

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	toilet/shower
		0.4500	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/Tariffs.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

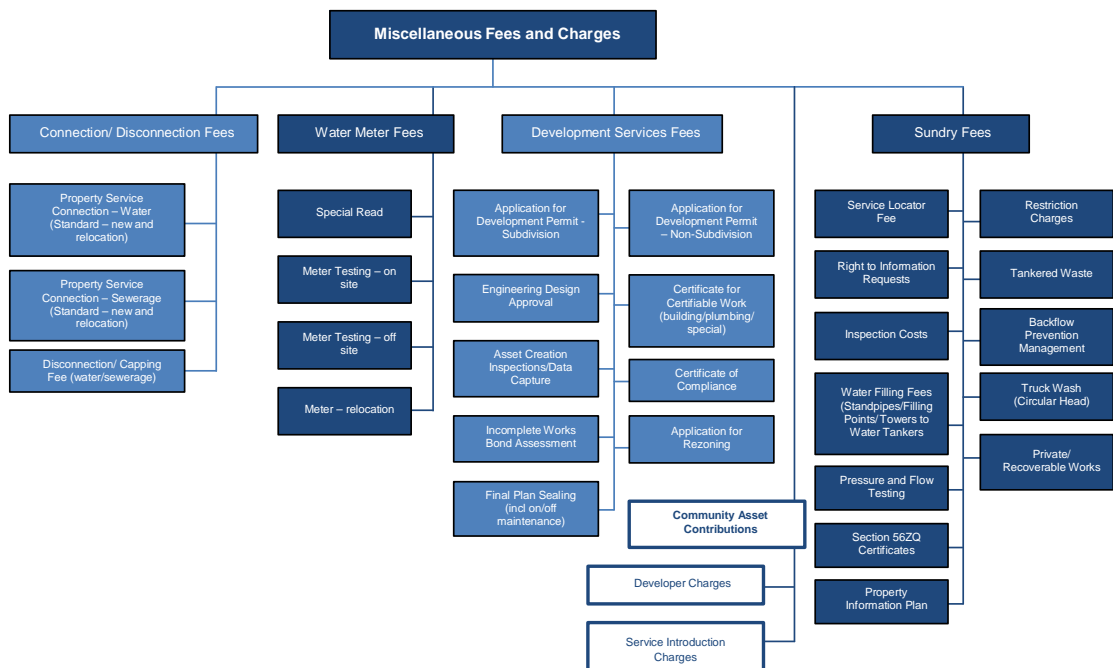
Miscellaneous fees and charges are all fees and charges that may be charged by TasWater which are not fixed charges, variable charges, developer charges or service introduction charges. As with other regulated charges, miscellaneous fees and charges must be determined according to the Pricing Principles 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.

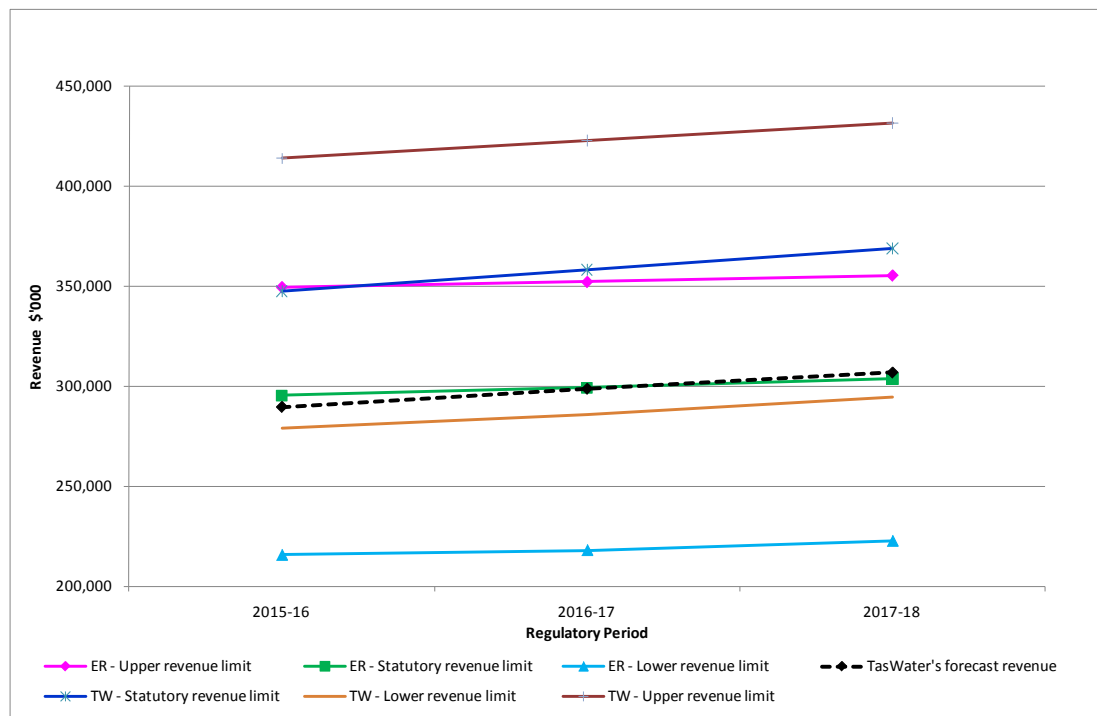
For this Final Report, the Economic Regulator reviewed the revenue limit components (as outlined in Chapter 4) and compared the revised revenue limits with TasWater's revenue limits, and with TasWater's forecast revenue for each year of the second regulatory period. The results of this analysis are set 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

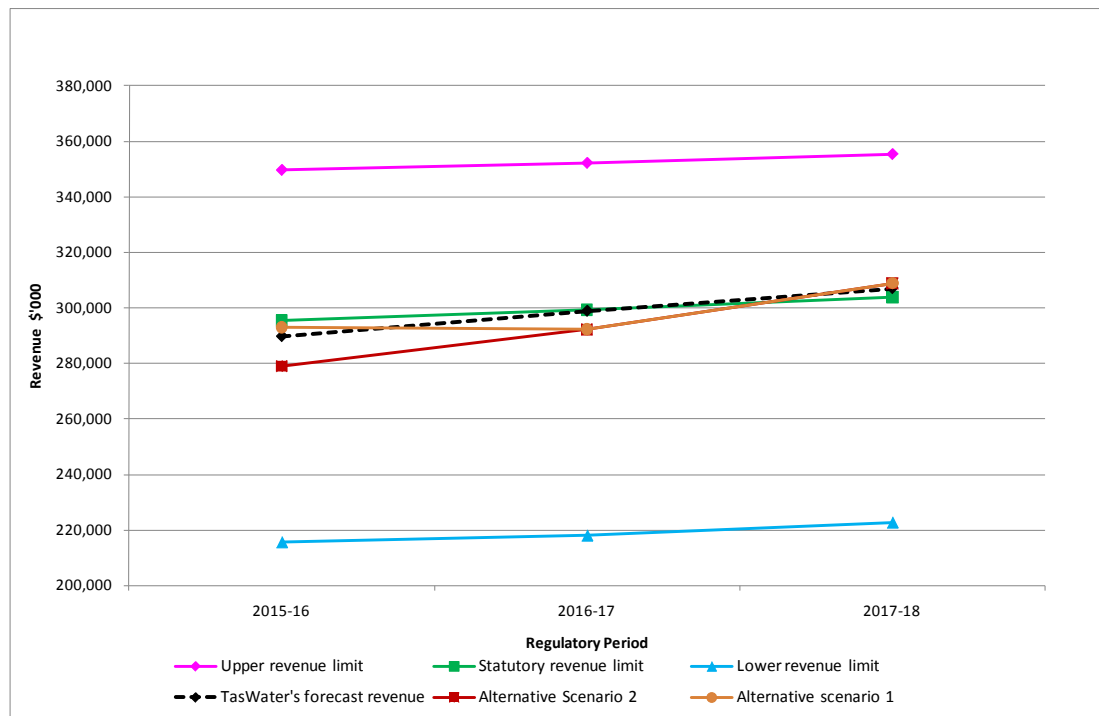
A forecast of revenues under each Alternative Price Scenario and TasWater’s forecast revenue is provided in the following table.

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.