach based on existing service standards within Victoria. The Customer Service Code then stipulated that a regulated entity is to achieve the minimum service standards within the second pricing period.

Transitional service standards were subsequently proposed by each of the three regional water and sewerage entities and approved for the first regulatory period (effective from 1 July 2012). Progress of the entities against the agreed performance transition paths was then monitored and reported upon by the Economic Regulator as part of the performance monitoring and reporting framework.

7.3 Review of minimum service standards

The Customer Service Code provided that the Economic Regulator would undertake a review of the minimum service standards by 30 June 2013 to take into account cost and service level data which came to light during the first regulatory period.

Accordingly, a review was undertaken with the objective of introducing differential service standards in the second regulatory period to reflect the different costs of delivering the regulated services to different geographical areas. The adoption of differential service standards was considered particularly important in the context of proposed 'postage stamp' pricing for water and sewerage services across the State. Under postage stamp pricing, charges are the same across the State regardless of location or the cost to provide these services. In this environment, differential service standards provide an opportunity to achieve more efficient outcomes that reflect different costs of service provision across the State, without affecting uniform state-wide prices.

It was presumed, at the time of the review, that the water and sewerage entities would have a better understanding of the systems involved and the different costs to provide services over those systems. Therefore the implementation of a differential service standard approach was more likely to be practically achievable.

However, it quickly became evident, through representations by the previous regulated entities, that there were still issues with the availability of comprehensive cost and service level data on a detailed system or area basis. Despite this, the Economic Regulator resolved that, on the grounds of what information was known at that time, and what further data would become available in the short to medium term, there was scope for the adoption of appropriately defined differential standards of service in the second regulatory period.

To this end, the Economic Regulator proposed that moving to a 'metropolitan' and 'non-metropolitan' split would be the most practical and achievable basis for differentiation of service standards.

It was resolved that the appropriateness of zone boundaries for such differentiation would be assessed in consultation with the newly amalgamated water and sewerage entity, TasWater (which commenced operations on 1 July 2013). The Economic Regulator stated that it would require TasWater to determine and provide

advice of its relevant metropolitan and non-metropolitan areas, identifying these zones with the use of maps (which may, for example, be systems based). TasWater would also be required to detail the characteristics it had used for justifying the provision of different levels of service across those defined metropolitan and non-metropolitan areas. This information was required to be submitted by TasWater as part of its proposed Price and Service Plan and considered by the Economic Regulator as part of the second price determination investigation process.

7.4 Assessment of customer service standards proposed by TasWater

As part of the Economic Regulator's Customer Service Code review, it was resolved that TasWater would have to achieve the new minimum service standard targets, set on a differential basis, before the conclusion of the third regulatory period (which is scheduled to commence on 1 July 2018).

TasWater was responsible for proposing, in its proposed Price and Service Plan for the second regulatory period, the new differential minimum service standard targets that will be included in the Customer Service Code. In addition, TasWater was to propose transitional service standard targets for each financial year of the second regulatory period to demonstrate how the entity intends to transition towards the minimum service standards it proposed.

The progress of TasWater in relation to achieving its agreed performance obligations, as it transitioned towards the targets, would be monitored and reported upon by the Economic Regulator as part of the performance monitoring and reporting regime.

The Economic Regulator's PSP Guideline for the 2014-15 price determination investigation, issued in November 2013, clearly outlines the obligations of TasWater in the setting of customer service standards.

Relevant industry officers had significant involvement in the development of the revised customer service standards framework for the second and subsequent regulatory periods. Despite this, the Economic Regulator noted that TasWater had not proposed service standards, nor outlined any associated transition path, on a differential basis. Rather, TasWater proposed state-wide minimum service standards as well as annual transition targets to move to the service standard targets during the second regulatory period.

Under this proposal, in reporting against the level of service standards, TasWater would effectively be continuing to report aggregated performance (ie averaged out across the system).

In its proposed Price and Service Plan TasWater noted that relevant to the consideration of service standard differentiation was TasWater's operating model, customer engagement, the focus of TasWater's 2015-18 capital program and data quality issues. Furthermore, in considering the impact and interaction of a number of factors in this regard, TasWater maintained that it was not in a position to propose

the requisite service standards, nor the associated transitional standards, on a differential basis, at this time.

The Economic Regulator did not find TasWater's argument to be persuasive and, accordingly, sought a more detailed explanation from TasWater as to the reasons for its inability to develop and propose differential service standards.

TasWater subsequently agreed to provide the Economic Regulator with further justification for not proposing differential service standards at this time. However, the Economic Regulator noted that this advice, when received, simply reflected what had already been documented in TasWater's proposed Price and Service Plan. That is, that TasWater did not have the necessary reliable data about its assets and relevant performance to propose differential service standards that would be meaningful for TasWater as a business or its customers.

As noted above, the omission, by TasWater in its proposed Price and Service Plan, of differential service standards results in there remaining only one set of proposed customer service standards for the State.

Differential service standards, either between or within regions, are preferred as they better reflect the different customer expectations and the different cost of service delivery across geographical areas. This has the potential to generate cost efficiencies for TasWater. The Economic Regulator remains concerned that this matter has not been addressed and will undertake further discussions with TasWater in order to resolve this issue.

Notwithstanding, the Economic Regulator undertook an assessment of the minimum service standards proposed by TasWater in its proposed Price and Service Plan and offered, in its Draft Report, the following comments for consideration.

The Economic Regulator noted that the minimum service standards as listed by TasWater were taken directly from Schedule 1 of the Customer Service Code. In this way, TasWater had not proposed any variation to the current minimum service standard targets, as approved by the Economic Regulator for the first regulatory period. Rather, TasWater had, for the majority of indicators, proposed new transitional service standards it intended to achieve over the second regulatory period.

Table 7.1 provides a comparison of the annual transition targets approved as part of the first Price Determination, for the then three regional regulated entities, and the targets proposed by TasWater for the duration of the second regulatory period (note that the table includes some updated information provided by TasWater after it submitted its proposed Price and Service Plan). For the purposes of this comparison, an average of the approved targets for the three previous regulated entities was calculated.

Table 7.1 Minimum service standards – transitional pathway comparison

Indicator	Minimum Service Standard	Average of previous regulated entities			TasWater		
		2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
WATER:							
Unplanned water supply interruptions (per 100km of water main)	32	49	48	46	55	45	32
Average time taken to attend bursts and leaks – Priority 1 (minutes)	30	48	44	37	40	35	30
Average time taken to attend bursts and leaks – Priority 2 (minutes)	120	120	120	120	120	120	120
Average time taken to attend bursts and leaks – Priority 3 (minutes)	1 440	1 440	1 440	1 440	1 440	1 440	1 440
Average frequency of unplanned water supply interruptions (number per customer)	0.10	0.20	0.19	0.17	0.20	0.15	0.10
Average frequency of planned water supply interruptions (number per customer)	0.10	0.20	0.17	0.13	0.15	0.15	0.10
Average unplanned customer minutes off water supply (minutes)	20	22	22	20	25	25	20
Average planned customer minutes off water supply (minutes)	15	25	25	22	20	15	15
Average duration of unplanned water supply interruption (minutes)	100	153	147	140	140	120	100
Average duration of planned water supply interruption (minutes)	180	260	248	230	220	200	180
Unplanned water supply interruptions restored within 5 hours (per cent)	98	89	90	93	85	90	98
Planned water supply interruptions restored within 5 hours (per cent)	95	72	75	78	80	90	95
Number of customers receiving more than 5 unplanned water supply interruptions in a financial year (number)	0	167	167	167			0
Unaccounted for water (per cent)	10	25	24	20			10
SEWERAGE:							
Sewer breaks and chokes (and spills) (per 100km of sewer main)	28	60	55	51	55	40	28
Average time to attend sewer spills, breaks and chokes (minutes)	41	70	65	60	60	50	41
Average sewerage service interruption (minutes)	150	210	203	190	200	180	150

Indicator	Minimum Service Standard	Average of previous regulated entities			TasWater		
		2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Sewerage spills contained within 5 hours (per cent)	99	93	93	95	99	99	99
Customers receiving more than 3 sewerage service interruptions per year	0	167	167	167	0	0	0
CUSTOMERS:							
Total water and sewerage complaints (per 1000 properties)	9	9	9	9	7	7	7
Water and sewerage complaints to Ombudsman (per 1000 customers)	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Percentage of calls answered by an operator within 30 seconds	90	73	78	83	85	90	90

The above transition paths for TasWater appeared satisfactory when considered against an average of those approved for the previous regional regulated entities for the first regulatory period. The Economic Regulator however noted that for the ‘Total water and sewerage complaints (per 1 000 properties)’ indicator, TasWater expected to exceed the minimum service standard target for each year of the regulatory period but had not proposed a revision to that standard in the Customer Service Code. Notwithstanding, the Economic Regulator was satisfied that the proposed transitional service standards for TasWater were reasonable.

To this end, the Economic Regulator assessed the current minimum service standards, and TasWater’s proposed transition path for 2015-16 to 2017-18, for reasonableness against TasWater’s 2013-14 performance data.

TasWater’s performance data for 2013-14 provides an annual result for each indicator calculated as an average of performance outcomes for the northern, north-western and southern regions of the State.

Based on 2013-14 performance data, for the majority of indicators TasWater achieved a comparable or better than minimum service standard result. However, there were several indicators against which TasWater’s result for the 2013-14 year were deficient in comparison to the minimum service standard as set for the first regulatory period. For example, for the indicators in question, TasWater failed to achieve a performance result, in 2013-14, within 30 to 300 per cent of the associated minimum service standards as outlined in the Customer Service Code. This was the case for indicators such as ‘Unplanned water supply interruptions (per 100km of water main)’, ‘Average duration of planned water supply interruptions (minutes)’ and ‘Sewer breaks and chokes (and spills) per 100 km of main’. Notwithstanding such results, TasWater chose not to propose revised minimum service standards for these indicators which would suggest that the entity considered achievement of these standards possible.

Not proposing any amendments to the already three year old minimum service standards (that were based on Victorian service standards at that time) suggested that TasWater considered the standards still appropriate and relevant for its customers. TasWater did not include in its proposed Price and Service Plan any assessment of these standards taking into account customer views, its ability to achieve these targets or the associated cost of doing so.

In light of this outcome, the Economic Regulator, in its Draft Report, outlined its intention to approve the current minimum service standards as outlined Schedule 1 of the Customer Service Code as actual minimum standards for the second regulatory period. That is, the performance of TasWater against each indicator would no longer be averaged out across TasWater's system statewide. Rather, the service standard proposed for each indicator would be the absolute minimum standard which TasWater would have to meet, in all instances, and in all of its interactions with customers state-wide, with respect to that indicator.

As a result of this approach, the Economic Regulator also intended to require TasWater to amend its proposed Price and Service Plan by removing any discussion concerning the development and application of differential service standards. This included the map of TasWater's management areas as shown on page 22 of TasWater's proposed Price and Service Plan. Furthermore, references to any transition path were also to be removed.

In addition, in its Draft Report, the Economic Regulator detailed its intention of making all necessary amendments to the Customer Service Code to ensure service standards on a differential basis are proposed by TasWater for the third regulatory period (commencing 1 July 2018). However, as a result of discussions subsequently held with TasWater, and noting TasWater's desire to work with the Economic Regulator in developing future service standards, the Economic Regulator has decided not to formally amend the Customer Service Code in this regard at this time.

Whilst the Economic Regulator, in its Draft Report, proposed a more binding arrangement on TasWater, with the adoption the current minimum service standards as actual, absolute minimum standards, the Economic Regulator also considered the introduction of an appropriate incentive/penalty regime to encourage TasWater to meet the customer service standards as determined for the second regulatory period.

For the first regulatory period the Economic Regulator chose not to pursue the establishment of arrangements to provide an incentive/penalty scheme to achieve agreed service standard levels. The Economic Regulator did, however, reconsider this matter as part of its 2013 Customer Service Code review process.

As part of the review, the then three regional water and sewerage entities provided a submission in response to the Economic Regulator's public circulation of its options paper outlining a proposed approach for the adoption of revised minimum service standards from 1 July 2015. The entities agreed with the Economic Regulator's

assessment at the time that it was premature to implement financial incentives such as a Guaranteed Service Level¹ (GSL) arrangement or S-factor mechanism.² Furthermore, the entities believed that the newly amalgamated entity, TasWater, should be given sufficient time to progress any new differentiated service standards before an incentive/penalty regime is established.

However, in response to TasWater's inability to meet its obligations with respect to the development of differential service standards for the second regulatory period, the Economic Regulator considered that there was merit in establishing a GSL scheme whereby TasWater would be required to provide a payment to affected customers, in those instances where the minimum service standard for certain indicators were not met. However, the Economic Regulator noted that there did not appear to be the necessary legislative and regulatory framework to support the introduction of such arrangements. It would, therefore, be a matter for the Government to consider whether to legislate for the introduction of a GSL scheme as proposed.

With respect to which indicators such an incentive/penalty payment would apply, should a GSL scheme be introduced, the Economic Regulator proposed that it be applicable against all of the proposed customer service standards in relation to duration and frequency of unplanned interruptions.

The Economic Regulator also proposed that the GSL scheme be similar to the current GSL arrangements for Aurora Energy in terms of the value of the payment TasWater would be required to provide its customers who were affected by the relevant minimum service standard(s) not being achieved.

The Economic Regulator continues to consider an appropriate GSL scheme beneficial as it would encourage TasWater to commit to, and achieve, levels of quality service for its customers. In the current Tasmanian context, TasWater is operating within a sector with natural monopoly characteristics, and is subject to little or no competition. In this way TasWater has the ability to reduce the level of service provided as customers generally cannot move to an alternative water and sewerage service provider. The introduction of a suitable penalty arrangement would provide that incentive.

7.5 Customer service standards to apply for the second regulatory period

TasWater was the only interested party to provide a submission in response to the Economic Regulator's indicated position concerning customer service standards, as outlined in its Draft Report and as summarised above.

¹ A Guaranteed Service Level (GSL) arrangement: eligible water and sewerage customers would be entitled to a GSL payment, from TasWater, in instances where the customer does not receive the relevant agreed minimum level of standard for customer service.

² An S-factor mechanism: provides financial incentives for businesses to deliver agreed service levels, with penalties when service levels fall below the set standard and bonuses when service levels are above the set standard.

TasWater indicated concern with the Economic Regulator’s intention to approve actual minimum service standards to apply during the second regulatory period, maintaining that averages provide better incentives for businesses to drive efficiency, which was particularly relevant at this stage in TasWater’s maturity. In addition, TasWater considered that the setting of actual minimums would possibly drive outcomes that were at odds with the priorities set by the technical regulators and TasWater’s legislative obligations.

TasWater also remained concerned about the quality of its data, noting that systems and processes required to fully comprehend its underlying performance did not yet exist. TasWater also considered that it would be in a better position to provide more accurate and evidence-based customer service standard targets for the third regulatory period.

Nevertheless, TasWater indicated that it was open to exploring, with the Economic Regulator, the possibility of setting actual minimum standards for some of the indicators.

To this end, TasWater provided a secondary proposal in relation to customer service standards for the Economic Regulator’s consideration. This secondary proposal was based on TasWater’s recent analysis of actual performance data for the period 1 July 2014 to 28 February 2015. On the basis of that analysis, and recognising the Economic Regulator’s desire to move to actual minimum standards, TasWater identified it was in a better position to propose more accurate and evidence-based customer service standards with respect to ‘response time’ and ‘duration related’ indicators and service standards relevant to ‘water supply interruptions’ and ‘sewer breaks and chokes’ indicators.

Revised ‘actual minimum’ service standards for these aforementioned indicators were subsequently provided to the Economic Regulator for its consideration.

In addition, TasWater identified that, whilst a number of its proposed revised service standards would be met, in accordance with its newly proposed customer service standards transition path, response time and duration related indicators would only be achieved ‘X’ per cent of the time during the second regulatory period (specifically 80 or 90 per cent of the time).

The following table provides an overview of the current minimum service standards as documented in Schedule 1 of the Customer Service Code along with TasWater’s revised service standards proposal for all indicators over the duration of the second regulatory period.

Table 7.2 Minimum service standards proposal for second regulatory period

	CURRENT Minimum Service Standard in Schedule 1 of Code	2015-16	2016-17	2017-18	Actual minimum achieved X% of time	Average standard or ratio
Water						
Unplanned water supply interruptions (per 100km of water main)	32	71	68	54		✓
Time taken to attend bursts and leaks – Priority 1* (minutes)	30	60	60	60	✓ (90%)	
Time taken to attend bursts and leaks – Priority 2* (minutes)	120	180	180	180	✓ (90%)	
Time taken to attend bursts and leaks – Priority 3* (minutes)	1440	4320	4320	4320	✓ (90%)	
Average frequency of unplanned water supply interruptions (number per customer)	0.1	0.1	0.1	0.1		✓
Average frequency of planned water supply interruptions (number per customer)	0.1	0.1	0.1	0.1		✓
Average unplanned customer minutes off water supply (minutes)	20	25	25	20		✓
Average planned customer minutes off water supply (minutes)	15	20	15	15		✓
Duration of unplanned water supply interruption (minutes)	100	180	180	180	✓ (80%)	
Duration of planned water supply interruption (minutes)	180	180	180	180	✓ (80%)	
Unplanned water supply interruptions restored within 5 hours (per cent)	98	85	90	98		✓
Planned water supply interruptions restored within 5 hours (per cent)	95	80	85	90		✓
Number of customers receiving more than 5 unplanned water supply interruptions in a financial year (number)	0	0	0	0	✓ (90%)	
Unaccounted for water (per cent)	10	14	12	10		✓

* Priority 1: is a burst or leak that causes, or has potential to cause, substantial damage or harm to customers, water quality, flow rate, property or environment.
 Priority 2: is a burst or a leak that causes, or has the potential to cause, minor damage or harm to customers, water quality, flow rate, property or environment
 Priority 3: is a burst or leak that causes no discernable impact on customers, property or the environment.

	CURRENT Minimum Service Standard in Schedule 1 of Code	2015-16	2016-17	2017-18	Actual minimum achieved X% of time	Average standard or ratio
Sewerage						
Sewer breaks and chokes (and spills) (per 100km of sewer main)	28	104	98	93		✓
Time to attend sewer spills, breaks and chokes (minutes)	41	60	60	60	✓ (90%)	
Sewerage service interruption (minutes)	150	180	180	180	✓ (80%)	
Sewerage spills contained within 5 hours (per cent)	99	99	99	99		✓
Customers receiving more than 3 sewerage service interruptions per year	0	0	0	0	✓ (90%)	
Customers						
Total water and sewerage complaints (per 1000 properties)	9	9	9	9		✓
Water and sewerage complaints to Ombudsman (per 1000 customers)	0.5	0.5	0.5	0.5		✓
Percentage of calls answered by an operator within 30 seconds	90	85	85	85		✓

The Economic Regulator, after considering TasWater's alternative proposal, accepts that the proposal does represent movement in the right direction towards service standards that are meaningful to customers.

The Economic Regulator will continue to work with TasWater towards the development of more relevant and representative customer service standards, on a differential basis, for the third regulatory period.

Performance reporting on TasWater's achievement (or otherwise) of the revised actual minimum service standards will be undertaken, with any consistent discrepancies between approved and actual service levels being detailed in the Economic Regulator's annual state of the industry reports. As these service undertakings will be binding through the Customer Service Code and Price Determination, the Economic Regulator will be able to take appropriate compliance enforcement action.

The Economic Regulator:

- (1) approves the proposed minimum service standards as outlined in Table 7.2 of this Final Report for adoption by TasWater for each year of the second regulatory period;***
- (2) will implement the newly approved minimum service standards by way of the Customer Service Code change process (for a 1 July 2015 commencement);***
- (3) requires TasWater to amend its final Price and Service Plan by removing any discussion concerning the development and application of differential service standards. This includes the map of TasWater's management areas as shown on page 22 of TasWater's proposed Price and Service Plan; and***
- (4) notes that there is merit in the Government considering whether to legislate for the introduction of a GSL scheme.***

APPENDIX 1 REVENUE LIMITS DATA

Table 1 RAB Existing assets (\$'000s)

		2015-16	2016-17	2017-18
Water	Opening Asset Base	1 347 912.82	1 316 069.86	1 284 226.89
	- Disposal	0.00	0.00	0.00
	- Depreciation	-31 842.97	-31 842.97	-31 842.97
	Closing Asset Base	1 316 069.86	1 284 226.89	1 252 383.92
Waste Water	Opening Asset Base	1 242 002.90	1 210 447.95	1 178 893.00
	- Disposal	0.00	0.00	0.00
	- Depreciation	-31 554.95	-31 554.95	-31 554.95
	Closing Asset Base	1 210 447.95	1 178 893.00	1 147 338.05
	Total Opening	2 589 915.73	2 526 517.81	2 463 119.89
	Total Closing	2 526 517.81	2 463 119.89	2 399 721.97
Total Average		2 558 216.77	2 494 818.85	2 431 420.93

Table 2 RAB New assets (\$'000s)

		2015-16	2016-17	2017-18
Water	Opening Asset Base	251 018.07	278 711.72	313 983.99
	+ Gross Capex	42 370.13	46 064.23	47 611.79
	- Disposals	0.00	0.00	0.00
	- Depreciation	-4 557.99	-5 230.26	-5 948.87
	- 3rd party contributions	-10 118.49	-5 561.70	-5 518.20
	Closing Asset Base	278 711.72	313 983.99	350 128.71
Waste Water	Opening Asset Base	174 792.36	220 844.77	270 380.11
	+ Gross Capex	53 316.70	57 712.09	65 265.85
	- Disposals	0.00	0.00	0.00
	- Depreciation	-3 486.29	-4 398.75	-5 416.58
	- 3rd party contributions	-3 778.00	-3 778.00	-3 778.00
	Closing Asset Base	220 844.77	270 380.11	326 451.38
	Total Opening	425 810.43	499 556.49	584 364.10
	Total Closing	499 556.49	584 364.10	676 580.10
Total Average		462 683.46	541 960.29	630 472.10

Upper, statutory and lower revenue limits

Table 3 Upper revenue limit (\$'000s)

		2015-16	2016-17	2017-18
Water	RAB existing x WACC new	56 701.01	55 345.50	53 989.99
	RAB new x WACC new	11 274.93	12 615.11	14 135.17
	Depreciation existing	31 842.97	31 842.97	31 842.97
	Depreciation new	4 557.99	5 230.26	5 948.87
	O&M	72 055.15	72 205.15	72 405.15
	Total Water	176 432.05	177 238.99	178 322.15
Waste Water	RAB existing x WACC new	52 198.70	50 855.45	49 512.20
	RAB new x WACC new	8 420.86	10 455.38	12 703.14
	Depreciation existing	31 554.95	31 554.95	31 554.95
	Depreciation new	3 486.29	4 398.75	5 416.58
	O&M	77 690.86	77 840.86	78 040.86
	Total Waste Water	173 351.66	175 105.39	177 227.73
Total	349 783.71	352 344.38	355 549.88	

Table 4 Statutory revenue limit (\$'000s)

		2015-16	2016-17	2017-18
Water	RAB existing x WACC existing	28 413.72	27 734.45	27 055.19
	RAB new x WACC new	11 274.93	12 615.11	14 135.17
	Depreciation existing	31 842.97	31 842.97	31 842.97
	Depreciation new	4 557.99	5 230.26	5 948.87
	O&M	72 055.15	72 205.15	72 405.15
	Total Water	148 144.76	149 627.95	151 387.35
Waste Water	RAB existing x WACC existing	26 157.55	25 484.43	24 811.30
	RAB new x WACC new	8 420.86	10 455.38	12 703.14
	Depreciation existing	31 554.95	31 554.95	31 554.95
	Depreciation new	3 486.29	4 398.75	5 416.58
	O&M	77 690.86	77 840.86	78 040.86
	Total Waste Water	147 310.51	149 734.36	152 526.83
Total	295 455.27	299 362.31	303 914.18	

Table 5 Lower revenue limit (\$'000s)

		2015-16	2016-17	2017-18
Water	Interest	10 863.94	11 917.87	14 059.28
	ARA	15 755.74	15 755.74	15 755.74
	O&M	72 055.15	72 205.15	72 405.15
	Dividends	0.00	0.00	0.00
	Total Water	98 674.82	99 878.76	102 220.16
Waste Water	Interest	10 863.94	11 917.87	14 059.28
	ARA	28 503.87	28 503.87	28 503.87
	O&M	77 690.86	77 840.86	78 040.86
	Dividends	0.00	0.00	0.00
	Total Waste Water	117 058.67	118 262.60	120 604.01
Total		215 733.49	218 141.35	222 824.17

