



**Tasmanian Small  
Business Council**  
Uniting Small Business

# Cross-subsidies in Tasmanian Electricity Tariffs

Impacts on Small Business

Prepared for the Tasmanian Small Business Council

October 2016



**Goanna Energy**  
Consulting Pty Ltd

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## Disclaimers

This project was funded by Energy Consumers Australia (<http://www.energyconsumersaustralia.com.au>) as part of its grants process for consumer advocacy projects and research projects for the benefit of consumers of electricity and natural gas. The views expressed in this document do not necessarily reflect the views of Energy Consumers Australia.

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# EXECUTIVE SUMMARY

- Scope of Study
- Findings of Study
- Recommendations of Study

## Executive Summary

The Tasmanian Small Business Council (TSBC) has asked Goanna Energy to prepare a report on cross-subsidies in Tasmanian regulated electricity tariffs and the impact that they have on small business in Tasmania. Their request has arisen from a long standing concern that small business in Tasmania is currently subsidising other electricity tariffs. This report examines the TSBC's concerns and was supported by the Energy Consumers Australia (ECA), who provided funding for the project.

## Scope of Study

This report has been limited to assessing the cross-subsidy between the network tariffs and the retail bundled tariffs using the available public information. As a consequence, this report has not:

1. attempted to measure any cross-subsidies that may exist in the network tariffs;
2. had the benefit of intra-day consumption profiles of customer groups to measure the differences between residential and small business consumption profiles and if so, determine the existence of any cross subsidies;
3. assessed time-of-use tariffs, but was limited to single part tariffs which is utilised by the vast majority of consumers

## Findings of Study

<b>What are cross-subsidies?</b>	<p>A cross-subsidy occurs when one tariff, or group of tariffs, is subject to over-recovery of costs and the proceeds are used to subsidise under-recovered costs on another tariff. In this regard, the tariff with over-recovery is said to be the source of a cross-subsidy and that with under-recovery the recipient of a cross-subsidy. There is a standard economic test that can be applied to determine if a cross-subsidy exists (explained in Section 2.2 of the report).</p>
<b>Tasmanian electricity tariffs</b>	<p>There are a range of retail and network tariffs in Tasmania that broadly reflect different types of customer, types of use, or time related factors. Tariffs usually contain a fixed (or daily) charge and a consumption (or usage) charge. The latter's share of a bill increases with consumption. One anomaly is that the general, and most commonly applied, small business retail tariff (called T22) has two consumption based blocks (called a declining block tariff) with the first block (covering the first 500 kWh of quarterly use) charged at a rate 36 per cent higher than the second, whereas the equivalent network tariff (called TAS22) has a single block.</p> <p>Another is that the fixed charge under T22 is 8 per cent higher than for the general residential tariff, T31, whereas the equivalent network tariffs (TAS22 and TAS31) have the same fixed charge.</p>

	<p>These differences between T22, T31 and TAS22 add to small business electricity costs without apparent justification, and create distortions and a disconnect between retail and network tariffs. In our opinion, changes to remove these anomalies should be expedited.</p> <p>Whilst small business is able to enter the competitive market and by-pass regulated tariffs, the fact is that very few have done so.</p>
<p><b>How are costs allocated to electricity tariffs? Does this show that cross-subsidies exist?</b></p>	<p>Information about how Aurora allocates its costs to its tariffs and the outcome of this process is limited. This is notwithstanding that Aurora has a virtual retail monopoly. This lack of transparency is a matter of concern and makes it difficult for customers, including small businesses, to determine whether they are being charged fair prices, or whether they are cross-subsidising other customers.</p> <p>As a regulated monopoly, TasNetworks is required to undertake and publish the outcome of a cost allocation for its network tariffs that closely resembles that used in applying the test for cross-subsidies. Assuming the data are robust, this shows that expected revenue for all tariffs is less than 'stand alone' costs and greater than 'avoidable' costs, so that the definite existence of cross-subsidies is not proven. Full application of the test could still show that cross-subsidies may exist, but the information to establish this is not available.</p>
<p><b>Is small business subsidising other electricity tariffs?</b></p>	<p>In any case, both Aurora and TasNetworks acknowledge that their tariffs contain cross-subsidies and that these flow from small business consumers to residential ones, especially to (extensively used) heating tariffs with uncontrolled load (T41 for retail and TAS41 for networks). These apply to all residential consumers, regardless of income.</p>
<p><b>What is the impact of small business cross-subsidies?</b></p>	<p>As Tasmanian small businesses are a source of cross-subsidy in electricity tariffs, their electricity costs are increased and they may restrict their use of electricity as a result, thus reducing small business consumption to below the optimal level. Conversely, those who receive a subsidy, including higher income households, are encouraged by the lower prices to use more electricity than is optimal, but less than optimal levels of substitutes, such as natural gas. This distorts resources and investment within the electricity industry, within industries paying or receiving a cross-subsidy and in the Tasmanian economy. A less favourable climate for investment and jobs could result.</p> <p>Cross-subsidies can also be maintained for political, social, environmental or industry policy reasons and act as a constraint on worthwhile reform in the Tasmania electricity market (e.g., promoting beneficial competition, efficient pricing or ownership reform). They also lack transparency as they tend to be hidden in electricity prices. This can perpetuate cross-subsidies if those who pay for them can lack the information to mount an effective case for their removal.</p>

**But tariffs are changing so that cross-subsidies will be removed. The trouble is it will take a long time – up to 15 years**

It is welcome that Aurora has committed to begin a transition to greater cost reflectivity in its tariffs from 1 July 2017 through more efficient allocation of its network costs, retail costs to serve its customers and its retail margin, as well as through rebalancing its tariffs by a maximum of 1.5 per cent per annum. Until now it has been constrained from doing this by a regulatory requirement to maintain the existing relativities between its fixed and usage charges, and between its business and residential tariffs.

Similarly, TasNetworks has begun to transition to greater cost reflectivity in its network tariffs, as it is required to do under regulatory arrangements. It has proposed a transition period of up to 15 years, after initially favouring a significantly shorter period. A long transition favours recipients of cross-subsidies, but works against the interests of customers who fund them, including small business.

Neither Aurora nor TasNetworks have outlined in detail how their tariffs will move towards cost reflectivity. However, TasNetworks expects to increase its revenue from residential consumers from 55 per cent in 2016/17 to 59 per cent in 2018/19. Over the same period, revenue from business consumers is expected to decrease from 30 per cent to 29 per cent. Even allowing for the lower share of revenue received from small business, it is clearly not intended to reduce small business revenue in proportion to the increase in revenue from households.

Our analysis of changes in network tariffs over the period 2012/13 to 2016/17, suggests that tariff changes to date have been limited. For example, usage charges for TAS41 (heating) increased by 24.3 per cent over this period whilst fixed charges increased by 25.5 per cent. Over the same period, fixed charges for TAS22 (small business) increased by a similar amount to TAS41, whereas usage charges fell by only 2.2 per cent. On a more positive note, there are some signs of improved momentum as usage charges for TAS41 increased by 1.8 per cent in 2016/17, whilst those for TAS22 fell by 9.0 per cent.

**What are cross-subsidies costing small business in Tasmania?**

We examined the cost differential between small business and residential tariffs, at both network and retail levels. The picture that emerges is one of substantial differences at both levels that disadvantage small business. Annual costs for a small business are \$400 higher at typical (medium) small business consumption levels and are over \$700 more for high consumption levels. We estimate a total cost to Tasmanian small businesses in 2016/17 of around \$10.6 million.

Furthermore, differences between tariffs have hardly changed over the period 2012/13 to 2016/17, with very little progress in removing small business subsidies apparent. On the brighter side, both TasNetworks and Aurora have indicated an intention to start to remove cross-subsidies beginning on 1 July 2017. Small business should benefit from this, although the implementation timeframe is



inordinately long and few details are available about the rate at which tariffs will change.

## Recommendations of Study

1. The TSBC should advocate to the Tasmanian Government, Aurora Energy, TasNetworks and regulators for the removal of cross-subsidies in Tasmanian electricity tariffs that are detrimental to the interests of small business.
2. The TSBC should advocate on the need for cross-subsidies to be removed in a significantly shorter period of time than the 15 years proposed by TasNetworks
3. The TSBC should propose to Aurora, TasNetworks, OTTER and the AER that a timetable for the removal of cross-subsidies in Tasmanian electricity tariffs be published and that this include the rate at which cross-subsidies will be removed.
4. The TSBC should negotiate with Aurora Energy for expedited changes to its T22 tariff so that its fixed and usage components are reduced to at least the same level as T31 and to change its usage component to a single block.
5. TSBC should raise with Aurora and OTTER a concern about less than full disclosure of its cost allocation methodology and allocation of actual costs to its tariffs, noting that this makes the identification of cross-subsidies and their cost more difficult to determine. Such information should preferably be made public but, if not, it should at least be disclosed to OTTER for use in the publication of information about retail tariff cross-subsidies.
6. The TSBC could also negotiate with Aurora and TasNetworks for both entities to publish their actual cost allocations, including information that would enable the full test for determining the existence of cross-subsidies to be performed on their tariffs.
7. The need to remove cross-subsidies that are detrimental to small business could be advanced by TSBC as an additional justification for the introduction of reforms to promote greater retail competition in Tasmania and to improve the efficiency of the Tasmanian electricity industry.

Once details emerge, the TSBC should obtain further advice on whether new time-of-use and demand based tariffs introduced by Aurora and TasNetworks would be beneficial to small business consumers. If so, they could encourage their members to undertake individual assessments of the benefits (or otherwise) to them, preferably with the assistance of Aurora and TasNetworks.

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# INTRODUCTION

- Tasmanian small business electricity tariffs
- Our approach
- Report structure

# 1 Introduction

The Tasmanian Small Business Council (TSBC)<sup>1</sup> has asked us to prepare a report to them on cross-subsidies in Tasmanian electricity tariffs and the impact which they have on small business in Tasmania. Its request has arisen from a long standing concern that small business in Tasmania is currently subsidising other electricity tariffs.

We are pleased to provide this report which addresses the TSBC's concerns and to provide information and analysis to assist them in prosecuting a case on these matters with the Tasmanian Government, relevant parts of the Tasmanian electricity industry and other interested stakeholders.

## 1.1 TASMANIAN SMALL BUSINESS ELECTRICITY TARIFFS

Although small businesses in Tasmania have the right to choose which retailer they buy electricity from, in reality there is very little competition in the small business market and the government owned entity, Aurora Energy, has a dominant share of this market.

This lack of competition means that the vast bulk of Tasmanian small businesses pay regulated electricity tariffs. In particular, around 95 per cent of tariff customers are on Aurora's General Business Tariff (called T22) and they are, in turn, assigned to TasNetworks' related network tariff (called TAS22). The latter comprises mainly a distribution component related to costs in the lower voltage distribution network, as well as a smaller transmission component related to the costs of the high voltage transmission system, both of which are owned and operated by the Government owned network entity, TasNetworks, which is a regulated monopoly.

Figure 1 provides a breakdown of a typical Tasmanian small business electricity bill in terms of its different components reflecting the structure of the production, transportation and supply of electricity to small business, as well as exogenous charges covering environmental (renewable energy target, or RET) costs and the running of the National Electricity Market (NEM).

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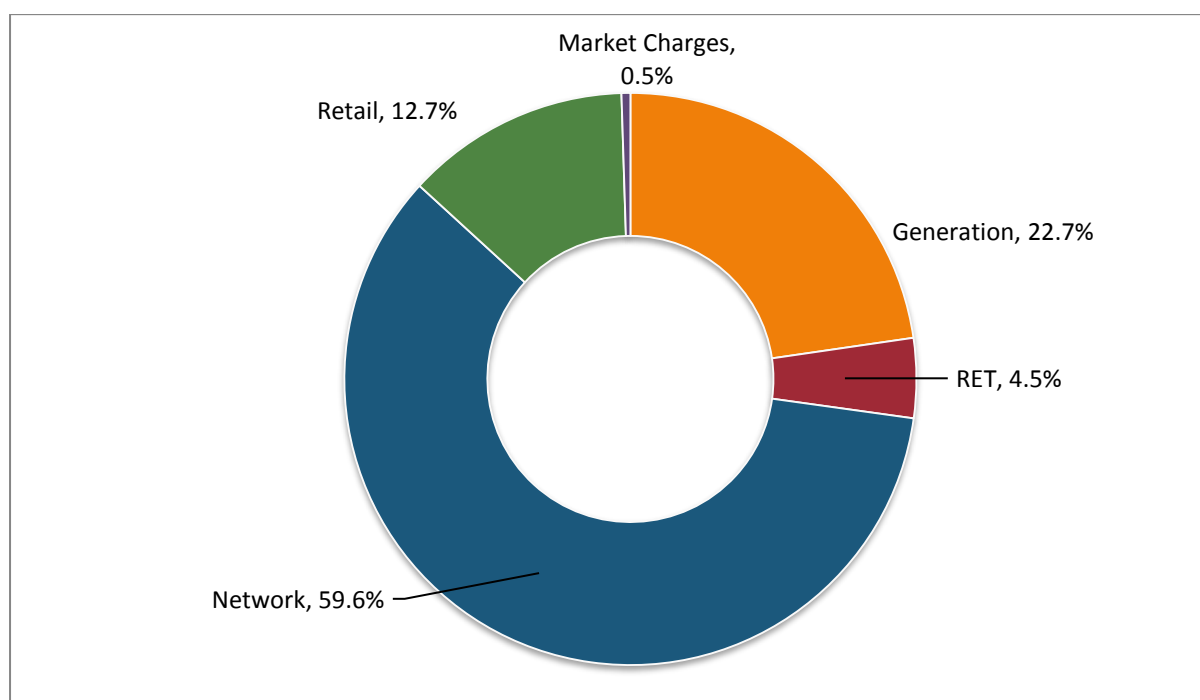
<sup>1</sup> The TSBC is the representative body on small business in Tasmania. Among the services it provides to Tasmanian small businesses is acting as an informed voice through its advocacy. For a number of years, it has taken a leading role in energy (electricity and gas) advocacy. See <http://www.tsbc.org.au/>.

As can be seen, network charges (transmission and distribution combined) account for close to 60 per cent of a retail bill, whilst retail charges represent 13 per cent. The remainder is made up of generation (the production of electricity) at 23 per cent and exogenous costs (5 per cent).

## 1.2 REPORT

We have examined the concept of cross-subsidies and their economic impacts, tested the proposition that Tasmanian electricity tariffs contain cross-subsidies and how they impact on small business and estimated some of the costs involved. We have considered cross-subsidies in the context of both retail and network tariffs.

*Figure 1: Breakdown of a Typical Tasmanian Retail Bill*



Source: Goanna Energy Consulting

Our report is structured as follows:

- First we outline what cross-subsidies are, how we can test for their existence and, in general terms, what impacts they can have (Section 2).
- Next we consider the proposition that cross-subsidies currently exist in Tasmanian electricity tariffs, with what benefits and costs, especially to small business and if this is measurable (Section 3). In this section, we also consider the available evidence on the removal of cross-subsidies and the likely timeframe.
- In Section 4, we present estimates of the costs to small business of differences in electricity tariffs and consider if these have changed over time.
- Finally in Section 5, we present our conclusions and recommendations to the TSBC.

# 2

## WHAT ARE CROSS-SUBSIDIES? WHAT IMPACTS DO THEY HAVE?

- Cross-subsidies explained
- Testing for cross-subsidies
- Impacts on small business

## 2 What are Cross-subsidies & What impacts do they have?

In this section we explain the concept of cross-subsidies, discuss their main impacts, how to test for their presence and how to measure them.

### 2.1 CROSS-SUBSIDIES EXPLAINED

The term ‘cross-subsidy’ is often used to refer to any case where the profit from providing one service is used to cover a loss incurred in providing another service. They occur when one group of users pay more than the costs of the services they receive and the surplus is used to offset the cost of services provided to other users. They may occur as an unintended result of the chosen charging mechanism or deliberately (to pursue equity or social policy objectives, for example).

In the context of Tasmanian electricity tariffs, one tariff may over-recover its costs, with the surplus being used to pay for under-recovery in the costs of another tariff.

### 2.2 TESTING FOR CROSS-SUBSIDIES

The economic literature outlines two tests for determining the existence of cross-subsidies, which are summarised below.

The first is the ‘stand-alone’ cost test for whether a tariff is a source of cross-subsidy, that is, where the cross-subsidy comes from a tariff where costs are being over-recovered – and consumers on this tariff are paying too much for their services. ‘Stand-alone’ costs are the costs that an efficient competitor would incur in offering just that tariff or group of tariffs. In definitional terms, ‘stand alone’ costs are costs that would be incurred if the firm in question were providing this tariff and no others. For example, the costs incurred if Aurora or TasNetworks were only providing electricity to small business customers.

Even though Aurora and TasNetworks do not have any competitors, this is a hypothetical test that acknowledges that, if they did, it would be possible for the competition to offer consumers a lower tariff and they would not be able to sustain the cross-subsidy, or they would risk losing these customers to the competitors.



This test comprises:

- A **lower bound**, which is the tariff's fully distributed cost (FDC) made up of the sum of its direct<sup>2</sup>, attributable<sup>3</sup> and unattributable<sup>4</sup> costs. Where the tariff's revenue exceeds fully distributed cost it **may** be a source of subsidy.
- An **upper bound** which is the sum of the tariff's direct and attributable costs, and the total of all of the firm's unattributable costs. Where the service's revenue is above this upper bound, it is a **definite** source of subsidy.

The second test is the 'incremental' cost test for whether a service is a **recipient** of cross-subsidy.

Incremental costs are the additional costs incurred by the monopolist in providing just that tariff or group of tariffs. Another way of considering incremental cost is to ask what costs would be avoided, in the long run, if the tariff was no longer offered. For this reason, they are sometimes also referred to as 'avoidable' costs. So, for example, what costs would Aurora or TasNetworks avoid if they no longer offered electricity to small businesses but did continue to offer all their remaining tariffs? Another way of looking at these is that they represent the dedicated costs associated with an individual tariff.

This test comprises:

- A **lower bound** where revenue is less than the direct costs associated with a tariff and it is a **definite** recipient of a subsidy.
- An **upper bound** where revenue for a tariff is sufficient to cover direct costs, but less than the sum of direct and attributable costs, and the tariff **may** be the recipient of a subsidy.

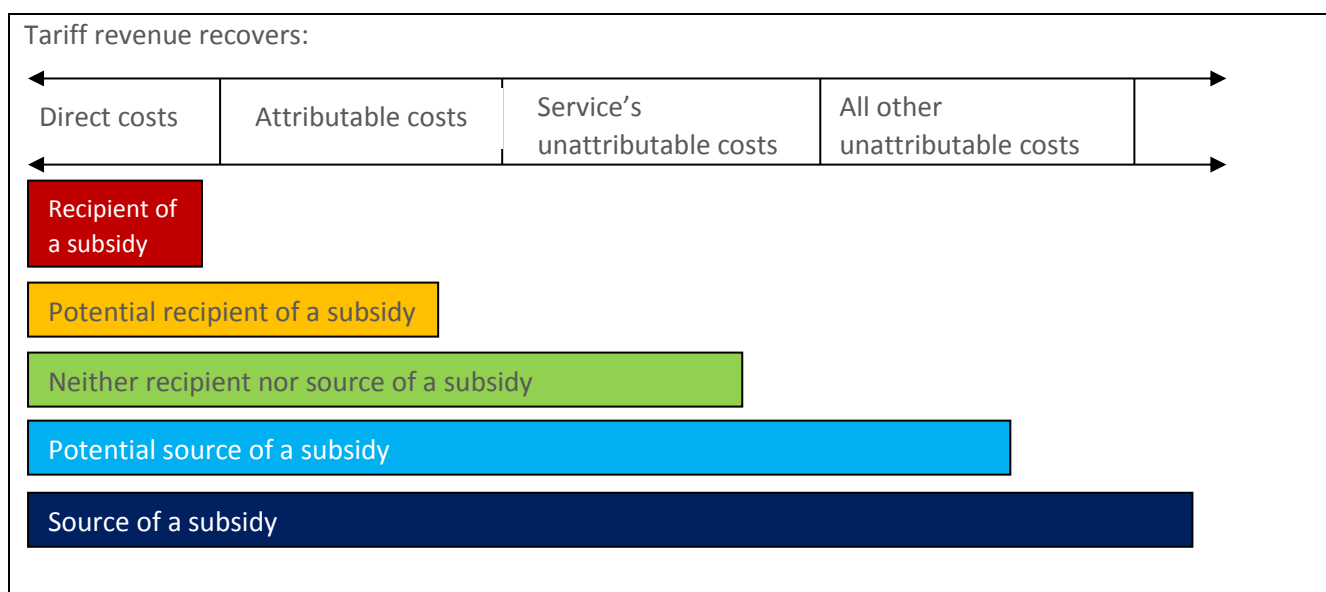
The above discussion is shown diagrammatically in Figure 2 on the following page.

<sup>2</sup> Costs that are **direct** to a particular tariff will be incremental to that tariff as they are solely associated with a particular tariff and would therefore be avoided if that tariff were no longer offered.

<sup>3</sup> A cost that is **attributable** is incremental to a tariff or combination of tariffs (i.e. if that tariff or combination of tariffs were no longer offered, the cost would be avoided). The extent to which a particular attributable cost is incremental to a particular individual tariff depends on the extent to which the business can avoid this particular cost by not providing that tariff.

<sup>4</sup> Costs that are **unattributable** are defined as being a part of a pool of common costs but are not readily identifiable (in whole or part) to any particular tariff by a separable cause-and-effect relationship. By nature, many of these costs are unlikely to be incremental to any particular tariff (for example, head office costs are unlikely to be able to be substantially reduced if an individual tariff was no longer offered).

Figure 2: Cross-subsidy tests



Source: ACCC, *Tests for assessing cross-subsidy*, June 2014.

It is worth mentioning that the upper bound of the stand-alone test appears to yield more reasonable results when it is applied to a wider group of tariffs (for example, business tariff customers as a group, compared to just the general small business tariff). This is because it is likely that a large proportion of the business's unattributable costs would not be incurred if an individual tariff (e.g. small business T22 for Aurora, or TAS22 for TasNetworks) was offered in isolation. In contrast, if a wider group of tariffs (e.g. all business tariffs) was offered 'in isolation', then a larger proportion of the business's unattributable costs would still be incurred. Thus, adding all of Aurora's, or TasNetworks' unattributable costs to the direct and attributable costs of an individual tariff (e.g. T22 or TAS22) is likely to overestimate the stand-alone cost of providing that tariff. When adding all of the businesses' unattributable costs to the direct and attributable costs of a larger group (e.g. all business customers), the overestimation is likely to reduce.

It should be noted that the application of the test for a cross-subsidy is ‘two-sided’. This is, it is not enough just to establish that a tariff is based on greater than ‘stand alone’ costs. If this is the case, it could merely indicate that the customers using this tariff are being over-charged by a business with market power with the over-recovery of revenue retained by the business. Likewise, it is not enough to show that a tariff involves less than ‘incremental’ costs, as this could be indicative of a business that is making losses on a service for commercial or other reasons but not subsidising this with over-recovery of revenue from other tariffs. To show that a cross-subsidy exists it is necessary to show that the tariff with higher than ‘stand alone’ costs is related to another tariff with lower than ‘incremental’ costs.

## 2.3 WHY SHOULD SMALL BUSINESS CARE ABOUT CROSS-SUBSIDIES?

Small business generally support an efficient and vibrant economy in Tasmania with good growth prospects, and market intervention and distortions kept to a minimum. This recognises that policies consistent with this are likely to be most beneficial to the Tasmanian small business sector in the longer term. Cross-subsidies are unlikely to be consistent with this.

Cross-subsidies between different tariffs or different users may permanently disadvantage one group relative to another. Those who pay the subsidy may restrict their use of the product, reducing desirable consumption that would have taken place if products were appropriately priced. Conversely, those who receive a subsidy may be encouraged to use too much of the product. This distorts resources and investment within the industry concerned, in this case the Tasmanian electricity industry, within the industries that are either sources or recipients of a cross-subsidy which, in turn, flows through to the Tasmanian economy. The economic efficiency of the Tasmanian economy is reduced and with it its ability to attract additional resources and investment, and provide jobs for its people.

Cross-subsidies that result from political decisions, say, to subsidise one group at the expense of another for industry policy, equity or environmental reasons have these impacts. They can also come to rely on government mandates, pressure or interventions that have the intended or unintended impact of limiting competition and preserving government ownership (even when the costs outweigh the benefits). This is because the sources of cross-subsidy are over-charged and their service providers would be susceptible to competitors offering these services at lower prices if they had free entry into the relevant market. It is also generally accepted that there are other, more efficient ways of providing assistance to groups genuinely in need of it via direct government financial support, for example.

Finally, the presence of cross-subsidies in prices, including in electricity tariffs, will often be associated with a lack of transparency. By their nature, cross-subsidies are embedded within the cost structure of a business and therefore remain largely invisible to those outside, including the source of the cross-subsidy and the broader community, as do the costs involved. The invisibility of cross-subsidies helps to perpetuate them and the economics costs they impose. For this reason, where cross-subsidies exist, their costs should be made completely transparent. This allows for better scrutiny of cross-subsidies, including by those adversely affected and the broader community.

## 2.4 SOME ISSUES IN MEASURING CROSS-SUBSIDIES

Measuring the existence of cross-subsidies and their costs requires access to relevant data. This includes the data needed to conduct the tests outlined in Section 2.2. However, the information requirements associated with measuring theoretical economic concepts, such as 'stand alone' and 'incremental' or 'avoidable' costs, can be quite demanding as businesses mostly use accounting rather than economic measures of cost, significantly increasing compliance costs. For this reason, regulators who measure cross-subsidies will often rely on accounting proxies for economic costs.

Another difficulty is that assigning FDC as direct, attributable and unattributable can become somewhat arbitrary and subject to estimation errors so that these may not accurately reflect the precise distribution of costs across tariffs.

As mentioned earlier, the narrower the distribution of costs to services such as individual tariffs, the more likely that some overestimation will creep in.

## 2.5 CONCLUDING COMMENTS

In this section, we have examined the concept of cross-subsidies and explained what they mean, how they work, how to test for them, what economic impacts they have and how they can be measured. This both sets up the discussion to follow and allows the TSBC to develop a better understanding of the economic concept of cross-subsidies and how they might apply to Tasmanian electricity tariffs. In the following section, we examine cross-subsidies in the specific context of Tasmanian electricity tariffs, especially those that may apply to small business consumers.

# ARE THERE CROSS-SUBSIDIES IN TASMANIAN ELECTRICITY TARIFFS?

- Retail Tariffs
- Network Tariffs
- Allocating Costs to Tariffs
- Evidence of Cross-subsidies
- Impacts and Issues

# 3 Cross-subsidies in Tasmanian Electricity Tariffs

This section addresses the issues of whether there are cross-subsidies in Tasmanian electricity tariffs and testing for and measuring these. Our focus is on small business tariffs, which are of most interest to the TSBC.<sup>5</sup>

## 3.1 TASMANIAN ELECTRICITY TARIFFS

We outline below the structure of electricity tariffs in Tasmania, including those that apply to small business.

### 3.1.1 RETAIL TARIFFS

There are a range of retail tariffs in place that broadly reflect different type of customer (e.g., residential, small business, medium size business, larger businesses, nursing home), type of use (e.g., space heating, hot water, off-peak, irrigation, pay-as-you-go, maximum demand) or time related factors (e.g., time-of-use, off-peak). Details of these tariffs and their current rates can be found [here](#).

Generally tariffs have two components, or parts. There is a fixed daily supply charge and a usage charge based on the metered consumption of electricity by customers. In the main, there is a single component of usage but some tariffs, including those applying to small business, have multiple components which decline with usage (called a declining block tariff). The usage component as a proportion of a customer's bill increases with consumption and the fixed component declines.

In the case of the generally used small business tariff (T22), the first block of consumption (500 kWh per quarter) is charged at a rate that it is currently 36 per cent higher than for the remaining (second block) of consumption. However, the general residential tariff (T31) has only a single usage charge, which is very similar to the rate applied to the second block of usage under T22. The fixed rate under T22 is also significantly (8 per cent) higher than that under the general residential tariff (T31).

<sup>5</sup> There may be other cross-subsidies contained in Tasmanian electricity tariffs. For example, under the current consumption based network tariffs there are some customers, such as those with solar panels, who pay less than their fair share for network services, even though the demands they place on the network at peak times may be just as great as customers without solar panels. These additional costs must be recovered from other tariffs. This issue is not covered in this report.

These differences effectively increase the electricity costs of small business. According to Aurora's website the reason for these differences are that:

*"Businesses generally place a higher load on the electricity system and require more electrical infrastructure to supply them with the electricity they need. This requires more assets and therefore comes at a higher cost."*<sup>6</sup>

However, we can see little justification for this. Aurora's argument that business requires more infrastructure and that this comes at a higher cost is difficult to reconcile with the fact that TasNetworks general small business (TAS22) and residential (TAS31) tariffs have the same rates – both fixed and usage. It is also noteworthy that TasNetworks, not Aurora, is the provider of electrical infrastructure and Aurora merely passes on these costs. In our view, Aurora needs to modify T22 to make it consistent with T31 and TAS22. That is, like TasNetworks, it should apply a single usage rate to T22 and drop its fixed and usage charges to at least the same level as T31.

### 3.1.2 NETWORK TARIFFS

Distribution level tariffs closely resemble the retail ones in structure and details of these and their current rates can be found [here](#). As with retail tariffs, there are fixed daily supply and usage components with a similar structure for the usage component. High voltage transmission tariffs are generally charged purely on a usage basis.

Unlike retail tariffs, the general small business network tariff (TAS22) has only a single usage component, as does its residential counterpart (TAS31). This creates a distortion and disconnect between charging for small business use at the network level and retail level (where a two block usage charge applies).

## 3.2 ALLOCATING COSTS TO TARIFFS

To determine individual tariff rates Aurora and TasNetworks allocate their business costs to each of their tariffs. We set out how this is done below.

### 3.2.1 RETAIL TARIFFS

Information about how Aurora allocates its costs to its tariffs and the outcome of this process is limited. This is notwithstanding that Aurora has a virtual monopoly in the Tasmanian electricity retail market, especially for smaller customers and that its retail tariffs are regulated by OTTER. Aurora could argue that the introduction of Full Retail Competition (FRC) from 1 July 2015 means that it is subject to the threat on new entrant retailers, either now or in future, and divulging its cost allocation would not be in its commercial interests.

Nevertheless, the fact that Aurora faces almost no competition means that this lack of transparency is a matter of concern. This makes it difficult for customers, including small businesses, to determine whether they are being charged fair prices or whether they are being required to cross-subsidise other customers.

<sup>6</sup> See <https://www.auroraenergy.com.au/faq/small-business/why-are-electricity-rates-different-for-business-c#faqLink199>.

However, in its *2016 Standing Offer Price Strategy*, Aurora has outlined the process it will be undertaking to allocate costs during its 1 July 2016 to 30 June 2019 regulatory period. This includes a number of measures to incrementally improve the cost reflectivity of its tariffs beginning from 1 July 2017.<sup>7</sup>

Being a retailer, a large proportion of Aurora's costs are exogenous and therefore largely outside its control. This includes network charges, generation costs, Renewable Energy Target (RET) costs and National Electricity Market (NEM) charges. These amount to 87 per cent of its costs (as shown in Figure 1).

Aurora allocates its generation, RET and NEM costs uniformly across its tariff classes. This is appropriate given that these do not generally vary across its tariff classes.

Its network costs are charged by TasNetworks and comprise 60 per cent of its costs. As explained below, TasNetworks is moving towards greater cost reflectivity in its charges, as it is required to do under the National Electricity Rules. However, until recently, Aurora has been constrained in following suite due to the terms of its *2013 Standing Offer Price Determination*, which states that:

*"Aurora Energy is required to maintain, in its standing offer prices, the relativities that existed as at 1 July 2013 between fixed and variable charges and between residential and business tariffs for the duration of the interim pricing period."*<sup>8</sup>

As Aurora points out:

*"This restriction has required Aurora Energy to apply the average movement in its total NMR [Notional Maximum Revenue] in January 2014, July 2014 and July 2015 evenly across all tariff components.*

*Consequently, 'price signals' to consumers that reflect actual movement in supply costs for particular tariffs across residential and business segments have been muted."*<sup>9</sup>

As Aurora says, this has constrained its ability to rebalance its tariffs so that they better reflect the costs associated with serving different tariff classes, including its ability to maintain consistency with changes in network charges. This has perpetuated and magnified cross-subsidies in retail tariffs.

This is an important point, as retail tariffs are ultimately what customers pay and any distortions contained therein will affect consumption decisions and ultimately have an impact back on investment decisions made in relation to electricity infrastructure and the like.

As shown in Figure 1, 13 per cent of Aurora's costs relate to its own costs as an electricity retailer. These comprise:

- The direct costs of supplying a retail tariff class, being the return on assets, depreciation and operating expenditure on assets that are directly attributable to the customers within that tariff class. These costs are avoidable.

<sup>7</sup> Aurora initially proposed beginning this change from 1 July 2016 but later changed its position to "ensure there is adequate time for these changes to be communicated to customers." Aurora Energy, *2016 Standing Offer Price Strategy*, May 2016, p. 15.

<sup>8</sup> Office of the Tasmanian Economic Regulator, *2013 Standing Offer Determination*, June 2013.

<sup>9</sup> Aurora Energy, *2016 Standing Offer Price Strategy*, May 2016, p. 15, our parenthesis.



- Shared costs of its retail operations, that is, the costs of funding and maintaining its retail operations. These costs are not avoidable for any particular tariff class.
- The costs associated with running its retail business, that is, the costs of maintaining corporate operations. They are not avoidable for any tariff class. These services would need to be maintained for the remaining tariff classes even if one of the tariff classes was no longer served.

Aurora's retail costs can be broken down into the Cost to Serve its customers and its Retail Margin. In its *2016 Standing Offer Price Strategy*, Aurora outlined that it will apply its Cost to Serve across fixed cost components of its tariffs and that it will apply its margin across both fixed and variable components. But it does not say how this will reflect the costs associated with each tariff class.<sup>10</sup>

Aurora will also be applying a 'side constraint' to its tariffs, whereby they will be adjusted upwards by up to 1.5 per cent annually commencing in 2017 and then subsequently in 2018.<sup>11</sup> This will allow the impacts of the uniform annual price increases across all its tariffs during the term of the *2013 Standing Offer Determination* to be addressed. However, it says this is likely to take two successive regulatory determinations to achieve (that is, 5-6 years). Small business would benefit from an accelerated approach and the economic inefficiencies from cross-subsidies would be removed faster.

Overall, whilst it is apparent that Aurora is, by necessity, moving towards greater cost reflectivity in its retail tariffs, the manner in which Aurora allocates its costs and the impacts on cross-subsidies is not as transparent as it could be. This applies especially to the outcome of its cost allocation to different tariffs and their relationship to its 'stand alone' and 'incremental' costs.

### 3.2.2 NETWORK TARIFFS

Being a regulated monopolist, TasNetworks is required to follow a set methodology in allocating its costs and to make this public. There are new National Electricity Rules in place that require all networks to develop tariffs that meet the Network Pricing Objective. The Objective requires that network tariffs reflect the efficient costs of providing services to customers, and are consistent with the following Pricing Principles:

- The revenue recovered from each tariff class needs to be between an upper bound, represented by the 'stand alone' cost of providing these services to consumers, and a lower bound, represented by the 'avoidable' cost if those services were not required;
- Tariffs must be based on the long run marginal cost of providing the service, taking into consideration the cost of determining this, the cost of meeting maximum demand from a tariff's consumers and any geographic differences in costs;
- The revenue to be recovered from each tariff must recover the total efficient costs of providing services in a way that minimises distortions to price signals and encourages efficient use of the network by customers;
- When setting tariffs, consideration must be given to the impact on consumers of any changes in network prices over time;
- Tariffs must comply with the National Electricity Rules and any applicable regulatory instruments, including Tasmania-specific legal requirements for pricing; and

<sup>10</sup> Aurora Energy, *2016 Standing Offer Price Strategy*, May 2016, pp 18-19. Aurora also says that for tariffs with negative margins, they will be increased to apply a positive margin (without specifying the amount) and that compensating decreases will be applied to tariffs with positive margin.

<sup>11</sup> There will be no restriction applied to tariff decreases.

- Tariffs must be designed to be able to be understood by consumers.

It is a welcome development that the National Electricity Rules now reflect these important principles and they should assist in the development of more efficient network tariffs over time, including the removal of cross-subsidies. The requirement that the revenue recovered from each tariff class needs to be between an upper bound of the 'stand alone' cost of providing services to its consumers and a lower bound of the 'avoidable' cost if those consumers did not require these services, is particularly relevant and consistent with the cross-subsidy tests outlined in Section 2.2.

TasNetworks maintain that "our tariffs meet the National Pricing Objective as they have been developed in accordance with each of the above Pricing Principles and, therefore, reflect the efficient costs of providing services to our customers."<sup>12</sup> Box 1 below sets out the process used.

*Box 1: TasNetworks' Tariff Cost Allocation Process*

TasNetworks estimate the 'stand-alone' costs for each network tariff class by calculating the total annual costs of operating its distribution network, less the 'avoidable' costs of serving other network tariff classes. This approach uses the total maximum allowed revenue as a first step, and then subtracts all costs that would be avoided if no other tariff classes were served. This is equal to the costs of installing and maintaining the shared network (which would be solely allocated to that tariff class) and the connection costs designated to that tariff class. It therefore does not include costs associated with connection assets designated to other network tariff classes. The calculation assumes the existence of the network in its current state.

The 'stand-alone' costs are estimated using a Total Efficient Cost model, which allocates the components of its maximum allowed revenue to assets, then customer groups and then its tariffs.

TasNetworks interpret the 'avoidable' cost for all network tariff classes as being the value of the connection assets for the customers within that tariff class. This is equal to the costs of financing and maintaining the connection assets designated to that tariff class. Business costs relating to operational areas are taken to be unavoidable as these service multiple tariff classes.

TasNetworks consider that:

- The direct costs of supplying each network tariff class – being the return on assets, depreciation and operating expenditure on assets that are directly attributable to the customers within that tariff class – are avoidable;
- The costs of the shared network – that is, the costs of funding and maintaining the network – are not avoidable for any particular tariff class; and
- The costs associated with running the business – that is, the costs of corporate operations – are not avoidable for any tariff class. These services would need to be maintained for the remaining tariff classes even if one of the tariff classes was no longer served.

Source: TasNetworks, *Tariff Structure Statement*, 29 January 2016, p. 61.

<sup>12</sup> TasNetworks, *Tariff Structure Statement*, 29 January 2016, p. 60.

### 3.3 EVIDENCE OF SMALL BUSINESS CROSS-SUBSIDIES IN TASMANIAN ELECTRICITY TARIFFS

Below we consider evidence for the existence of cross-subsidies in Tasmanian small business retail and network electricity tariffs, including the applicability of the normal cross-subsidy test.

#### 3.3.1 RETAIL TARIFFS

As noted in Section 3.2.1, there is no publicly available data on the allocation of Aurora's costs so the normal tests for determining the existence of cross-subsidies in its tariffs cannot be performed. However, it is clear from documents such as its *2016 Standing Offer Price Strategy* that its tariffs contain elements of cross-subsidy and that it is intending to gradually remove these, principally by allowing cost reflective changes in network charges to flow through into retail tariffs and by application of a 1.5 per cent maximum annual side constraint (annual adjustment) to its tariffs.

Comments made by Aurora also confirm the existence of cross-subsidies, that small business is a source of them and their undesirable impacts. For example:

*"If the Relevant retail tariffs are not able to reflect these [cost reflective] changes in network recoveries, then small business consumers will further subsidise the residential tariff customers."*<sup>13</sup>

And

*"When retail tariffs are established without direct correlation to how relevant input costs feed into them, they become arbitrary, unsustainable and potentially lead to perverse outcomes."*<sup>14</sup>

#### 3.3.2 NETWORK TARIFFS

TasNetworks has acknowledged the existence of cross-subsidies in its tariffs and has begun a process of transitioning these to greater cost reflectivity. For example, TasNetworks comments that:

*"We are also transitioning our existing network tariffs to reflect total efficient costs, thereby removing cross-subsidies between existing network tariffs and between classes of customer."*<sup>15</sup>

This is also clear from proposed new tariffs in its *2016 Tariff Structure Statement* lodged with the Australian Energy Regulator (AER). One of the aims is to reduce the rates for its general small business tariff (TAS22), whilst either increasing those for other tariffs which are currently subject to very low rates, such as for uncontrolled household heating and hot water (TAS41), or by grandfathering some tariffs.

TasNetworks publishes information about how its tariffs meet the National Electricity Rules' requirement that they lie between its 'stand alone' and 'avoidable' costs. The outcomes published in its *2015/16 Annual Pricing Proposal* are shown in Table 1 below with TAS22 and TAS41 highlighted.

<sup>13</sup> Aurora Energy, *Draft Standing Offer Price Strategy*, 12 Feb 2016, p. 15, our parenthesis

<sup>14</sup> Aurora Energy, *Final Standing Offer Price Strategy*, May 2016, p 14.

<sup>15</sup> TasNetworks, *Tariff Structure Statement*, January 2016, p. 32.

Table 1: TasNetworks Stand Alone Costs, Avoidable Costs and Expected Tariff Revenue

Tariff class	Tariff	Avoidable cost (\$m)	Expected revenue (\$m) excluding side constraint adjustment	Stand-alone cost (\$m)
ITC	Individual Tariff Calculation (TASCUS)	0.164	1.755	234.764
HV	Business HV kVA Specified Demand >2MVA (TAS15)	0.093	3.483	234.693
	Business HV kVA Specified Demand (TAS5DM)	0.292	6.456	234.892
Irrigation	Irrigation LV TOU (TAS75)	1.291	8.262	235.891
Large LV	Business LV kVA Demand (TAS82)	0.672	28.466	235.272
Small LV	Business LV General (TAS22)	2.297	44.237	236.897
	Business LV Nursing Homes (TAS34)	0.237	1.860	234.837
	General Network – Business, Curtilage (TASCURT)	0.203	2.563	234.803
	Business LV TOU (TAS94)	1.949	31.781	236.549
Residential	Residential LV General (TAS31)	6.489	121.236	241.089
	Residential LV PAYG TOU / Residential LV TOU (TAS92) (TAS93)	0.019	0.907	234.619
	Residential LV PAYG (TAS101)	0.443	19.943	235.043
Uncontrolled Energy	Uncontrolled LV Heating (TAS41)	0.000	22.678	234.600
Controlled Energy	Controlled LV Energy – Off Peak with afternoon boost (TAS61)	0.000	1.388	234.600
	Controlled LV Energy – Night period only (TAS63)	0.000	0.001	234.600
Unmetered	UMS LV General (TASUMS)	0.000	1.068	234.602
Streetlights	UMS LV Public Lighting (TASUMSSL)	0.007	2.474	234.607

Source: TasNetworks, *Tariff Structure Statement*, January 2016, Table 31, p. 53.

Accepting TasNetworks' estimates, it can be seen from these data that its small business tariff (TAS22) lies within this boundary so that it meets the upper bound for the 'stand alone' costs test. That is, it is not the **definite** source of a cross-subsidy. It should also be recalled from Section 2.2 that when applied to individual tariffs, it is more likely that stand alone costs will be over-estimated; and from Section 2.4 that assigning FDC

as direct, attributable and unattributable can become somewhat arbitrary and subject to estimation errors. We are not in position to assess the quality of TasNetworks cost allocations.

Whether TAS22 meets the lower bound, which is that the tariff is greater than the sum of its direct, attributable and unattributable costs is not shown. If it does, then it is still a **potential** source of cross-subsidy.

TasNetworks' acknowledgement that its small business tariffs are not cost reflective and are used to lower the costs of some of its other tariffs support that they are the source of a cross-subsidy.

Again, assuming that TasNetworks' data is robust, expected revenue from TAS41 lies within the lower bound of the 'avoidable' costs test (do not cover their direct costs) and are therefore not a **definite** recipient of a cross-subsidy. However, they may still be within the upper bound of the test (cover direct costs but not the sum of direct and attributable costs) so that they are a **potential** recipient of a cross-subsidy. TasNetworks' data do not show the lower bound but their public comments support that TAS41 is the recipient of a cross-subsidy.

### 3.4 IMPACTS ON SMALL BUSINESS

As mentioned earlier, cross-subsidies create distortions and inefficiencies. The existence of cross subsidies within Tasmanian electricity tariffs, with small business being a source of cross-subsidy, is detrimental to their interests.

Some of the impacts on Tasmanian small business are highlighted below.

- By increasing prices to small business above their efficient level, cross-subsidies reduce small business demand for electricity below its efficient level.
  - This creates other distortions, such as small business being forced to substitute use of other resources for electricity, e.g., alternative fuels that may be less efficient to use or more polluting, or to use other inputs such as more labour, for example.
  - At a more macro level, they can limit opportunities for small business activity in Tasmania by increasing their operating costs, with flow on impacts such as less investment and less opportunity to employ Tasmanians.
- As cross-subsidies distort resource allocation away from small business, Tasmania could be missing out on economic opportunities as a consequence, including the well known dynamic abilities of small businesses to create entrepreneurship and innovation.
- The presence and perpetuation of cross-subsidies in Tasmanian small business electricity tariffs, other things being equal, would encourage retailers to offer small business prices that remove all or some of the cross-subsidy. A desire to avoid this happening could prevent reforms that would encourage competitors to enter the Tasmanian electricity retail market. Although the monopoly status of TasNetworks mean that any new retailer would need to pay the same (cross-subsidised) network charges as incumbents, the Government's ownership of both TasNetworks and Aurora arguably help to maintain the cross-subsidies. The cross-subsidies may also be a disincentive for ownership reform.

One of the main recipients of the small business sourced cross-subsidies are consumers (mainly residential) in receipt of T41. This further distorts resource allocation in the Tasmanian economy by:

- Promoting relatively inefficient use of electricity.
- Discouraging the use of alternative forms of energy that may be more efficient fuels for space and hot water heating, especially natural gas, which currently has a very low market penetration rate in Tasmania.
- Encouraging the installation and use of appliances for space and hot water heating with tariffs that are not sustainable and that will come under pressure for increases in future.

Across-the-board application of T41 means that it subsidises the electrical heating costs of both low income Tasmanians and well off ones. In fact, the higher electricity use often exhibited by higher income consumers means that they would be benefitting disproportionately, raising equity issues.

This broad application also makes the T41 cross-subsidy more difficult to remove politically. On the one hand, application to the less well off raises equity issues for tariff removal or reductions, though it is possible to more directly fund or target these consumers. Meanwhile, broad application means that cross-subsidy removal or reduction is complicated by the prospect of broad community resistance.

Finally, in common with most cross-subsidies, there is lack of transparency associated with the cross-subsidies in Tasmanian electricity tariffs. Whilst there is some information available, this is patchy, especially at the retail level, which is the level at which consumers interact with the market. One consequence of this is that small business is less well equipped to advocate for the removal of cross-subsidies, which are detrimental to their interests. This helps prolong their existence and the economic problems they create.

Whilst small business can escape the impacts of cross-subsidies on their electricity prices by opting for a retail market offer, the fact is that few have done so to date. This likely reflects factors such as these offers not being attractive enough, limited discounting of standing offers, a lack of electricity retail competition, no new entry of retailers and a low level of knowledge of, or uncertainty about, the retail market on the part of small business.

### 3.5 TRANSITION ISSUES

Both Aurora and TasNetworks intend to transition existing tariffs to greater cost reflectivity. This means it will take time to remove cross-subsidies. This decision most likely reflects political factors and the concerns of those consumers who stand to lose from the removal of cross-subsidies.

For small business consumers this means it will take time to unwind the price increasing effects that cross-subsidies have on their electricity charges. Meanwhile, the economic costs to Tasmania will also continue to accumulate.

TasNetworks has said that:

*“The changes we have proposed will require transitional arrangements to ensure that we avoid any sudden adverse impacts for our customers, referred to as ‘price shocks’. For most customers the transition will, therefore, involve only incremental changes.”<sup>16</sup>*

<sup>16</sup> TasNetworks, *Tariff Structure Statement*, 29 January 2016, p. 7.

And:

*“In response to suggestions from our customers and their advocates, we are going to transition our existing tariffs towards full cost reflectivity over a period of up to 15 years. Initially we proposed a significantly faster pace of reform, but amended our plans in response to customer and stakeholder feedback, which clearly expressed a preference for a longer transitional period.”<sup>17</sup>*

As far as we are aware, Aurora has not commented on how long a transition it plans but as it has tended to follow TasNetworks in other aspects of tariff reform, it could be expected to largely align with TasNetworks’ transition. In any case, as network tariffs make up 60 per cent of retail bills, their transition will clearly have a significant influence the pace of change in retail tariffs.

Aurora will not commence movement towards more cost reflective tariffs until 1 July 2017, whereas TasNetworks says it has already commenced the move. We note that, in the meantime, this adds to the misalignment of Aurora’s and TasNetworks’ tariffs referred to in Section 3.3.1 and will require Aurora to increase the pace of its changes if it is to catch up.

Furthermore, the 15 year time period that TasNetworks says it will adopt in transitioning its tariffs to cost reflectivity is very long and will be costly to small business. It is therefore disappointing that TasNetworks has abandoned its initial intention to adopt a significantly faster pace of reform.

Fifteen years is also well outside the time horizon of most small businesses for business and strategic decision-making. It is also likely outside the life span of many small businesses.

TasNetworks has not outlined the pace at which it intends to move towards cost reflectivity. However, some indication can be obtained from the fact that TasNetworks is expected to increase the revenue it recovers from residential consumers from 55 per cent in 2016/17 to 59 per cent in 2018/19. Meanwhile, the proportion of revenue collected from business consumers is expected to decrease from 30 per cent to 29 per cent over the same period. Even allowing for the lower share of revenue collected from small business, this suggests it does not intend to reduce revenue collected from small business in proportion to the increased revenue collected from household consumers.

In relation to the pace of implementing cost reflective charges, our analysis shows that, whilst there has been some rebalancing of TasNetworks network tariffs over the period 2012/13 to 2016/17, this has been limited. For example, usage charges for TAS41 (heating) increased by 24.3 per cent over this period whilst fixed charges increased by 25.5 per cent. Over the same period, fixed charges for TAS22 (small business) increased by the same amount, whereas usage charges fell by only 2.2 per cent. However, there are some signs of increased momentum as usage charges for TAS41 increased by 1.8 per cent in 2016/17, whilst those for TAS22 fell by 9.0 per cent.

It is worth mentioning that TasNetworks (and Aurora) also intend to introduce a range of new tariffs focused on using prices to signal more efficient use of electricity. This initially involves the use of Time of Use (ToU) tariffs followed by demand based tariffs. There will also be a greater emphasis on fixed rather than usage charging for all tariffs. The new tariffs will be offered on an ‘opt in’ basis.

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<sup>17</sup> TasNetworks, *Tariff Structure Statement*, 29 January 2016, p. 27.



Individual small businesses may benefit from these new tariffs and should investigate them further.<sup>18</sup> For example, Aurora's modelling indicates small business consumers may benefit by between 13.24% and 21.74%, depending on the level and timing of their consumption.<sup>19</sup> They should also bear in mind both that these tariffs require the installation of a meter (charged to the customer) capable of measuring the time of consumption and that existing business tariffs may be grandfathered and eventually abolished.

### 3.6 CONCLUDING COMMENTS

This section described the structure of existing Tasmanian electricity retail and network tariffs and the common application of both fixed and variable charges. We also described how a two-block usage component in the general small business retail tariff (T22) and the application of a higher fixed charge increases small business electricity costs relative to household tariffs.

Aurora has explained how it allocates its costs to retail tariffs but there is a lack of transparency about this. Aurora's ability to move to more cost reflective tariffs has been constrained by a requirement that it maintain uniformity between both its tariffs and business and household ones.

Although public data with which to perform the normal tests for establishing cross-subsidy is lacking, it is clear from a range of statements that retail tariffs contain cross-subsidies, that small business is a source of these with some residential tariffs being a recipient (principally the heating tariff, T41).

At the network level, TasNetworks performs a cost allocation under its regulatory obligations, which seek to ensure that tariffs are neither a source nor recipient of cross-subsidy. Whilst the information with which to perform the standard tests for cross-subsidies outlined in Section 2.2 is only partly available, TasNetworks' public comments confirm that its small business tariff (TAS22) and its uncontrolled heating tariff (TAS41) are respectively a source and recipient of a cross-subsidy.

We outlined the impacts of cross-subsidies on small business, including that higher electricity costs lead to less than optimal consumption of electricity by small business. They also lead to less than optimal small business activity in Tasmania with consequences for investment, jobs, entrepreneurship and innovation. They can also lead to greater than optimal use of electricity by households, including higher income ones, and less than optimal use of natural gas. Cross-subsidies can also limit scope for electricity market reform. Finally, they lack transparency making advocacy for removal more difficult.

TasNetworks has said that it intends to implement a range of tariff reforms, including removal of existing cross-subsidies over a period of up to 15 years. As discussed in Section 3.5, it initially proposed a much faster implementation. Aurora is likely to adopt a similar timeframe. This is a very long transition during which small business will continue to pay for cross-subsidies. Moreover, little is known about the rate of change of tariffs over this transition.

Both TasNetworks and Aurora are also introducing new ToU and demand based tariffs on an 'opt in' basis. These may be advantageous to some small business consumers.

<sup>18</sup> Goanna Energy has advised customers who benefitted by changing their network tariff.

<sup>19</sup> Aurora Energy, *2016 Standing Offer Price Strategy*, p. 23.



# IMPACT ON SMALL BUSINESS ELECTRICITY COSTS

- Analysis Approach
- Cost Disadvantage

# 4 Impact on Small Business Electricity Costs

In this Section we consider the impacts that cross-subsidies in Tasmanian electricity tariffs have on small business electricity costs.

## 4.1 APPROACH

We have undertaken an analysis of Tasmanian electricity tariffs to determine the extent of cost disadvantage in small business tariffs (T22 for retail and TAS22 for networks) versus general residential (T31 and TAS31) and uncontrolled heating (T41 and TAS41) tariffs. This has been done using current tariff rates, that is, those that apply for 2016/17.

As well as comparing the individual tariffs, we have also compared the small business tariffs, T22 and TAS22, with the combined residential tariff bundles T31/41 and TAS31/41. According to OTTER, 95 per cent of small businesses tariff customers are on T22, whilst 86 per cent of household tariff customers are on the T31/41 combination.<sup>20</sup> There are very few Tasmanian small businesses and households who are not on regulated tariffs. Hence, undertaking the analysis using these tariffs covers the vast majority of small business and residential customers and consumption.

We also analysed changes in these tariffs over the period 2012/13 to 2016/17 to assess if there has been any change in the extent of cost disadvantage over this period.

For the analysis of network tariffs, we have used the Network Use of System (NUoS) charges, which combine distribution and transmission charges in order to maintain simplicity and understandability. It is worth pointing out that distribution charges make up the bulk of NUoS charges and are also be the main contributor to cross-subsidies in network charges.

We have undertaken the analysis using OTTER data which establishes typical Low, Medium and High levels of consumption by small business (1,344, 4,398 and 11,349 kWh per annum respectively).<sup>21</sup> We could also have used average household consumption for the comparison but OTTER estimate this to be higher than the medium for small business at around 8,250 kWh per annum, so it will increase the estimate of cost disadvantage.

Whilst this does approach not directly measure the cost of cross-subsidies, it does estimate the relative cost differences between tariffs and therefore the cost disadvantage (or advantage) of customers on these tariffs.

<sup>20</sup> Office of the Tasmanian Economic Regulator, *Typical Electricity Customers Information Paper*, May 2014.

<sup>21</sup> *Ibid.*

Cross-subsidies are part of this cost difference although there could be other factors that also contribute (positively or negatively).

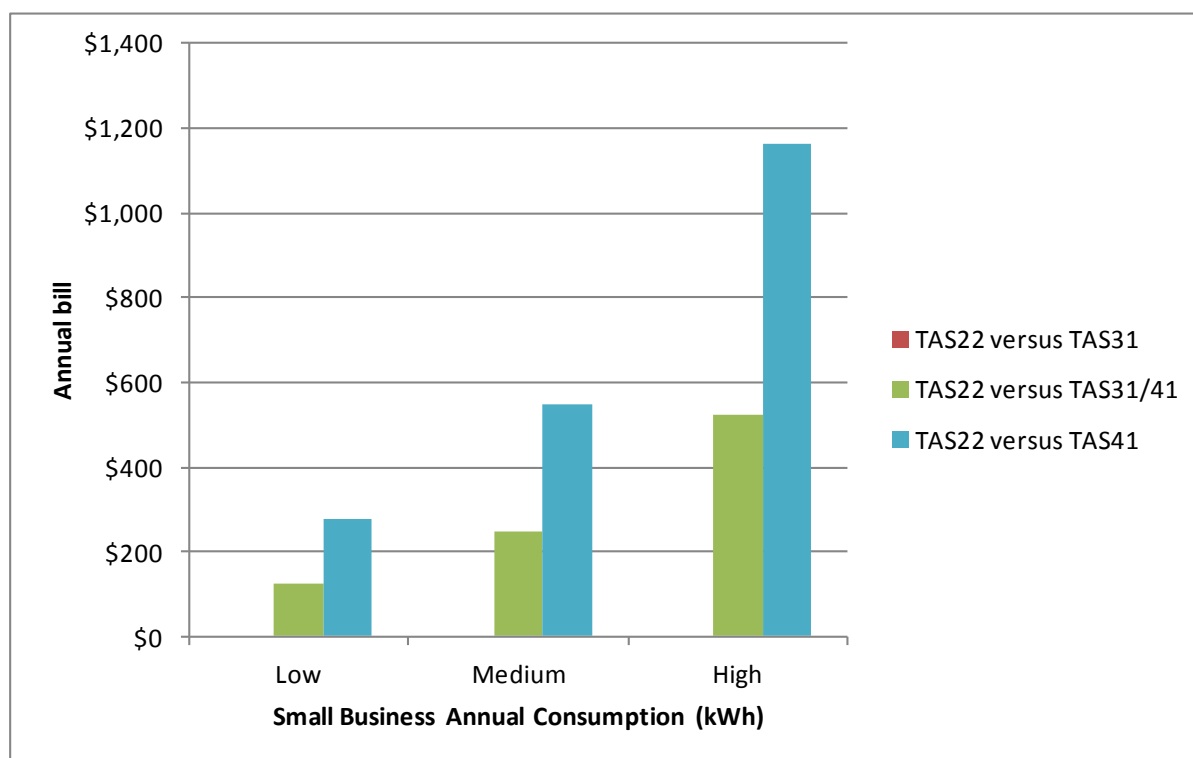
## 4.2 SMALL BUSINESS TARIFF COST DISADVANTAGE

Figure 3 below shows the small business network tariff (TAS22) cost disadvantage relative to TAS31, the commonly used household combination (TAS31/41) and TAS41 at the medium annual consumption level for small business.

As rates for TAS22 and TAS31 are identical, there is no tariff cost disadvantage in this case and consequently none is shown in the chart.

Compared to the TAS31/41 combination, that most commonly applied to residential consumers, the small business tariff (TAS22) results in significantly higher annual costs for small business, reflecting in part at least, the cross-subsidy from TAS22 to TAS41. The additional costs to small business amount to \$124 per annum at the low consumption level, \$246 at the medium level and \$523 at the high level of consumption. Also shown is the cost difference between TAS22 and TAS41. Whilst no customers can use TAS 41 alone for all their electricity consumption as it cannot be used for light and power, this nevertheless is indicative of the very low costs embedded in TAS41 rates.

Figure 3: Small Business NUoS Tariff Cost Disadvantage, 2016/17

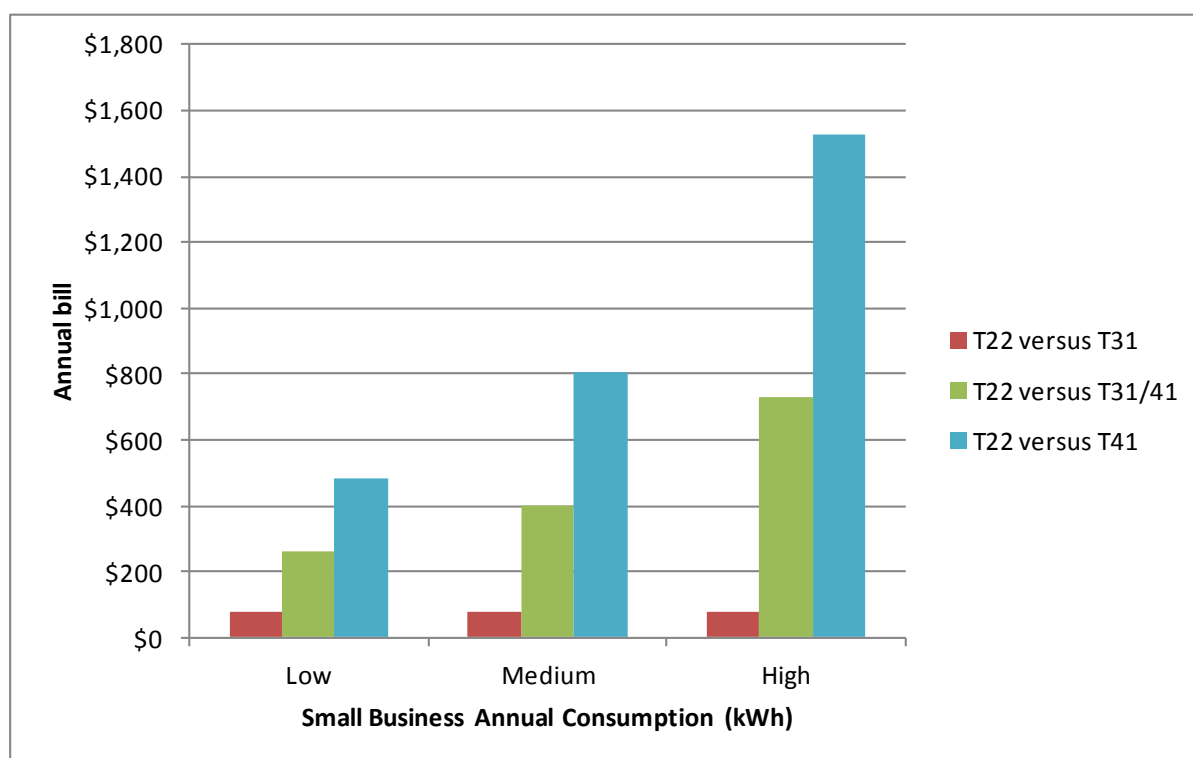


Source: Goanna Energy Consulting

Figure 4 shows the same information as Figure 3 but using Aurora's equivalent retail tariffs, that is, T22 for small business, and T31, T41 and T31/41 for residential consumers. The tariff cost disadvantage of small business increases at the retail level, as would be expected since retail tariffs contain the NUoS, retail and other cost components mentioned in Section 3.2.1. Comparing T22 with the T31/41 combination, the small business tariff cost disadvantage increases to \$260 per annum for the low consumption level, \$403 at the medium level and \$729 at the high level.

For retail tariffs there is also a tariff cost disadvantage between T22 and T31 of about \$75 per annum, which is not present for the equivalent network tariffs. This reflects the inclusion of an additional usage charge component on the initial 500 kWh per quarter consumed by small business (not present in TAS22 or T31), which is levied at around 36 per cent higher than the other consumption charges in T22 and T31, which have very similar rates. As mentioned earlier in this report, the continued presence of this component in T22 is a matter of concern and, in our view, unjustifiably increases electricity costs for small business.

*Figure 4: Small Business Retail Tariff Cost Disadvantage, 2016/17*

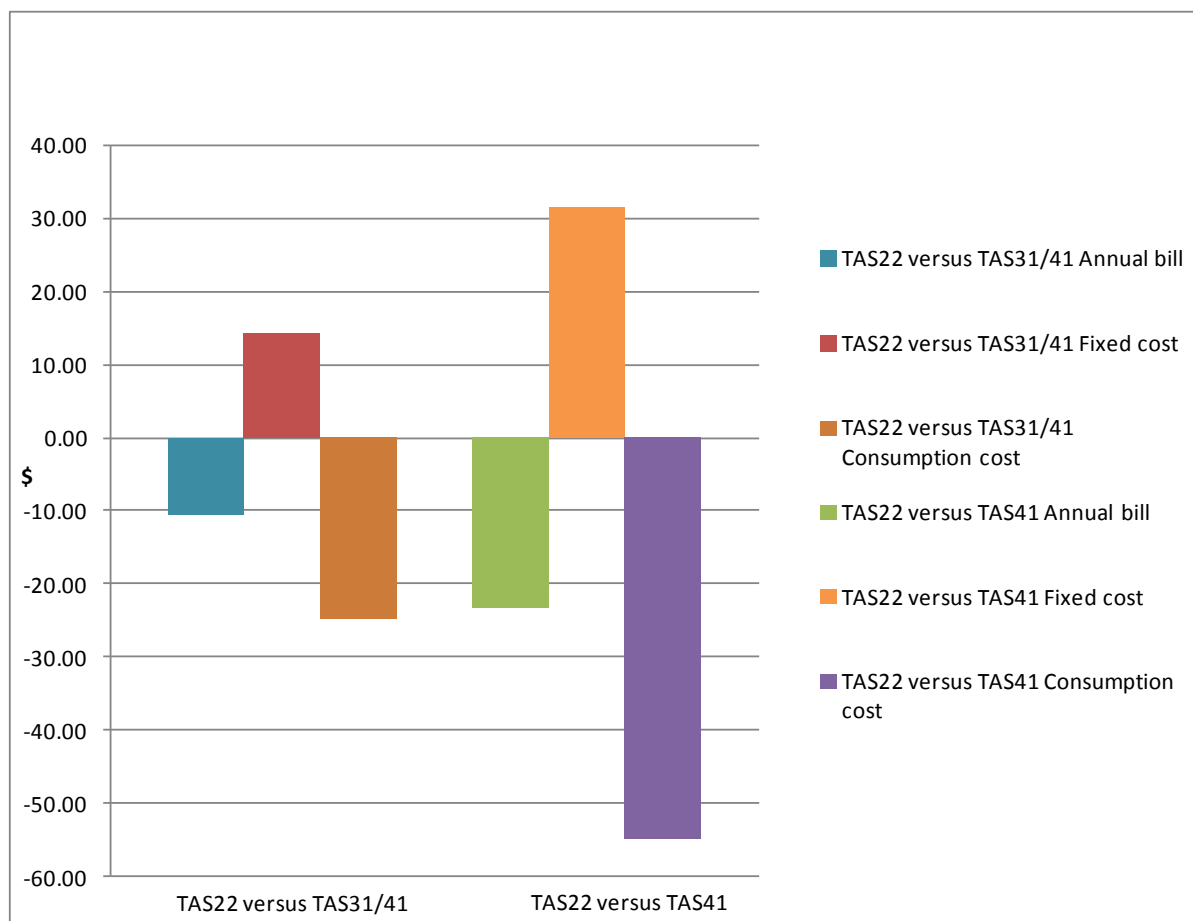


Source: Goanna Energy Consulting

Figure 5 below shows the changes in the tariff cost disadvantage of small business consumers for NUoS charges, comparing TAS 22 to the TAS31/41 combination and T41 alone over the period 2012/13 to 2016/17. The TAS22 and T31 comparison is not shown as there is no difference in rates between these two tariffs. Medium consumption levels are used, as are nominal prices. The change in the total annual bill is shown, as is the change in the fixed and usage (consumption) components. It is apparent that there has been very

little reduction in the tariff cost disadvantage of small business over this period, with the difference in the annual bill between TAS22 and TAS31/41 reducing by only about \$10. Whilst there was a reduction of \$24 in consumption charges, these were partly offset by a \$14 increase in fixed charges. This suggests there has been very little progress in removing the cross-subsidy between small business tariffs and household tariffs.

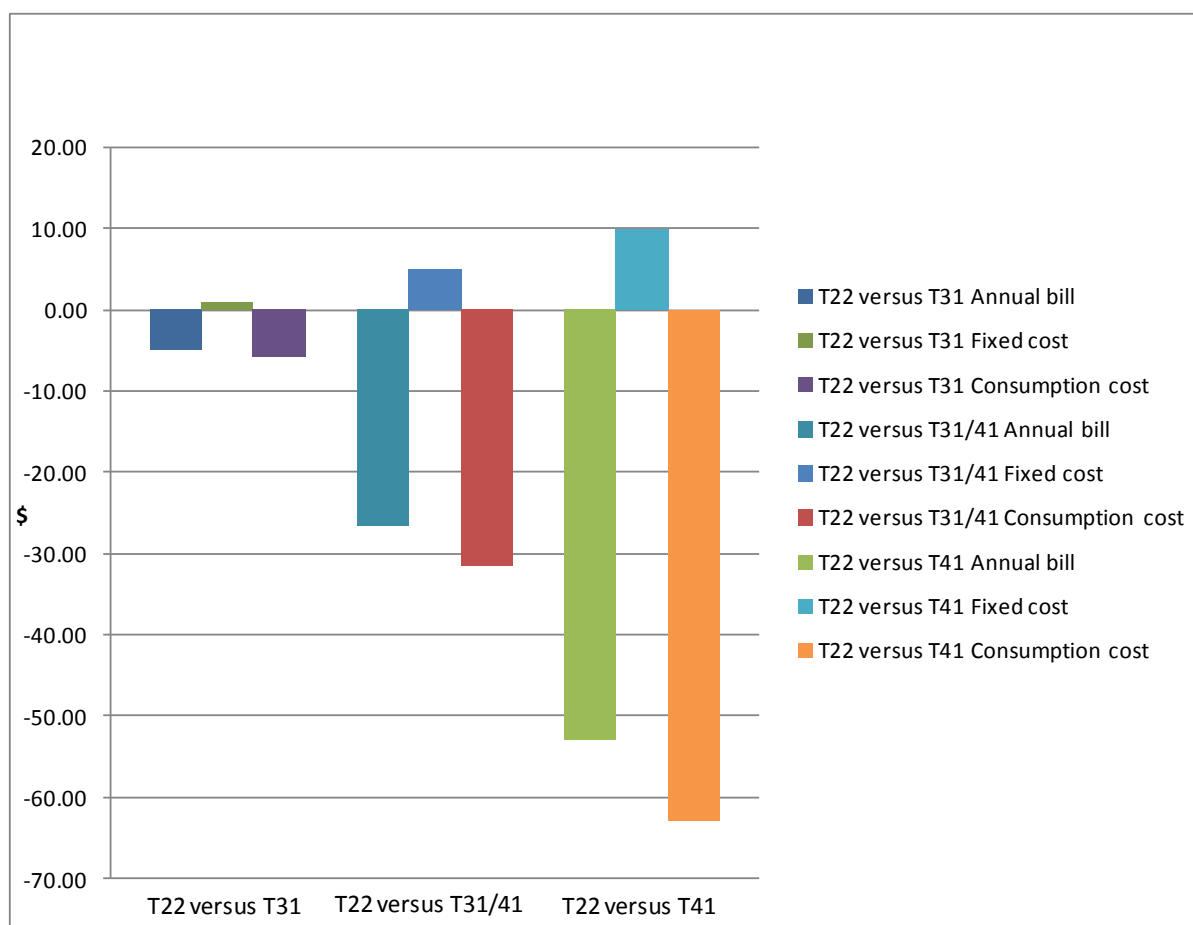
Figure 5: Change in Small Business NUoS Tariff Cost Disadvantage, 2012/13 to 2016/17 (nominal)



Source: Goanna Energy Consulting

Meanwhile, Figure 6 shows that retail tariffs have followed the same pattern. The cost differential between T22 and T31 has only changed by a modest \$5 reduction in the annual bill, with all of this due to reductions in usage (consumption) charges, whilst fixed charges are more-or-less unchanged. Regarding changes in the differential between the small business tariff (T22) and the household retail combination of T31/41, there has also been only a modest reduction in the difference in annual bills of \$26, again due to a reduction in usage (consumption) charges, slightly offset by increases in fixed charges. This suggests very little progress in removing the cross-subsidy between small business tariffs and household tariffs at the retail level.

Figure 6: Change in Small Business Retail Tariff Cost Disadvantage, 2012/13 to 2016/17 (nominal)



Source: Goanna Energy Consulting

### 4.3 CONCLUDING COMMENTS

In this section we have examined the cost differential between small business and residential tariffs, at both the network and retail levels. The picture that emerges is one of substantial differences at both levels that disadvantage small businesses. At the retail level, Aurora's tariffs contain an added cost for small business due to the existence of an additional usage tier set at a higher rate. Annual costs for small business are typically \$400 higher and for high consumption levels can be over \$700 more. We estimate a total cost to Tasmanian small businesses in 2016/17 of around \$10.6 million.<sup>22</sup>

Moreover, these differences between rates have hardly changed over the period 2012/13 to 2016/17, with very little progress in removing small business subsidies. On the brighter side, both TasNetworks and Aurora have indicated their intention to begin to remove cross-subsidies from 1 July 2017. Small business should benefit from this, although the implementation timeframe is inordinately long and few details are available about the rate at which tariffs will change.

<sup>22</sup> Using the T22 versus T31/41 comparison, its medium consumption small business customer cost disadvantage of \$403 and OTTER's (2014) T22 customer numbers of 26,333.

# RECOMMENDATIONS TO THE TSBC

- Advocate to for the removal of cross-subsidies
- Propose timetable for removal of cross-subsidies
- Negotiate expedited changes to Aurora Energy's T22 Tariff

# 5 Recommendations

## 5.1 RECOMMENDATIONS

Below are our recommendations to the TSBC based on report. For convenience, we have included references in each to relevant sections of the report.

1. The TSBC should advocate to the Tasmanian Government, Aurora Energy, TasNetworks and regulators for the removal of cross-subsidies in Tasmanian electricity tariffs (retail and network) that are detrimental to the interests of small business (supporting arguments are in Sections 3.3, 3.4 and 4.2).
2. The TSBC should advocate on the need for cross-subsidies to be removed in a significantly shorter period of time than the 15 years proposed by TasNetworks, say, no longer than 5 years, noting that a longer period will continue to impose costs on Tasmanian small businesses (refer to Section 3.5).
3. The TSBC should propose to Aurora, TasNetworks, OTTER and the AER that a timetable for the removal of cross-subsidies in Tasmanian electricity tariffs be published and that this include the rate at which cross-subsidies will be removed. Small business would derive most benefit from a timetable of accelerated removal in the early years. A less attractive option would involve removal uniformly over time (refer to Section 3.5).
4. The TSBC should negotiate with Aurora Energy for expedited changes to its T22 tariff so that its fixed and usage components are reduced to at least the same level as T31 and to change its usage component to a single block (refer to Section 3.1.1)
5. TSBC should raise with Aurora and OTTER a concern about less than full disclosure of its cost allocation methodology and allocation of actual costs to its tariffs, noting that this makes the identification of cross-subsidies and their cost more difficult to determine. Such information should preferably be made public but, if not, it should at least be disclosed to OTTER for use in the publication of information about retail tariff cross-subsidies (refer to Section 3.2.1).
6. The TSBC could also negotiate with Aurora and TasNetworks for both entities to publish their actual cost allocations, including information that would enable the full test for determining the existence of cross-subsidies to be performed on their tariffs (refer to Sections 2.2 and 3.2).



7. The need to remove cross-subsidies that are detrimental to small business could be advanced by TSBC as an additional justification for the introduction of reforms to promote greater retail competition in Tasmania and to improve the efficiency of the Tasmanian electricity industry (refer to Section 3.4).
8. Once details emerge, the TSBC should obtain further advice on whether new time-of-use and demand based tariffs introduced by Aurora and TasNetworks would be beneficial to small business consumers. If so, they could encourage their members to undertake individual assessments of the benefits (or otherwise) to them, preferably with the assistance of Aurora and TasNetworks (refer to Section 3.5)



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Goanna Energy Consulting Pty Ltd

PO Box 30, Sandy Bay, Tasmania 7006, Australia  
Telephone (03) 6223 7253, Fax (03) 6223 7270  
E-Mail: [marc@goannaenergy.com.au](mailto:marc@goannaenergy.com.au)