

## 12 PRICING STRUCTURE

This chapter provides an overview of TasWater's proposed pricing structure for the third regulatory period.

The chapter outlines the:

- pricing principles;
- price reform priorities for the third regulatory period;
- structure of pricing for regulated water and sewerage services; and
- pricing for other services associated with the provision of regulated water and sewerage services.

### 12.1 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.

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; the 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 and second regulatory periods.

For the third regulatory period TasWater's proposed PSP 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;
- the additional pricing principles set out in the Pricing Regulations; and
- the price reform priorities established by the Economic Regulator for the third regulatory period.

To date, TasWater has been subject to price regulation with a side constraint on price movements. This was to ensure that during the transition period, the impact of price changes on customers was managed while revenue was transitioned to the statutory revenue limit.

Given that TasWater's prices currently provide for revenues that are approaching the statutory revenue limit (as established in the Economic Regulator's 2015 price determination investigation), the Economic Regulator required TasWater propose price changes in its proposed PSP and demonstrate that its pricing proposals, combined with forecasts of water demand, customer connections and the number of miscellaneous transactions, resulted in TasWater's forecast revenue being equal to or below the Economic Regulator's calculation of TasWater's MARR for each year of the third regulatory period.

### 12.2 Statutory pricing principles

Subject to Section 68AA of the Industry Act (see Section 12.4 of this Final Report), 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.

## 12.3 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 assets;<sup>81</sup>
- 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.

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<sup>81</sup> 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.

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.

## 12.4 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.

Section 68AA enables the pricing principles not to 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 PSP 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, 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 customer impacts are discussed in Chapter 13 of this Final Report.

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 third regulatory period are designed to enable compliance with the pricing principles by 1 July 2020.

## 12.5 Price reform priorities for the third regulatory period

During the third regulatory period, as noted in Section 12.4 of this Final Report, TasWater's tariffs are proposed to complete the transition to a rational price structure with all customers on target tariffs.

From the commencement of independent regulation of water and sewerage prices in Tasmania on 1 July 2012 through to the end of the second regulatory period on 30 June 2018 it has been the constraints on price movements that have been determining prices as customers have continued to transition to uniform target tariffs.

While the Economic Regulator has been calculating revenue limits as part of its price determination investigations, expected revenue has been below the legally binding statutory limit during this time.

For the third regulatory period it is expected that the following price reforms will need to be managed:

- completing the transition of all customers to the relevant target tariff by 1 July 2020;

- underlying movements in target tariffs to continue the transition to the statutory revenue limit and fund required regulatory compliance improvement;
- making any changes to the level of miscellaneous charges; and
- implementing the outcomes of any proposed changes to TasWater’s tariff structure or customer classes.

The structure and quantum of these proposed price changes will depend upon an assessment of the ability of TasWater to achieve price reform in a manner that manages the impact of the rate of change of prices for customers whilst addressing competing needs such as facilitating improved regulatory compliance.

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

Any proposed movements in price, or constraints upon price movements, have been assessed by the Economic Regulator based on the following objectives:

- completing the transition of all customers to the relevant target tariff by 1 July 2020;
- managing the impact of price changes on customers; and
- provide effective incentives to promote economic efficiency, reduce costs or otherwise improve productivity with respect to a regulated service.

TasWater was required to demonstrate that proposed price movements, or constraints upon price movements, have been informed by feedback from consultation with customers and industry regulators (see Chapters 2 and 3 of this Report respectively).

The above matters are addressed in Chapter 13.

## 12.6 Structure of regulated prices

This Chapter provides an overview of the services TasWater intends to provide during the third regulatory period, as well as the proposed tariff structure for each service.

TasWater’s proposed tariff structure for each regulated service is described generally below.

Water charges:

- fixed water tariff – an annual charge for the provision of water via water infrastructure for both full service customers and limited water supply customers (ie where the service is limited due to pressure and/or flow issues);
- volumetric water tariff – a charge per kilolitre for water usage for both full service customers and limited water quality customers (ie where the water received 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 while 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
- unconnected service charge – an annual charge for the ability to connect to TasWater’s infrastructure, even though a physical connection may not be in place.

The Economic Regulator identified that, compared to the second regulatory period, TasWater had not proposed applying fixed water charges to:

- water carrier tariffs;
- public and private filling tariffs; and
- portable metered standpipes.

TasWater confirmed that this was an oversight and that it intended to continue applying fixed water charges for these services.

Sewerage charges:

- fixed sewerage tariff – an annual charge for the removal, treatment and disposal of sewage via sewerage infrastructure, including motor home dump points (located outside of caravan parks) and Septic Tank Effluent Disposal (STED) customers. The Economic Regulator identified that TasWater’s STED tariffs were missing from TasWater’s proposed PSP and, following confirmation from TasWater that this was an oversight, requested that TasWater include details relating to these tariffs in its final Price and Service Plan. The Economic Regulator has included details of STED tariffs in its final Price Determination (Appendix 1);
- unconnected 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 application fee and an annual fixed charge. Minor and major non-compliance charges may be levied where trade waste discharge is outside agreed limits. New fees - a trade waste site constraint fee and a trade waste macerator fee - are also proposed (see Sections 13.2.2.2 and 13.2.2.3 of this Final Report respectively).
  - Category 3 and 4 customers negotiate charges with TasWater and may involve fixed and/or variable charges and reflect the costs of removing, treating and disposing of the trade waste. Prices for these customers are negotiated individually and are unregulated.

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 on 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; 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 tariff structure is generally not significantly different to that approved by the Economic Regulator in respect of the three previous regulated entities or for the previous two regulatory periods.

*The Economic Regulator has concluded that, once the STED tariffs are added and fixed water charges are applied to water carrier tariffs, public and private filling tariffs and portable metered standpipes, TasWater’s proposed regulated services and proposed tariff structures satisfy the definition of a regulated service and are structured in line with the pricing principles respectively.*

## 12.7 Pricing zones

A pricing zone is a region where the prices charged to customers are the same for the same service, that is, 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.

### 12.7.1 Pricing zones for the first and second regulatory periods

During 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.

During the second pricing investigation, TasWater proposed one state-wide target tariff for each service. It argued that state-wide postage stamp pricing was the fairest and most practical approach for Tasmania given its dispersed population and asset base, as well as being simple to understand, particularly given the differing pricing arrangements that had previously existed. It indicated that solid support for postage stamp pricing had been expressed during customer consultation across all regions.

At that time the Economic Regulator was of the view that TasWater's proposed PSP for the second regulatory period did not demonstrate that the cost of implementing pricing zones outweighed the benefits, and sought additional information. TasWater indicated that:

- it did not have the data required to accurately and appropriately identify and inform the build-up of cost and prices between different zones;
- implementing zone pricing would require costly changes to systems which it believed were not warranted given its small customer base; and
- a move away from postage stamp pricing would require thorough consideration 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 Economic Regulator decided to approve TasWater's proposal to not introduce separate pricing zones for the second regulatory period.

### 12.7.2 Pricing zones for the third regulatory period

In its proposed PSP for the third regulatory period, TasWater proposed retaining a single pricing zone for the State, so that the same prices would apply for each service regardless of the location. TasWater provided the following reasons to justify the retention of postage stamp pricing:

- returning to a regional approach would add considerably to its administrative burden and create confusion for customers;
- it does not collect cost data by region as the data requirements would be difficult to establish and would require significant resources to estimate, and the benefits of disaggregating the data are not compelling;
- customers support retaining a single pricing zone;
- paying the same price for the same service is generally viewed as an equitable outcome;
- uniform pricing is simple to understand, particularly given the different pricing arrangements that previously existed; and
- the theoretical benefits of nodal pricing (for example, providing a price signal to incentivise efficient investment and water usage) would be muted as prices do not yet reflect costs.

While TasWater's arguments for retaining postage stamp pricing do not demonstrate in detail that the cost of implementing pricing zones would outweigh the benefits, the Economic Regulator notes that detailed regional information is not available and would be costly to acquire. Therefore the Economic Regulator has approved TasWater's proposal to retain a single pricing zone for the State for the third regulatory period.

*The Economic Regulator approves TasWater's proposal to retain a single pricing zone for Tasmania for the third regulatory period.*

## 12.8 Customer classes

In its proposed PSP for the third regulatory period, TasWater was required to describe and justify any changes to the customer classes approved by the Economic Regulator for the second regulatory period. Proposed changes to the existing classes were required to be justified on the basis of further achieving the pricing principles of the Industry Act.

Different customer classes are required to ensure that the following is reflected:

- 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.

Water customers and sewerage customers are considered to be different customer classes, reflecting the different costs associated with providing a different service and product.

The Economic Regulator approved the following customer classes for the second regulatory period:

- full service (water);
- full service (sewerage);
- 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;
- combined limited water quality and limited water supply;
- trade waste - four categories:
  - Category 1 and 2 customers operating under a standard regulated contract (section 60 of the Industry Act) –
    - o Category 1 customer waste is of low volume or strength, results in a minimal risk to/demand on the sewerage infrastructure and can be managed through cleaner production methods;
    - o Category 2 customer waste is of low to medium volume, requires physical pre-treatment before it can be discharged and is separated into three sub-categories (categories 2A, 2B and 2C) to more accurately reflect demand on the system using a technical and commercial risk assessment of the impacts; and
  - Category 3 and 4 customers operating under a section 61 contract, where the volume, composition or quality of the waste (either individually or combined) results in a medium to high risk to/demand on the system, and where TasWater negotiates prices directly with customers; and
- septic tank effluent disposal scheme (STEDs) customers:
  - a septic tank is maintained by the customer, including desludging, and liquid waste is removed by TasWater, with schemes currently operating at Beauty Point, South Arm (Blessington Street), Bronte Lagoon and Granville Harbour (see Section 12.9.4 of this Final Report for further details on STED schemes).

TasWater has proposed retaining the same customer classes for the third regulatory period. These customer classes have been recognised since the first regulatory period, with the only refinement being the separation of category 2 trade waste customers into three sub-categories approved as part of the 2015 investigation. The Economic Regulator identified that STEDs were missing from TasWater's proposed Price and Service Plan for the third regulatory period and, following confirmation from TasWater that it intended to continue operating a small number of such schemes, requested that information on STEDs be included.

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

*The Economic Regulator requires TasWater to include details about STED customers in its final Price and Service Plan.*

*The Economic Regulator also approves the customer classes TasWater has proposed for the third regulatory period.*

## 12.9 Fixed charges

TasWater's proposed fixed water and sewerage charges are detailed in the following sections.

### 12.9.1 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 second regulatory period, TasWater proposed setting fixed water charges based on the size of a property's metered water connection.

TasWater stated that since all connections share (or can potentially share) in the benefits of its infrastructure, cost reflective prices represent the share of the fixed costs of acquiring and maintaining water infrastructure each connection (or potential connection) can enjoy (or potentially enjoy).

TasWater proposed to allocate fixed prices based on connection size. The size of water connections directly affects the costs of network infrastructure. Larger water mains and more pumping capacity are required to service the water flows able to be drawn by larger connection sizes.

Water connection sizes also give an indication of the different water use potentials of different customers. The different water use potentials are a factor contributing to the design of water storages.

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. Table 12.1 outlines the multipliers relating to water connection size.

The Economic Regulator considers TasWater's proposal to base fixed water target tariffs on connection sizes is appropriate as it reflects potential water demand upon a 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.*

In its proposed PSP for the third regulatory period, TasWater noted its intention to maintain its current approach to the imposition of service charges. That is, TasWater proposed that vacant land within its serviced land boundaries continue to be levied a service charge. TasWater proposed that the service charge for water continue to be equal to the fixed water charge for 20mm connections. Further information on TasWater's proposed service charges can be found in Chapter 4 (Section 4.10.3).

Table 12.1 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

### 12.9.2 Fixed water charge (limited service)

As was the case for the second regulatory period, TasWater has proposed the application of a ten 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 asked TasWater to explain how the ten per cent discount was derived, including any evidence or data to justify the proposed percentage discount.

TasWater stated that the range of customer scenarios that make up limited water service customers means that it is not feasible to quantitatively estimate the fixed costs to supply this specific group. Rather, TasWater provide what it considers to be a reasonable discount to reflect the reduced level of service received, but does not encourage increased demand for these types of connections. TasWater stated that while it did not specifically consult on the current level of discount in its customer engagement, customers did not raise any issues with the level during the second regulatory period.

The Economic Regulator considers 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 (see Section 12.10.3 of this Final Report for further discussion on this issue).

***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 third regulatory period.***

### 12.9.3 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 potential need for the service requires a regulated entity to build capacity into its network to meet peak supply requirements.

As for standard water charges, 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.

The Economic Regulator asked TasWater to justify its proposal to impose a fire service charge based on 25 per cent of the fixed water target tariff. TasWater stated that many customers across the state, particularly commercial and industrial customers, have a water service provided to their property to support a sprinkler system or private fire hydrant in the event of fire. This may be combined with the standard potable service, or in addition to it.

In both the first and second regulatory periods, fire service charges were levied to reflect that the need for the service requires TasWater to build capacity into its network to meet peak supply requirements. Except for dedicated fire services, these should not be directly metered connections and are not often called upon. The fire service charge for the third regulatory period is proposed to be equivalent to 25 per cent of the relevant target fixed water charge to take account of the fact that the service is infrequently called into use.

TasWater stated that during customer engagement for its proposed PSP, its individual discussions with major customers and peak bodies showed general support for the current fire service charge arrangement. TasWater stated that it had discussions specifically with the University of Tasmania, Nekon Pty Ltd, Old Woolstore Hotel and the Property Council of Australia (Tasmania).

TasWater has advised that all fire service customers will be on target by the start of the third regulatory period.

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.

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

A submission from Mr Bob Harder in response to the Economic Regulator's Draft Report raised concerns about fire service charges. Mr Harder's submission notes that TasWater has advised him that it sets its fire service charges to recover the additional costs it incurs in providing these services. Mr Harder explains his particular circumstances and cites a number of reasons why he believes that the cost of providing fire services in this instance are not as high as TasWater's prices suggest.

#### 12.9.3.2 Economic Regulator's decision

Having considered Mr Harder's argument, the Economic Regulator's view is that his situation is primarily a legacy issue resulting from historically inconsistent practices and standards for the installation of fire hydrants across Tasmania. Mr Harder is paying for a service installed many years ago that is potentially no longer required. The Economic Regulator acknowledges Mr Harder's concerns but notes that the need and specifications for fire hydrants are not matters on which it has the expertise or authority to comment.

Within the remit of its responsibility, however, the Economic Regulator does not believe that Mr Harder's particular situation constitutes a reason for it to change its Draft Report decision on TasWater's proposed fire service charges for the third regulatory period. That is, the Economic Regulator approves TasWater levying 25 per cent of the fixed water target tariff for fire services.

***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 third regulatory period.***

#### 12.9.4 Fixed sewerage charge (STEDs)

TasWater operates a small number of Septic Tank Effluent Disposal schemes (STED) around the state (Beauty Point, South Arm (Blessington Street), Bronte Lagoon, Granville Harbour) that take only the liquid waste from customers' septic tanks. Customers manage and maintain their own septic tanks, including desludging.

Under the *Building Regulations 2016* existing septic tanks are required to be de-sludged at least every three years or other period as directed by the relevant local council.

As part of the 2015 price determination investigation, the Economic Regulator approved the discounted price for sewerage services of 0.9 ET 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. The Economic Regulator considered that this approach is appropriate in light of the lower costs to TasWater of providing this particular service.

For the third regulatory period TasWater is proposing that a property connected to a STED scheme will have an ET rate of 0.7 of the full fixed sewerage target tariff to account for owners having to meet the costs of their septic tank being de-sludged every three years.

***The Economic Regulator approves TasWater's proposal to charge STED customers 70 per cent of the fixed sewerage target tariff for each year of the third regulatory period.***

#### 12.10 Variable charges

The Pricing Regulations specify that the 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 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 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, 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 proposed 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 PSP.

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.

### **12.10.1 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 third regulatory period, TasWater has proposed that target variable water charges continue to be set on a similar basis to that used for the second regulatory period. TasWater proposed that the target variable price increase by 4.6 per cent. On that basis, TasWater proposed a variable water charge of \$1.07 per kL in 2018-19.

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

### **12.10.2 Extent of fixed costs recovered through variable charges**

The PSP Guideline stated that the Pricing Regulations specify that water prices must provide for efficient two-part, cost-reflective pricing.

Additionally, 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.

The Guideline stated that where TasWater proposes levying a variable charge greater than the cost of delivering water, or removing sewage, TasWater must identify, quantify and justify the other costs to be recovered through variable charges in its proposed PSP.

In its proposed PSP TasWater is not proposing to change its approach to fixed and variable charges for the third regulatory period. TasWater stated that, while it considers approximately 15 per cent of its water costs to be variable, it seeks to recover approximately 30 per cent of its water revenue through the variable charge.

TasWater acknowledges that the benefits of aligning the variable costs with the variable price theoretically include:

- an efficient price signal whereby customers face a price signal that reflects the cost of supplying water. This will theoretically result in an optimally efficient level of water use; and
- lower demand risk as any variation in actual demand relative to forecast will impact on costs and revenue in an offsetting manner.

However, for the third regulatory period, TasWater considers it appropriate to retain the existing split between fixed and variable prices noting that its estimate of variable costs is based only on short run variable costs. TasWater stated that regulators typically allow variable prices based on long run marginal costs (LRMC) which are normally higher. Long run marginal costs include a portion of the costs of future system augmentation needed to meet increasing demand. TasWater stated that, since a significant portion of its proposed capex over 20 years has a growth driver, a higher variable charge may result in lower water use growth and defer some capex.

TasWater stated that, during consultation for its proposed PSP, customers expressed a desire for the variable charge to be a higher proportion of the total bill relative to the fixed charge. Any reduction in the variable charge would be counter to customers' preferences and would also create volatility in the price path between the second and third regulatory periods.

The Economic Regulator asked TasWater to explain what else is included in the variable charge given the proposed PSP includes only a general discussion that the variable charge is higher than it would be if it was based purely on variable costs.

In response, TasWater stated that the variable charge was derived by increasing current charges at 4.6 per cent based on community consultation and reflects a general acceptance of the prevailing tariff structure. The gap between variable costs and the variable revenue does not reflect any particular cost types.

TasWater stated that the gap between cost-reflective and target variable prices is \$0.49 per kL in 2018-19. Based on forecast demand of approximately 60 GL, this results in a revenue gap of \$29 million. However, since TasWater forecast its regulated revenue to be less than its calculation of the statutory revenue limit it considered that there would be no over-recovery overall.

### **12.10.2.1 Issues raised during consultation on the Economic Regulator's Draft Report**

The Tasmanian Council of Social Service (TasCOSS) stated in its submission on the Draft Report that a customer using 200 kL per annum in 2018-19 would pay a total of \$1 265 per annum based on a fixed water charge of \$357; a fixed sewerage charge of \$659, and a variable charge of \$221. This results in the water usage component to be 17 per cent of the total water and sewerage bill.

TasCOSS stated that one advantage of this structure is that it provides TasWater with a stable and predictable revenue. A disadvantage is that the relatively high proportion of fixed to variable costs makes it difficult for households to save money by reducing their water usage.

TasCOSS argued that the proposed approach mutes the price signal to consumers and works against water conservation. TasCOSS stated that people would benefit if they could exercise more control over the price they pay for water services by adjusting their use. TasCOSS recommends a rebalancing of the fixed and variable costs to enable consumers to have more control over the costs of the water they use.

The Pricing Regulations 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, Regulation 16(6) outlines circumstances where states the amount of a variable charge can be greater than the cost of delivering water or removing sewerage (see Section 12.10 of this Final Report).

The Economic Regulator is therefore limited to its capacity to approve variable prices above variable costs. It is not consistent with the legislation to increase the variable charges above variable cost for the purpose of addressing affordability concerns.

Nevertheless, the Economic Regulator has provided some discussion below on rebalancing fixed and variable charges.

There have been many studies in Australia and overseas examining the price elasticity of demand for residential water, ie how responsive is the quantity of water demanded to changes in price.<sup>82</sup> The vast majority of the studies show that price elasticity of demand is inelastic meaning that the percentage reduction in the quantity of residential water demanded is less than the percentage increase in price.

A study by the Independent Competition and Regulatory Commission (ICRC) for separately metered standalone residential houses,<sup>83</sup> produced an estimate of price elasticity of -0.14 suggesting that a ten per cent increase in the marginal price of water would lead on average to a 1.4 per cent reduction in household water consumption. The paper concluded that such a low elasticity mitigates against the use of price as a tool to manage water demand in the ACT. The study also found that household size and household income both have a positive effect on water consumption with the number of people in the household having a larger impact than income.

Worthington *et al* (2006) estimated the determinants of water demand in Brisbane, Australia.<sup>84</sup> Unlike the Inclining Block Tariff approach in the ACT, Brisbane has had two part pricing without free water allowances since 1997.<sup>85</sup> The study estimated short run price elasticity of demand of between -0.51 and -0.59 and a long run price elastic of demand of between -1.17 and -1.44.

Grafton *et al* (2009)<sup>86</sup>, in analysing residential water demand data across various countries found that, for all ten countries, price elasticity of demand is inelastic, but ranges from a low of -0.33 for Norway to a high of -0.88 for Italy with an average across the entire sample of -0.56.

The Productivity Commission (2011)<sup>87</sup> in its analysis of utility billing data and Census collection district characteristics found that low income households appear to have less discretionary water use or fewer means and/or less preparedness to invest in water conservation measures than high income households. As a result their usage is less sensitive to water restrictions and price increases than that of high income households.

Despite these types of results in Australia and internationally, there is an ongoing debate on the effectiveness of using water prices to achieve policy objectives. Some argue that the low price elasticity results suggest that prices are an ineffective tool to help households reduce their water bills or to influence households to conserve water during drought. Others such as the Productivity Commission suggest that the elasticity, while inelastic, is sufficiently high for prices to be used to signal the scarcity value of water during droughts to avoid the need for expensive investments to augment water supplies.

The Productivity Commission argues that while studies show that demand for water is price inelastic, price elasticity can become more elastic with more frequent customer billing; wider rollout of households with water meters; consumer education on the tariff structure; simpler tariff structures; and replacing permanent water restrictions with flexible pricing to signal the scarcity value of water during droughts to avoid the need for expensive investments to augment water supplies.

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82 See *Technical Paper 1 Price elasticity of water demand in the ACT, Tariff Review 2016*, by the Independent Competition and Regulatory Commission, section 2.4 for numerous examples of studies that estimate the determinants of the demand for water.

83 Independent Competition and Regulatory Commission, *Technical Paper 1 Price elasticity of water demand in the ACT, Tariff Review, 2016*.

84 Worthington, A., Hoffman, M. and Higgs, H. *Urban water demand with fixed volumetric charging in a large municipality: the case of Brisbane, Australia*, Griffith University, Australian Journal of Agricultural and Resource Economics, 2006.

85 Inclining block tariffs are where the price increases as successively higher blocks of water are consumed within a billing period. The first block tends to be set at or below LRMC which aims to provide an amount of essential water at low cost to assist low income households. Subsequent blocks are set at or above LRMC to provide incentives for water conservation.

86 Grafton, R. Quentin & Kompas, Tom & To, Hang & Ward, Michael B., *Residential Water Consumption: A Cross Country Analysis*, Australian National University, Environmental Economics Research Hub, 2009.

87 Productivity Commission, *Australia's Urban Water Sector, Report No. 55, Final Inquiry Report*, Canberra, 2011.

Advocates of Inclining Block Tariffs argue that they provide low income households with affordable essential water use with a low fixed charge and low variable charge for essential use and promote water conservation by charging high water users much higher variable prices when consumption is greater than the (deemed) essential amount.

The Economic Regulator was unable to find any Tasmania-specific water demand studies. It is, therefore, not clear how Tasmanian customers might respond to a re-balancing of the fixed and variable charges. Nevertheless, the available evidence does show that the demand for water is price inelastic and increasing the variable charge well above marginal costs (with associated lower fixed charges) or using Inclining Block Tariffs, while intuitively appealing, can disadvantage low income households. Large low income households in particular may be disadvantaged if the relatively high amount of use is non-discretionary and the fixed charge is not reduced sufficiently to counter the higher variable charge. Large low income households may have limited capacity to purchase and install water efficient appliances.

In Tasmania, under the *Residential Tenancy Act 1997*, landlords can pass on the variable charge component of the water bill to tenants. The landlord as property owner pays the fixed charges. Any large increases in the variable charge and reductions in the fixed charge could adversely affect tenants unless rent is reduced to reflect the lower fixed charge. Tenants may also be constrained as to how much water use they can reduce due to low discretionary use; the use of landlord provided washing machine or water fittings; or low incomes making the purchase of water efficient appliances unattainable. Assuming no change in rent, the landlord would receive a windfall gain.

As mentioned in the Draft Report, setting variable charges at levels above variable 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.

In multi-unit dwellings or strata title schemes where individual units or lots are not metered and the volumetric component is split evenly among residents, any further loading of the variable charge would increase existing cross-subsidisation.

The Productivity Commission recommends not adjusting prices to achieve social policy objectives. The Commission stated that if governments wish to pursue distributional objectives such as supporting low-income consumers they should do so at least cost. In contrast to the perverse inefficiencies and inequities generated by manipulating prices to improve affordability outcomes governments have other measures available to them that are more efficient, flexibly targeted and transparent.

Also, depending on tariff design, such a change could adversely affect TasWater's revenue and jeopardise improvements to regulatory compliance.

### **12.10.2.2 Economic Regulator's decision**

The Economic Regulator has decided not to change its Draft Report proposal. It has made this decision due to:

- The Economic Regulator is limited to its capacity to approve variable prices above variable costs. It is not consistent with the legislation to increase the variable charges above variable cost for the purpose of addressing affordability concerns.
- Setting the variable charge at around \$1.00 per kL, which is already significantly higher than SRMC, sends a price signal to customers so they can choose to modify their water consumption and enable some demand driven investment to be deferred. It also allows the imposition of a fixed charge sufficient for TasWater to recover its costs, which are largely fixed.

- The Economic Regulator is not aware of studies regarding how Tasmanian households might react to a rebalancing of fixed and variable charges. Even without Tasmania-specific studies to draw conclusions from, the available evidence suggests that water demand is price inelastic and it is not clear that all low income customers would be better off under such a scenario.

*The Economic Regulator approves TasWater continuing to recover some fixed costs through variable charges for the third regulatory period.*

### 12.10.3 Variable water charges (limited service)

TasWater did not include any information on the level of discount to limited water quality customers in its proposed PSP. The Economic Regulator requested information from TasWater on the level of discount and a justification of the level of discount.

As approved by the Economic Regulator for the second regulatory period, TasWater proposed 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 asked TasWater for further detail on how the level of discount was determined. TasWater stated that the components of the variable water supply opex related to treatment (materials and services, chemicals and power) amounted to \$17.8 million in 2015-16. This is approximately 20 per cent of the total 2015-16 water supply opex of \$90.8 million. The proposed discount for limited water quality customers reflects this percentage.

The Economic Regulator considers that TasWater's proposed approach is appropriate given that it costs less to supply limited quality water to a property.

In its Draft Report, the Economic Regulator considered that TasWater's proposed 20 per cent discount for limited water quality on the variable rate was appropriate.

#### 12.10.3.1 Issue raised during consultation on the Economic Regulator's Draft Report

In her submission on the Draft Report, Ms Emily Devine believes that TasWater's pricing for services that are not fit-for-purpose, ie a permanent boil water alert, was unreasonable and did not reflect the inconvenience and cost to customers.

The Economic Regulator acknowledges that in many circumstances, the 20 per cent discount applied may not reflect the full cost to customers. However, TasWater's *24 Glasses* project<sup>88</sup> has the objective of removing all boiled water alerts in Tasmania, which includes Judbury where Ms Devine lives, by the end of August 2018.

Upon completion of the project, Ms Devine's immediate water quality issues should be resolved and a limited water quality discount should not be required for any customer past August 2018.

#### 12.10.3.2 Economic Regulator's decision

Considering the issue raised by Ms Devine the Economic Regulator has determined that the minimum limited water quality discount should be 20 per cent.

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88 <https://24glasses.com.au/> (accessed 16 April 2018).

***The Economic Regulator approves TasWater's proposal to charge limited water quality customers 80 per cent of the variable water target tariffs for each year of the third regulatory period.***

## 12.11 Equivalent Tenements

The Pricing Regulations require 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 using the fixed charge to cover costs associated with the treatment and disposal of domestic wastewater.

TasWater applies fixed costs for sewerage services across all customers based on their likely demand on the sewerage system. The likely demand on the system is determined as a ratio of the equivalent tenements (ETs) assessed for each property. An ET is an approximate measure of the load (or demand) a property places on the sewerage system relative to the average discharge of a standard residential dwelling. Generally, one ET is applicable for an average residential property under dry weather flows.

This average rate forms the basis for calculating the ET rates for other types of properties depending on their differing impacts on the sewerage system. A customer's fixed charge for sewerage services increases proportionally with the ET assessment. If a property places twice as much load on the sewerage system as an average residential property, its target tariff will be twice the standard sewerage service charge (two ETs).

ET property types are categorised as either residential or non-residential, with the majority being residential on standard allotments. TasWater's current and proposed PSPs consider all houses, units, flats and apartments as standard occupancy properties. Where a lot is classified as multi-residential (ie more than one residential dwelling is located on a single allotment), the number of ETs for that lot is multiplied by the number of dwellings. For non-residential property types, different rates apply depending on the industry and the property type. Property types include accommodation, business (excluding food preparation), meal preparation, food manufacture, metal processing and manufacturing, entertainment, sporting/spectator facilities, community facilities and other.

TasWater also considers property attributes such as building and land size, occupancy rates and whether a property has multiple uses (eg shopping centres) when determining an ET rate per unit, with units varying depending on the property type.

### 12.11.1 ET method for the first and second regulatory periods

For the first and second regulatory periods, the previously regulated entities and TasWater calculated fixed sewerage charges using the ET methodology. While application of the ET method has progressed considerably since the commencement of water and sewerage reform in Tasmania, further work could help improve transparency, understanding and accuracy of measurement in this area.

As part of the first pricing investigation, the previously regulated entities proposed determining sewerage charges based on assessed ETs and the method contained in the Water Services Association Australia (WSAA) Sewerage Code. However, ETs had not been determined for all customers at that time. The Economic Regulator approved this approach 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 were to transition to the determined ETs in line with the proposed price constraints.

During the first regulatory period, it became apparent that there were differences between the previously regulated entities in terms of the application of price caps, ET methods and accompanying policies. It also became apparent that the ET method was not well articulated and, therefore, customers did not fully understand the basis of, and rationale for, the method.

As part of the second pricing investigation, TasWater was required to describe and justify its intended ET method, including how it would apply it to different customer types and how it intended to transition ET prices while managing customer impacts through to the end of the transition period (1 July 2020).

The Economic Regulator approved TasWater's proposal to apply its ET method in determining fixed sewerage charges, with the exception of caravan parks. Concerns arose during consultation that the ET method proposed at the time would not provide an accurate estimate of the likely demand each caravan park would impose on the sewerage system, given the diverse range of facilities and services they offer. Following further consultation, TasWater developed an alternative approach to determine ETs for caravan parks based on the proportion of water consumed and discharged to the sewerage system. TasWater considered that this alternative approach would be simpler to administer and would result in more cost reflective outcomes. The Economic Regulator approved TasWater's approach to transitioning sewerage customers to target tariffs based on their respective number of ETs.

However, the Economic Regulator was concerned about the lack of transparency surrounding the ET method. TasWater had explained that it based its ET method on the WSAA Sewerage Code and information released by the NSW Water Directorate<sup>89</sup>, the *Section 64 Determinations of Equivalent Tenements Guidelines*, adjusted to reflect Tasmanian circumstances. The Economic Regulator noted that while TasWater had provided a detailed schedule of ET rates, it had not provided a clear explanation of the method it had used to calculate the various ET rates to apply to different industries and property uses. The Economic Regulator also noted that this was particularly an issue given that the supporting basis for TasWater's approach (ie information published by WSAA and the Water Directorate) was available by subscription only to members of those bodies.

Consequently, the Economic Regulator required TasWater to amend its final PSP for the second regulatory period to include a schedule detailing the ET rates to apply to different industries and property uses, and a clear explanation of the method used to calculate them. TasWater was also required to justify any departures in its ET method from the schedules contained in the NSW Water Directorate's Guidelines and to publish any documentation that that it was intending to rely on but was not publicly available.

### 12.11.2 Proposed ET method for the third regulatory period

In its proposed PSP for the third regulatory period, TasWater proposed continuing the use of a fixed charge to cover the costs of sewerage services. It indicated that implementing a variable charge as an alternative would require meters to be installed for every property and it did not consider this to be a priority in terms of capex or likely to provide a net benefit. It also proposed continuing its existing ET method.

TasWater proposed that vacant land within its serviced land boundaries continue to be levied a service charge. TasWater proposed that the service charge for sewerage continue to be 60 per cent of one ET fixed sewerage charge. Further information on service charges is provided in Chapter 4 (Section 4.10.3 of this Final Report).

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<sup>89</sup> The Water Directorate is a water and sewerage industry organisation that provides independent advice and direction to members on technical issues. Membership is open to councils and local water utilities that deliver water and wastewater services across regional and rural NSW.

The Economic Regulator's PSP Guideline required TasWater to justify and describe how it would apply its ET method, explain how it had determined the number of ETs for each property type and justify that the resultant ETs were cost reflective. TasWater was also required to include a schedule of proposed ETs for different industries and property types.

The Economic Regulator notes TasWater's planned continuation of a fixed charge to cover the costs of sewerage services and intends approving its proposed continuation of the ET method to estimate the load placed on the sewerage system by each connection. It notes that TasWater's proposed PSP includes a table of proposed ETs for different industries and property types, as well as a table broadly describing proposed adjustments to ETs from the second regulatory period.

TasWater indicated that its ET method for the third regulatory period is underpinned by the NSW Water Directorate's Guidelines (2017), supplemented by former corporation information and WSAA Sewerage Code related documents to account for local differences, reduce administrative complexity, ensure fairness or respond to customer concerns. The Economic Regulator notes that the 2017 version of the NSW Water Directorate's Guidelines is available for purchase online.

TasWater indicated that the process for calculating ETs involves the following:

- Ascertaining the property type (such as residential, accommodation or community facilities) and associated property attributes (such as number of beds, number of students, gross floor area or number of toilets or showers) using combined data sources such as site visits, direct customer contact, Google maps and local knowledge.
- Attributing one ET to all identified standard residential customers as a default.
- Identifying customers who have a property within serviced land that has no connection to TasWater's sewerage infrastructure, but has the ability to connect, and applying a rate of 0.60 ETs to residential customers in this situation.

The Economic Regulator notes that public access to the resources forming the basis for TasWater's ET method is still restricted. Appendix 9 of this Final Report compares ET rates for each property type for the second and third regulatory periods, and describes any changes. It shows, for example, that TasWater has proposed an alternative method of ET calculation for the 'Office' property type (using annual water consumption data and a discharge factor) and that changes are also proposed for other property types including 'Car wash', 'Boarding house' and STED scheme customers.

After submitting its proposed PSP, TasWater provided further advice to the Economic Regulator which showed proposed ET rates for property types that differ from those contained in the NSW Water Directorate's 2017 Guidelines with a justification for each departure (see Appendix 10 of this Final Report). TasWater noted that the ET rates in the NSW Guidelines include trade waste and that TasWater has adjusted its proposed rates to account for this, where appropriate. TasWater also noted that for property types where the NSW Guidelines do not provide an ET rate, TasWater's has based its proposed rate on either the WSAA Sewerage Code, supplementary information or a local assessment.

As indicated, as part of the second pricing investigation, the Economic Regulator required TasWater to justify any departures in its ET method from the NSW Guidelines. A table outlining TasWater's reasons for these variations is currently available on TasWater's website. The Economic Regulator also requires TasWater to publish this information for the third regulatory period.

The Economic Regulator also requires TasWater to publish any documents that are not publicly available, where they form the basis of its ET method.

Where customers face a material bill increase due to a change in their number of ETs following a reassessment, the Economic Regulator understands that TasWater's approach is as follows:

- meet with the customer or contact the customer by phone to advise of the outcomes from the reassessment;
- write to the customer advising of the changes that will be made from the next billing period; and
- provide details of flexible payment plans and hardship arrangements.

The Economic Regulator accepts TasWater's approach to dealing with customers facing a material bill increase following an ET reassessment.

TasWater's proposed PSP for the third regulatory period conceded that its ET method has limitations. TasWater indicated that it plans to conduct a review of alternative sewerage charging methodologies operating in Australia to ascertain whether these might be applicable in Tasmania. This review will include stakeholder engagement, take into account the findings of other studies<sup>90</sup> and inform a revised sewerage charging approach as part of its proposed PSP for the fourth regulatory period. The Economic Regulator supports this review, as it may lead to an improved understanding of how to measure the load different property types place on the sewerage system more accurately, a more accurate charging approach and greater transparency. The Economic Regulator requires that TasWater liaise with stakeholders and the Economic Regulator during the review, and publish its findings when available.

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

Three submissions in response to the Economic Regulator's Draft Report commented on the issue of ETs. The relevant submissions were from Nekon, Mr R Manson and Mr Kevin Close.

Nekon raised concerns that the average annual residential water consumption figure that TasWater bases its ET calculations on is inaccurate. TasWater uses an estimate of 200kL, whereas Nekon points out that according to the Bureau of Meteorology's *National performance report 2015–16: urban water utilities* (NPR) the annual average residential water consumption for TasWater customers was 176 kL (in 2016-17, this figure was 178 kL). Australian urban water utilities, including TasWater, provide the data informing the NPR. This data is also subject to independent audit and verification on a three yearly cycle.

The NSW Guidelines, on which TasWater bases its method of calculating ETs, recommends using a five-year average to estimate average residential water consumption. The average annual residential water consumption for TasWater's customers over the past five years is 177.4 kL. The Economic Regulator therefore does not dispute Nekon's claim that TasWater's estimate of 200 kL as the average annual residential water consumption in Tasmania is inaccurate.

However, Nekon considers that TasWater uses ETs to estimate customers' actual, rather than relative, load on the sewerage system. In fact, TasWater uses ETs as a basis for setting fixed sewerage charges by calculating how much sewerage a business discharges to the sewerage system in comparison to an average residential household. Given that TasWater does not ask its customers to pay variable sewerage charges, the estimated volume of an ET is relatively unimportant.

The Economic Regulator's view therefore is that while Nekon has raised a valid point and TasWater's current ET consumption figure is not accurate, this discrepancy does not have a significant impact on the fixed sewerage charges paid by TasWater customers.

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<sup>90</sup> TasWater refers to the *Inquiry into Reform Options for SA Water's Drinking Water and Sewerage Prices 2014*, undertaken by the Essential Services Commission of South Australia, available at: [www.escosa.sa.gov.au/](http://www.escosa.sa.gov.au/)

Nekon also raised concerns that TasWater's current method for estimating business ETs is imprecise and often leads to unreasonable outcomes. Nekon pointed out that TasWater's use of the gross floor area of a business premises to calculate the number of ETs does not properly account for the variety of different uses that even businesses of the same property type may put their premises to. It also does not consider that population densities may differ between business premises, and is difficult to adapt for dealing with multiple use premises.

Due to the flaws it sees in TasWater's current ET method, Nekon suggested that TasWater move to a discharge factor method of calculating business customers' load on the sewerage system (ie that a business customer's fixed sewerage charges be based on a certain percentage of its total water consumption). Under this model, each business property type would have a specific discharge factor rather than an ET number.

Mr Close raised one of the same points as Nekon, describing his own circumstances as an example of TasWater's current method for estimating business ETs leading to unreasonable outcomes. TasWater recently reclassified Mr Close's business premises from the 'Office' property type to the 'Factory/Warehouse/Workshop' property type. Mr Close explained that the ET factor for his premises consequently increased by 50 per cent.

Mr Close argued that, with TasWater's base ET being 200 kL, his current classification of 2.4 ETs suggests that his premises' annual water consumption is roughly 480 kL. However, he stated that the actual annual water consumption at his business premises is around 20 kL. He therefore echoed Nekon's suggestion that TasWater move to a discharge factor method of calculating business customers' load on the sewerage system.

As discussed in reference to trade waste charges in Section 4.8 of this Final Report, the Economic Regulator notes that a discharge factor model, like an ET model, is a one-size-fits-all solution in a situation where each TasWater customer faces different circumstances. Therefore, while changing to a discharge factor model of calculating fixed sewerage charges may benefit some TasWater customers, it would likely leave other customers at a relative disadvantage and would, therefore, need to be carefully considered.

Mr Manson raised concerns about the water and sewerage charges imposed on several one-bedroom units that he owns due to TasWater assessing all residential properties as a minimum of one ET regardless of the size and value of the property. Mr Manson contended that the Assessed Annual Value (AAV) system is a fairer means of determining sewerage charges than ETs, as larger and therefore generally more expensive properties attract higher charges. Owners of these properties generally have a greater capacity to pay the higher charges while the opposite applies to smaller, less expensive properties. Mr Manson suggested that TasWater should switch to an AAV basis for determining sewerage charges or reduce the ET rate for one-bedroom units.

Under the legislation, sewerage charges must reflect TasWater's costs of providing sewerage services to the customer. The Economic Regulator cannot therefore approve sewerage charges based on AAV as they are unrelated to TasWater's costs. Affordability and wealth distribution are outside the scope of the Economic Regulator's role.

In its proposed PSP for the third regulatory period, TasWater acknowledged that its current practice of using ETs to calculate fixed sewerage charges is not ideal, and that it plans to review and possibly change this practice from the fourth regulatory period onwards. TasWater will base any changes to its method of calculating fixed sewerage charges on an analysis of the methods used in other Australian jurisdictions, and on stakeholder engagement and feedback.

In its Draft Report, the Economic Regulator expressed support for TasWater's proposed review. The Economic Regulator also intends to consult with stakeholders as the review progresses to gauge their views. The Economic Regulator considers that this review may well address many stakeholders'

concerns. In the meantime, the Economic Regulator does not believe it would be appropriate for TasWater to change its method of calculating fixed sewerage charges without first conducting the relevant research and analysis.

### 12.11.4 Economic Regulator's decisions

The Economic Regulator notes that TasWater's application of the ET method has progressed considerably since the commencement of water and sewerage reform in Tasmania. However, scope remains for significant improvement. TasWater's proposed review of alternative sewerage charging methods should assist in this regard.

*Having reviewed TasWater's proposals in relation to its ET method for the third regulatory period, the Economic Regulator:*

- *approves TasWater's proposal to apply its ET method in determining fixed sewerage charges;*
- *requires TasWater to publish its justification of ET rates for property types that differ from those contained in the NSW Water Directorate's 2017 Section 64 Determinations of Equivalent Tenements Guidelines;*
- *requires TasWater to publish any relevant documents that are not publicly available, where they form the basis of its ET method;*
- *approves TasWater's approach to transitioning customers facing a material bill increase as a result of an ET reassessment;*
- *supports TasWater's proposed review of alternative sewerage charging methods operating in Australia, and;*
- *expects TasWater to liaise with stakeholders and the Economic Regulator as part of the review and to publish its findings when available.*

## 12.12 Trade Waste

Section 4.8 of this Final Report outlines TasWater's proposed trade waste charges policy.

In terms of pricing structure, TasWater's proposed trade waste prices are made up of:

- an application fee;
- an annual component;
- fees for minor and major instances of non-compliance;
- an annual site constraint fee (where applicable); and
- an annual macerator charge (where applicable).

In its proposed PSP, TasWater notes that it is intending to continue to apply the risk-based approach used during the second regulatory period to categorise trade waste customers. TasWater explains that this approach is based on the WSAA *Australian Sewage Quality Management Guideline 2012* and that it also has a Trade Waste Customer Category Guideline which outlines, in detail, the approach advocated under the WSAA Guideline. TasWater is currently reviewing its Category Guideline and intends publishing the revised version on its website at the same time that it publishes its final PSP.

*The Economic Regulator requires TasWater to publish its revised trade waste guideline at the same time that it publishes its final Price and Service Plan for the third regulatory period.*

As in the second regulatory period, TasWater is proposing categorising customers into categories 1, 2A, 2B, 2C, 3 and 4. While pricing for category 3 and 4 trade waste is unregulated, the service TasWater provides to those customers continues to be regulated. TasWater's forecast of the number of customers in each category for the third regulatory period is shown in Table 12.2.

Table 12.2 TasWater's forecast number of trade waste customers by category

Category	2018-19	2019-20	2020-21
Category 1	1 038	1 043	1 048
Category 2A	2 235	2 245	2 255
Category 2B	119	119	132
Category 2C	131	131	132
Category 3	41	41	41
Category 4	37	37	37

As TasWater is not proposing to change its approach to trade waste pricing nor the method of categorising trade waste customers, the Economic Regulator has approved the structure of TasWater's trade waste prices.

*The Economic Regulator approves the proposed structure of TasWater's trade waste prices.*

## 12.13 Developer Charges

Section 4.9.1 of this Final Report describes TasWater's proposed developer charges policy and the Economic Regulator's assessment of that policy. Table 12.3 summarises TasWater's proposed application of developer charges.

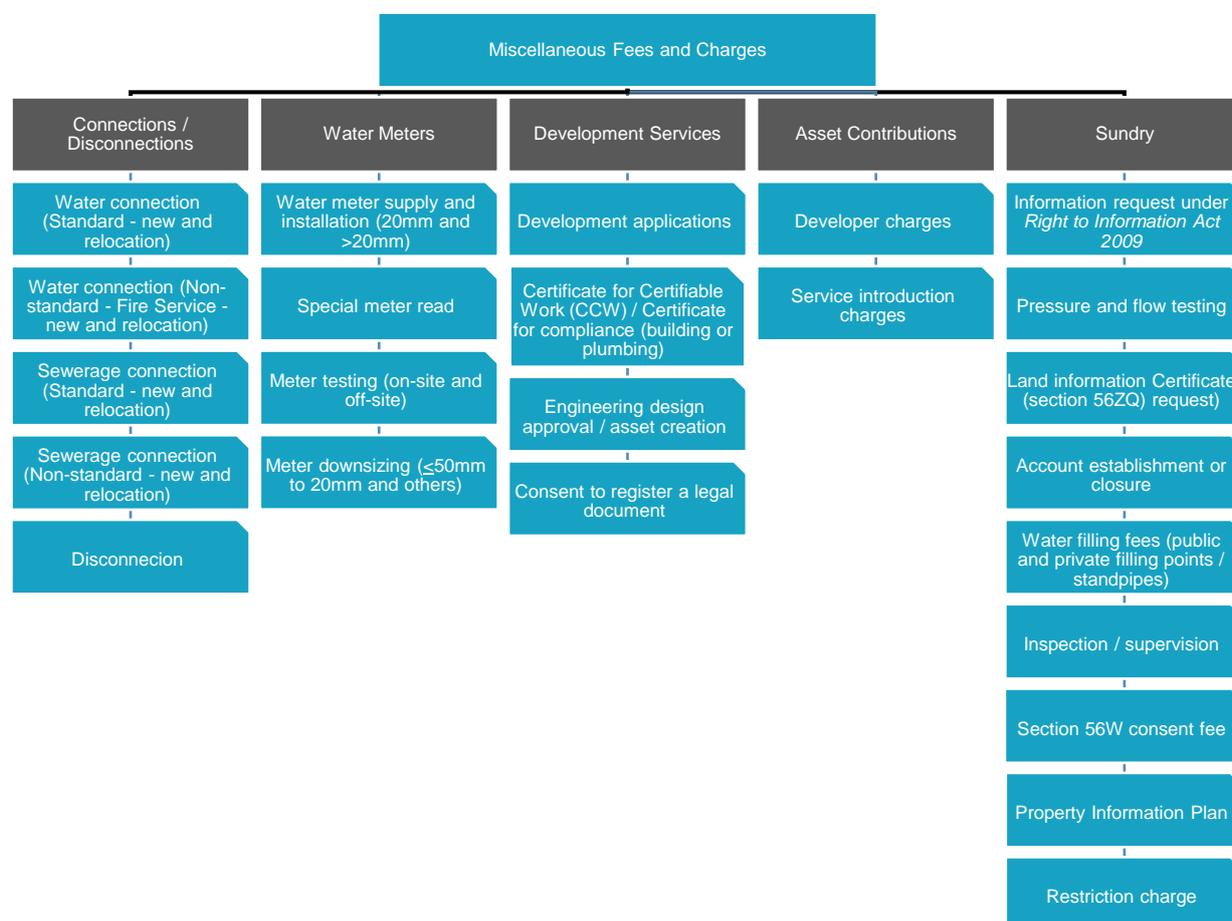
Table 12.3 TasWater's proposed application of developer charges

Description	Inside serviced land	Outside serviced land
Capacity available within existing infrastructure	No developer charges	Developer to pay costs of extension and able to access available capacity at no charge
Capacity not available within existing infrastructure	Developer to pay the costs of expansion	Developer to pay costs of extension, connection and expansion and able to access, at no charge, spare existing capacity where less than total required capacity
Isolated development	N/A	Developer to meet all costs

## 12.14 Miscellaneous services

Miscellaneous fees and charges are all fees and charges that may be charged by TasWater which are not fixed charges or variable 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 MARR and in its proposed PSP. Figure 12.1 presents TasWater's proposed miscellaneous fees and charges in diagrammatic form.

Figure 12.1 Structure of TasWater's proposed Miscellaneous Fees and Charges



Additionally, as set out in Chapter 5, for each proposed miscellaneous services fee, TasWater was required to include in its proposed PSP, the key assumptions underlying, and the forecasts of, the estimated number of transactions for each financial year of the third regulatory period.

TasWater's fees and charges for each of its proposed miscellaneous services for the third regulatory period are set out in Table 13.15 of this Final Report.

*The Economic Regulator approves TasWater's proposed simplification of its development application fees structure.*

*The Economic Regulator approves TasWater combining the Certificate for Certifiable Work/Certificate for Compliance fees and engineering design approval and asset creation services.*

*The Economic Regulator also approves the structure of TasWater's proposed miscellaneous fees and charges.*

## 12.15 Moving customers directly to target tariffs

TasWater's proposed PSP outlines a number of situations where it proposed moving customers directly to the relevant target tariff.

However, the Economic Regulator noted that TasWater's proposed Price and Service Plan did not explain the basis upon which TasWater proposed moving or transitioning customers to the target tariff.

As shown in Table 12.5, for the second regulatory period, not all customers transitioned immediately to the target price. The Economic Regulator asked TasWater to explain why, for the third regulatory period, the customers in the scenarios listed are proposed to transition immediately to the target price and why the scenario "amalgamation (property change)" was not included.

In response TasWater considered that the scenarios listed can be grouped into three categories: (1) connection, customer or property change; (2) newly discovered connection or service; (3) change in service standard.

The first category (connection, customer or property change) can broadly be defined as customers who choose to alter an existing arrangement and are informed (or have the opportunity to inform themselves) of the impact on their water and/or sewerage charges. On this basis, TasWater believes it is reasonable for these customers to transition immediately to the target price. It also ensures the rest of the customer base is not unfairly burdened with covering the revenue shortfall that would eventuate if these customers did not transition immediately to the target price.

The second category (newly discovered connection or service) includes those customers who will receive a bill for a connection or a service for the first time. These customers do not have an existing price from which they would transition. TasWater is of the view that transitional prices are a mechanism to achieve a single set of target prices by the legislated date of 1 July 2020. TasWater does not believe customers with newly discovered connections (such as customers who will receive a new or additional bill for the first time) meet the intent of the transitional arrangements (which apply to existing customers with existing bills).

TasWater stated that if customers with newly discovered connections or services have difficulty paying their accounts, they are eligible for flexible payment plans in accordance with the Code. In addition, residential customers have access to TasWater's Hardship Assistance Program as part of its Financial Hardship Policy.

The third category (change in service standard) includes those customers moving from a non-potable to a potable water supply. These customers will be liable for the full variable charge rather than a discounted rate when the change in service standard takes place.

TasWater consider that the inclusion of a scenario for amalgamation of properties is unnecessary. When customers choose to amalgamate multiple property titles under one Property Identifier Descriptor (PID) the way the property will be charged for sewerage and water services does not change. Under an amalgamation, the number of titles does not change regardless of the fact that they fall under one PID. Therefore, the number of titles will still be used in determining the number of water and sewerage charges and/or connections.

Table 12.4 Circumstances where customers will transition or be moved directly to target

Scenario	Basis of change	Target Tariff/s Applied in PSP3	Target Tariff/s Applied in PSP2	Transition to Target Tariff/s under price constraints in PSP2
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 subdivisions)	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	NA		✓
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 approves TasWater's proposal in relation to transitioning or moving customers directly to target tariff.***