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Uniting Small Business

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The Inquiry Secretary
Legislative Council Sessional Committee – Government Administration 'A'
Inquiry into Energy Prices in Tasmania
Legislative Council
Parliament House
Hobart Tas 7000

16 October 2023

Dear Secretary

Following is a response to the invitation by Hon Ruth Forrest MLC to the Legislative Council Sessional Committee – Government Administration 'A', Inquiry into Energy Prices in Tasmania.

I also attach a number of reports and investigations the Tasmanian Small Business Council (TSBC) has done into a range of factors affecting the Tasmanian small business sector in respect to energy.

Specifically:

- TSBC Submission - Tasmanian Wholesale Electricity Market Study 2018
- TSBC Report - Cross Subsidies in Tasmanian Electricity Tariffs 2016 – *Impacts on Small Business*
- TSBC Submission - ACCC Retail Electricity Pricing Inquiry – Preliminary Report
- TSBC Submission - TasNetworks Transmission Revenue & Distribution Regulatory Proposal 20219-20 to 2023-24

I am able to supply each of these reports in hard copy format to you. Would you like me to deliver them to Parliament House?

The Chair and Board look forward to the outcomes of the Hon Members deliberations.

Regards

ROBERT MALLETT
CEO
TSBC
[redacted]

Background

The Evolution of Tasmania's Energy System

The history of Tasmania's energy system is a fascinating journey from its humble beginnings with the construction of the first hydroelectric dam at Duck Reach to its integration into the National Energy Market (NEM). This transformation spans over a century and is marked by significant developments, innovations, and policy changes.

Early Beginnings: The Duck Reach Hydro Dam (1895)

The origins of Tasmania's energy system can be traced back to 1895 when the first hydroelectric power station was constructed at Duck Reach, near Launceston. Duck Reach Power Station was the first publicly owned hydro-electric plant in the Southern Hemisphere and provided the Tasmanian city of Launceston with hydro-electric power from its construction in 1895 to its closure in 1955.

The success of Duck Reach served as a catalyst for further hydroelectric developments across the island.

Hydro Tasmania: A State-Owned Enterprise (1914)

As demand for electricity grew, so did the need for a more organized approach to power generation and distribution. In response, the Tasmanian Hydro-Electric Department (THED) was established in 1914 as a state-owned enterprise. Under THED's leadership, Tasmania embarked on an ambitious program of hydroelectric development. Several dams, power stations, and transmission lines were built, expanding the reach of electricity across the state and even allowing Tasmania to export power to mainland Australia.

Rise of Hydro Tasmania (1998)

In 1998, the Tasmanian government restructured its energy sector, transforming the THED into Hydro Tasmania. This move aimed to modernize and streamline the state's energy operations, making it more competitive on the national and international stage. Hydro Tasmania continued to invest in hydroelectric projects, wind farms, and other renewable energy sources, further solidifying Tasmania's reputation as a clean energy hub.

The Splitting of Hydro Tasmania (1998-2009)

While Hydro Tasmania was a key player in the state's energy landscape, the early 2000s saw a significant restructuring. The government split Hydro Tasmania into three entities, each with distinct roles and responsibilities:

- Hydro Tasmania: This entity retained control over hydroelectric power generation and continued to develop new renewable energy projects.
- Transend Networks: Transend Networks (later renamed TasNetworks) was responsible for managing the high-voltage transmission network, ensuring the reliable transport of electricity across Tasmania.
- Aurora Energy: Aurora Energy took charge of electricity distribution (later made the responsibility of TasNetworks) and retail services, serving as the primary electricity retailer for Tasmanian consumers.

This division aimed to enhance competition, improve efficiency, and increase transparency within Tasmania's energy sector.

Entry into the National Energy Market (NEM)

The journey of Tasmania's energy system took a pivotal turn with its entry into the National Energy Market (NEM). The NEM is Australia's interconnected electricity market, spanning multiple states and territories.

Interconnection with Victoria: Basslink (2006)

One of the crucial steps in integrating Tasmania into the NEM was the completion of the Basslink interconnector in 2006. This undersea cable linked Tasmania's electricity grid with the mainland's, allowing for the import and export of electricity. Tasmania, known for its abundant hydroelectric resources, began exporting excess power to the mainland during times of surplus generation, contributing to the broader stability of the NEM.

Challenges and Benefits of NEM Participation

Participation in the NEM brought both benefits and challenges to Tasmania's energy system. On the one hand, it provided access to a larger electricity market, facilitating the sale of excess energy and potential revenue generation. On the other hand, Tasmania had to adapt to the market's dynamics, including price volatility and competition with mainland generators.

Clean Energy Advantages

Tasmania's participation in the NEM also highlighted its commitment to renewable energy. The state's hydroelectric and wind power generation capacity positioned it as a valuable source of clean energy for the NEM. Tasmania's contribution to reducing greenhouse gas emissions in the wider Australian energy landscape became increasingly significant.

Modernizing the Grid (2010s)

In the 2010s, Tasmania continued to modernize its energy infrastructure. It invested in upgrading transmission lines and interconnection facilities to enhance grid reliability and efficiency. The state also made strategic investments in wind power, further diversifying its energy sources.

Factors that impact energy prices for Tasmanian household and small and medium business customers

`Tasmania’s energy sector is characterized by a set of distinct influencers that affect energy prices in the region. This summary delves into the key factors that shape energy prices in Tasmania, examining both the challenges and opportunities faced by the state.

Key Influencing Factors

1. **Hydropower Dominance:** Tasmania's energy generation relies heavily on hydropower, with over 80% of electricity produced from hydroelectric dams. This abundant and relatively low-cost energy source contributes to stable energy prices, especially during periods of good rainfall.
2. **Interconnection with Victoria:** The Basslink interconnector, a subsea cable connecting Tasmania to Victoria, plays a vital role in balancing energy supply and demand. It allows the import of electricity during periods of low generation and the export of surplus power when

hydro dams are producing more. Variations in energy prices in Victoria can affect Tasmania through this connection.

3. **Weather and Climate Variability:** Tasmania's energy system is highly sensitive to weather patterns and climatic variations. Droughts can reduce hydroelectric generation, leading to increased reliance on more expensive energy sources such as natural gas and imported electricity. Conversely, abundant rainfall can lower energy prices.

4. **Renewable Energy Investments:** Tasmania has been investing in wind and solar energy projects to diversify its energy mix and reduce emissions. These investments can impact energy prices in the long term, as the state transitions to cleaner energy sources.

Market Dynamics and Regulations

1. **Retail Competition:** The energy market in Tasmania is characterized by fragile and illiquid competition among several retail providers. Consumer choices in selecting energy plans can influence costs. Government initiatives to promote competition can also play a role in price regulation.

2. **Regulatory Environment:** The Tasmanian government regulates residential and small business energy prices to ensure affordability for consumers. Pricing structures, tariffs, and incentives for renewable energy adoption are all governed by regulatory bodies, affecting energy costs.

3. **Energy Efficiency Programs:** The state's energy efficiency initiatives can reduce overall demand, influencing energy prices by managing peak loads and minimizing the need for expensive energy generation during high-demand periods.

4. **Renewable Energy Targets:** Tasmania has set ambitious renewable energy targets, such as achieving 200% renewable energy by 2040. These targets may require substantial investments and can influence energy prices through incentives, subsidies, and market dynamics.

Issues with Electricity Price Flexibility in Tasmania.

A number of issues have the capacity to limit the mechanisms available to the Government to manipulate energy prices in Tasmania.

1. **TasNetworks and the AER:** TasNetworks is a highly regulated transmission and distribution business. A regulated transmission and distribution business refers to an entity responsible for operating and maintaining high-voltage electricity transmission and distribution networks. Tas Networks is subject to regulatory oversight to ensure they operate fairly, efficiently, and in the best interests of consumers. Transmission and Network costs represent 38% of the typical energy bill.

   The key requirements of a regulated transmission and distribution business include:

   a. **Access and Pricing Regulation**: Transmission businesses must provide access to their networks to all electricity market participants on equal and transparent terms. Pricing is regulated to ensure it is reasonable and non-discriminatory.

   b. **Investment and Planning**: Transmission businesses are required to engage in long-term planning to ensure the reliability and security of the electricity grid. Their investment

proposals are subject to regulatory scrutiny to ensure they are in the best interests of consumers.

c. **Efficiency and Performance**: Transmission businesses must operate efficiently and meet performance targets set by the regulator. They are incentivized to reduce costs and improve network reliability.

d. **Information Disclosure**: These businesses are required to provide extensive information about their operations, costs, and network performance to the regulator and market participants.

e. **Compliance with Codes and Standards**: Transmission and distribution businesses must comply with all relevant codes, standards, and regulations to maintain the safety and reliability of the transmission network.

f. **Customer Engagement**: Businesses are expected to engage with stakeholders and customers to address their concerns and incorporate feedback into network planning and operation.

g. **Regulatory Review and Approval**: Major decisions, such as pricing structures and significant investments, are subject to regulatory review and approval by the Australian Energy Regulator (AER).

h. **Performance Monitoring**: The AER continuously monitors the performance of regulated transmission businesses to ensure they adhere to regulatory requirements and deliver on their obligations.

i. **Consumer Protection**: Regulatory measures are designed to protect the interests of consumers by ensuring that transmission businesses do not engage in anti-competitive behaviour or pass on unreasonable costs.

These requirements are in place to ensure that regulated transmission businesses in Australia operate in a manner that promotes competition, efficiency, and the long-term stability of the electricity supply network while protecting the interests of consumers.

2. **Generation:** The linkage between Tasmanian wholesale electricity prices and the Victorian wholesale price is a unique feature of the Tasmanian electricity market, primarily due to the presence of the Basslink interconnector. This arrangement means that Tasmanian wholesale prices are influenced by factors in the Victorian wholesale market, rather than being primarily driven by the costs of local production within Tasmania**.**

   This may well be able to change when Basslink becomes a regulated transmission entity in 2025. Currently Basslink is a privately owned enterprise with exclusive supply contracts with Hydro Tasmania.

3. **Environmental Charges:** Renewable Energy Target (RET) Costs. The RET is a federal initiative requiring energy retailers to source a certain percentage of their electricity from renewable sources. Costs associated with purchasing renewable energy certificates (RECs) to meet the RET can be passed on to consumers. Currently in Tasmania they comprise 8% of the retail price**.**

4. **Retail Charges and Cost to Serve:** The Tasmanian Economic Regulator is charged with setting energy prices for standing offer customers in both the residential and small business

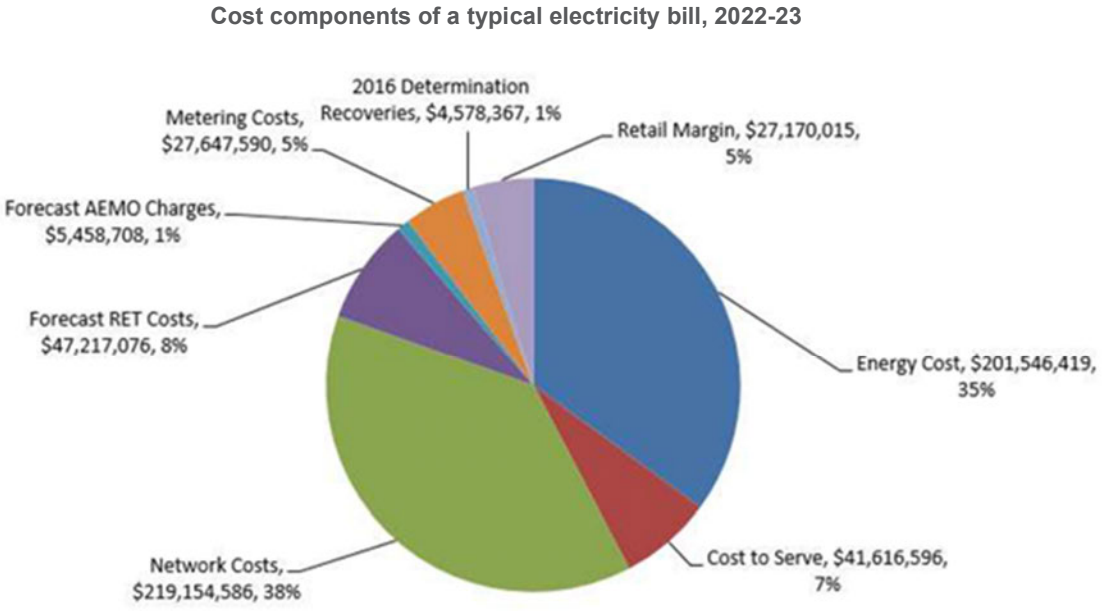
jurisdictions. With a small and as described previously fragile and illiquid competitive market, little opportunity exists for householders and small business owners to seek alternative providers with more attractive pricing. That said, retail margin and cost to serve only represent 12% of the energy bill.

The Tasmanian Economic Regulator (TER)

The TER in a publication https://www.economicregulator.tas.gov.au/electricity/pricing/retail/electricity-pricing-explained gives a description of the parts of a Tasmanian standing offer energy customers bill that it can influence. In part it says:

> *Whilst the Tasmanian Economic Regulator approves standing offer prices it does not have discretion to determine the majority of the costs that contribute to those prices.*
>
> *For one, network charges which comprise around 38 per cent of total costs are regulated by the Australian Energy Regulator, an independent national body.*
>
> *Secondly, generation costs make up around 35 per cent of total costs. The Wholesale Electricity Price (WEP) is the main component of these costs. The WEP is calculated by the Tasmanian Economic Regulator in accordance with the results produced by a wholesale pricing model that complies with the principles set out in the Wholesale Contract Regulatory Instrument and the methodology set out in the Regulator's annual price approval guideline.*
>
> *Finally, National Energy Market participation charges, which are set by the Australian Energy Market Operator (AEMO), Metering costs and Renewable Energy Target costs comprise around 14 per cent of total costs.*
>
> *As a result, the Tasmanian Economic Regulator has discretion with respect to determining around 12 per cent of the costs that contribute to the total cost of electricity*

From the same publication, below is a chart of the different components of a typical Tasmanian energy bill and their percentage of that bill.



Source: Aurora Energy, Pricing Proposal for Period 1 of the 2022 Standing Offer Price Determination 1 July 2022 – 30 June 2023

Opportunities and Challenges for the State of Tasmania as owners of power generation and transmission infrastructure.

The state of Tasmania, as the owner of power generation and transmission infrastructure, has several opportunities to leverage its assets to benefit the state and its residents. Some key opportunities include:

1. **Energy Export**: Tasmania has a plan for significant surplus of clean, renewable energy using its hydroelectric power stations but increasingly looking toward onshore and offshore wind opportunities and the production of green hydrogen. The state can explore opportunities to export this excess energy to the mainland and internationally, contributing to revenue generation and regional economic development.
2. **Energy Storage**: Tasmania's hydroelectric dams can be used for energy storage, particularly through pumped hydro facilities. These systems can store excess electricity during periods of low demand and release it during peak demand, enhancing energy grid stability and reliability.
3. **Renewable Energy Development**: Tasmania has ample potential for the development of additional renewable energy sources, such as wind and solar. The state can invest in new projects to increase its renewable energy capacity, create jobs, and export green energy to other regions.
4. **Interconnection Expansion**: Expanding and upgrading the Basslink interconnector can enhance energy exchange with the Australian mainland. This not only bolsters energy security but also creates opportunities for arbitrage, allowing Tasmania to import electricity during low-cost periods and export during high-cost periods. Marinus Link is estimated to

provide either 750Mw or 1500Mw depending on whether a single or double cable will be commissioned.

5. **Grid Resilience**: The state can invest in grid modernization and resilience measures to better withstand natural disasters, ensuring a continuous and reliable power supply to residents and businesses.
6. **Energy-Intensive Industries**: Offering competitive electricity rates can attract energy-intensive industries, such as data centers or manufacturing, to Tasmania. This can boost economic growth and create jobs in the state.
7. **Electrification Initiatives**: Promoting the electrification of transportation and industries can lead to increased electricity demand. This benefits the state by using excess energy capacity and supporting clean and sustainable energy practices.
8. **Innovation and Research**: Tasmania can foster innovation and research in energy-related fields, including energy efficiency, renewable technologies, and grid management, through partnerships with academic institutions and industry collaborations.
9. **Energy Efficiency Programs**: Implementing energy efficiency programs can reduce energy consumption and costs for residents and businesses. These programs may also lead to lower environmental impacts.
10. **Regional Energy Security**: Investing in local generation and storage capacity can enhance energy security, reducing dependence on imports and potential vulnerabilities.
11. **Environmental Sustainability**: As a clean energy provider, Tasmania can maintain its commitment to sustainability, reduce greenhouse gas emissions, and contribute to climate change mitigation efforts.

Tasmania's ownership of power generation and transmission infrastructure positions it well to take advantage of these opportunities. However, careful planning, sound energy policy, and collaboration with industry stakeholders, as well as regulators, are crucial to realizing the full potential of its energy assets while ensuring they benefit both the state and the broader Australian energy market.

Attachments:

- TSBC Submission - Tasmanian Wholesale Electricity Market Study 2018
- TSBC Report - Cross Subsidies in Tasmanian Electricity Tariffs 2016 – *Impacts on Small Business*
- TSBC Submission - ACCC Retail Electricity Pricing Inquiry – Preliminary Report
- TSBC Submission - TasNetworks Transmission Revenue & Distribution Regulatory Proposal 20219-20 to 2023-24

Tasmanian Small Business Council

Uniting Small Business

Australian Competition & Consumer Commission (ACCC)

Retail Electricity Pricing Inquiry – Preliminary Report Response

Submission

November 2017

Acknowledgements & Disclaimers

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Executive Summary

The Tasmanian Small Business Council (TSBC) welcomes the opportunity to provide a submission to the Australian Competition and Consumer Commission's (ACCC) Preliminary Report on its Inquiry into Retail Electricity Prices.

TSBC Positions on Key Inquiry Issues

We seek the ACCC's consideration of our positions below.

We support strong and vigorous competition in energy markets where possible, including in Tasmania. This is likely to deliver the best sustained price and non-price outcomes for small business. But there have been too many past compromises and trade-offs in this regard.

We are sceptical about the value to consumers of Government regulation in the electricity market, beyond basic consumer and market power protections, and are mindful that regulation often has unintended consequences.

We support the Tasmanian Government's decision earlier this year to cap wholesale market prices used in the determination of Tasmanian regulated retail electricity tariffs, as this avoided exposing our sector to large wholesale price increases. However, we also recognise that this approach may not be sustainable and could have unintended consequences.

Regulation of retail electricity prices for small customers in Tasmania, including small business, is also an impediment to new entry into the Tasmanian electricity retail market, although it has delivered electricity prices to small business that are below national average standing offer prices (no comparison is made with discounted market offers). Despite the absence of competing retailers for small consumers in Tasmania, regulated tariffs contain unjustified Customer Acquisition and Retention Cost (CARP) and a premium on Aurora's retail margin based on the presence of (non-existent) competition.

The absence of structural reform in the Tasmanian wholesale market is a major reason for the lack of retail competition and the related absence of competitive prices and retail offers.

The TSBC generally favours private over government ownership, believing this to deliver superior outcomes to consumers, but notes that electricity privatisation has too often favoured asset proceeds over competition. Government owned Tasmanian generators and retailers has created virtual monopolies and left the market devoid of choice and competing offers for small business, with regulation a response to the resulting market power. There is significant evidence from sources such as the Australian Energy Regulator's (AER) economic benchmarking studies that privately owned networks in the NEM are more efficient and productive than government owned ones.

The Renewable Energy Target (RET) adds 5 per cent to the costs of electricity for Tasmanian small businesses. With wind and solar now cost competitive with thermal generation, it is time to end the RET and there should be no further expansion of it after 2020.

The lack of action on and uncertainty about carbon reduction policy is contributing to investment uncertainty and higher wholesale prices in the NEM, with Tasmania impacted by virtue of its links to the NEM wholesale market. This is of concern to the TSBC.

The TSBC supports the introduction of electricity competition and choice in Tasmania. Competitive electricity prices and more innovative services are a key outcome sought by Tasmanian small businesses and their absence has been a source of frustration to them.

The Tasmanian gas market suffers from multiple shortcomings – some local and some associated with its links to the mainland – that significantly constrain what it can deliver to small business. These also have implications for electricity through gas-fired generation, fuel substitution and synergies between the two fuels.

Responses to ACCC Preliminary Report

Overall, we find the Preliminary Report to be a welcome addition to, and extension of, the analysis of and knowledge about how the NEM is impacting on electricity consumers, including small business. However, the narrow range of recommendations contained therein is somewhat disappointing, as is the limited attention given to Tasmanian issues. We recognise that this is impacted by its preliminary nature.

We support the ACCC's clear conclusion that the NEM has an electricity affordability problem. It has also reached the broad conclusion that there is insufficient competition in the generation and retail markets, which both raises prices and increases barriers to entry. We concur with this whilst noting that there is virtually no competition in Tasmania.

The 2015/16 Tasmanian cost stack for small business differs from the national cost stack as network charges are significantly larger and retail charges significantly lower. However, in common with national trends, the share of wholesale costs has increased markedly since then (but not by as much as it would have had the State Government not intervened), whilst network charges have fallen significantly).

The ACCC's has found that the wholesale (generation) market is highly concentrated and this is likely to be contributing to higher wholesale electricity prices. In Tasmania, Hydro Tasmania is a dominant generator and hedging provider with the Independent Panel concluding it possessed "latent market power", which deterred new entry. The ACCC's finding is also important to Tasmania due to its links to the mainland (especially Victorian) wholesale market. Up until this year, Victorian wholesale prices have been used to set wholesale costs in regulated tariffs for small business, but the closure of Hazelwood power

station and resultant high wholesale prices prompted the Tasmanian Government to cap Tasmania wholesale prices. We urge the ACCC to examine the Tasmanian wholesale market closely and make recommendations in its Final Report on how it could be improved.

The ACCC has found that concentration in NEM retail markets and vertical integration with generators has disadvantaged non-vertically integrated) retailers and delivered outcomes not consistent with vigorous competition. In Tasmania there is simply no retail competition for small business customers and ERM the only retailer attempting to provide some (not very successfully). Moreover, Aurora Energy has been provided with CARC costs and a retail margin as if it faced competition, which adds costs to small business regulated tariffs.

The Preliminary Report makes few recommendations on how to improve competition in the retail sector and we look forward to a more complete treatment of this in the Final Report.

Network prices and regulation have been identified by the ACCC as making a major contribution to electricity price increases, notwithstanding recent moderation, through excessive allowances and over-investment (gold platting). These issues have also impacted Tasmania and the TSBC has concerns that network prices and regulation need further attention. We have identified a range of issues in our submissions including: remaining imperfections in the regulatory regime, inefficiencies in government owned networks, ongoing monitoring and improvement to recent regime changes, ensuring the AER remains accountable following the removal of Limited Merits Review appeals and the need for ongoing improvements in consumer engagement by networks.

The TSBC does not accept that past excesses in regulatory allowances provided to networks should continue to be borne by consumers, some of them for several decades according to the ACCC. These impacts should be unwound from network charges as soon as possible. The TSBC encourages the ACCC to develop a set of strong recommendations that will deliver better network regulation and efficient prices.

The RET subsidy imposes costs on Tasmanian small businesses. As wind and solar costs have now reduced and compare favourably with thermal generation, it is time to unwind this subsidy. There should be no subsidy for new projects after 2020.

Consumer experience issues raised in the Preliminary Report are relevant in markets where there is retail competition, which is not the case in relation to small consumers in Tasmania. The first order of business in Tasmania is how to create a competitive environment.

Tasmanian Electricity Issues for Further ACCC Consideration

Given the ACCC is undertaking additional work for its Final Report and has made limited recommendations in its Preliminary Report, we repeat below some of the Tasmanian issues raised in our initial submission and not canvassed earlier in this submission. The TSBC looks

to this Inquiry to propose reforms that will deliver competitive retail electricity prices that are commensurate with Australia's rich energy endowment.

We note that neither the CARC nor a competitive market retail margin is consistent with the TER's role of ensuring Aurora does not price with monopoly power and has efficient costs. The review of Tasmanian wholesale market price regulation by the Tasmanian Department of Treasury and Finance referred to in our earlier submission has now commenced.

The ability of Tasmanian small businesses to save through Time-of-Use (TOU) network tariffs may be limited by the nature of their operations, will be offset by (unknown) metering costs and is constrained by Aurora Energy having only recently introduced retail TOU tariffs with little promotion. The timeframe to remove cross-subsidies from Tasmanian small business tariffs is too long (15 years) and the two-block retail tariff is inconsistent with the equivalent network tariff.

Hydro Tasmania dominates the ownership of wind generation in Tasmania and controls access to wind capacity as the only natural seller of firming capacity. This creates an additional barrier to entry. The transfer of the TVPS from Aurora Energy to Hydro Tasmania altered its role from one of competing with Hydro Tasmania to portfolio optimisation and stand-by operation for energy security.

TOU tariffs may stimulate some competition through energy service providers but need to be accompanied by retail competition if consumers are to take full advantage of this.

Energy consultants and brokers can help small businesses access what retail competition and tariff choice exists in Tasmania, but cannot derive a commission where a Regulated Standing Offer Tariff is recommended, which has been further compounded by the capping of wholesale prices in regulated tariffs for 2017/18.

The still to be renegotiated gas transmission contract to supply the TVPS after the end of this year could impact the viability of the Tasmanian gas market and is of concern to the TSBC.

Conclusions and ACCC's Next Steps for the Inquiry

We urge the ACCC to provide a comprehensive blueprint for competitive electricity throughout the NEM in its Final Report focused on the key areas of the wholesale market, network regulation and charges, environmental charges and the retail market. This should include more focus on jurisdictional issues, including Tasmania and small business impacts. TSBC is keen to engage further with the ACCC and would welcome a public hearing in Tasmania.

1 Introduction

The Tasmanian Small Business Council (TSBC) welcomes the Australian Competition and Consumer Commission's (ACCC) Inquiry into Retail Electricity Prices in the National Electricity Market (NEM) and the release of its Preliminary Report. We also welcome the opportunity to provide this submission responding to the Preliminary Report. We draw the ACCC's attention to our earlier submission on the ACCC's Issues Paper for this inquiry which raises issues we hope that the ACCC will address more fully in its Final Report. Many of these issues are important to the Tasmanian small business sector and the benefits (or costs) that they derive from the electricity market in Tasmania.

Our approach to this submission has been to:

- Set out our position in relation to the issues that the ACCC Inquiry raises for small business in Tasmania;
- Respond to the Preliminary Report, especially as it relates to Tasmania and its small business sector; and
- Reiterate a number of points raised in our earlier submission that we wish to draw to the ACCC's attention again to ensure they are considered as the Commission finalises its inquiry.

2 TSBC Positions

The TSBC's positions in relation to the central issues for Tasmanian small business under consideration in this Inquiry are as follows:

- We support strong and vigorous competition in energy markets wherever possible, including in Tasmania, as this is likely to deliver the best sustained price and non-price outcomes for small business. However, we are wary of competition being used as a 'label' for energy markets that are far from being robustly competitive, including in the NEM. There have been too many compromises and trade-offs where competition has been compromised and consumers left short-changed involving maximising the proceeds from the sale of government owned assets, supply-side preferment and jurisdictional priorities (including protecting government owned assets). The ACCC's Preliminary Report contains some examples of this but it has (unfortunately in our view) ignored other glaring ones. The ACCC is encouraged to come up with a forward looking plan that avoids such mistakes in future, places consumer benefit at the 'head of the table' and unwinds past errors.

- We are sceptical about the value to consumers of Government regulation in the electricity market, beyond basic protections, the avoidance of market or monopoly power, or other robustly assessed exceptions. Even seemingly well-intended regulation of the electricity market can often result in unintended consequences that leave consumers worse not better off. The ACCC Preliminary Report has examples of this, as does our earlier submission.
- Having said that, we support the Tasmanian Government's decision earlier this year to cap wholesale market prices used in the determination of Tasmanian regulated retail electricity tariffs. These comprise around 37 per cent of the retail electricity bill of a typical small business and this move kept in check what would have been substantial increases in small business electricity prices with likely significant adverse consequences for our sector, the Tasmanian community and its economy. We note that the decision was itself necessitated by large increases in mainland NEM wholesale electricity prices, especially in Victoria, to which Tasmanian prices were closely linked, itself a consequence of poor policy choices, delays in making decisions, a failure to address market power problems and poor regulation. Some of these faults were outlined in the Preliminary Report, although in our view some were not explored fully enough. Nevertheless, there could be unintended consequences from continuing with such intervention and it is useful that the Tasmanian Government has established a review of wholesale market regulation to assess the future needs of the State.
- We recognise that the continued regulation of retail electricity prices for small customers in Tasmania, including small business, is an impediment to new entry into the Tasmanian electricity retail space. This has been a two-edged sword for Tasmania's small businesses. On the one hand it has delivered standing offer prices that are below the national average and allowed the government to cap 2017/18 retail prices for small consumers. In the case of small business, this has resulted in reductions in prices for small business tariff customers of between 4-6 per cent. On the other hand, it has also been a barrier to the entry of new retailers who could have provided competitive market offers with access to discounts. Moreover, regulated retail tariffs have included costs – such as a Customer Acquisition and Retention Cost (CARC) and premium on Aurora's retail margin that reflect the need for it to compete with other retailers, when it clearly has no competitors and little prospect of having any for the foreseeable future.
- The decision of the former Tasmanian Government not to undertake structural reform of the Tasmanian wholesale electricity market as recommended by the Independent Panel on the Tasmanian Electricity Supply Industry (Independent Panel) in 2012 but opt for regulation of Hydro Tasmania's wholesale contracts instead (and the current Government's continuation of this) has been a barrier to the entry of new electricity retailers and helped prevent the sale of Aurora Energy's retail book.

This has contributed to the absence of both retail choice and competitive electricity offers for small businesses.

- The TSBC generally favours private over government ownership of assets, believing this to deliver greater cost efficiency, productivity and innovation in services. Provided the relevant markets are competitive (or regulated to avoid monopoly excesses where competition is not possible), consumers will benefit from lower prices on a sustained basis. However, again the NEM has been characterised by a series of compromises and poor decisions that have too often favoured owners over consumers, entrenched market power or resulted in poorly conceived regulation with consumers 'short changed'.
- The continued State Government ownership of electricity assets in Tasmania is of concern to the TSBC. The associated virtual monopoly status of both Hydro Tasmania and Aurora Energy has all but eliminated retail choice for small businesses and prevented them from gaining access to the sorts of discounts available in most other parts of the NEM. Even though standing offer tariffs are on the low side compared to elsewhere in the NEM, this takes no account of the absence of discounting.
- TasNetworks' monopoly is unavoidable given its network cannot be economically duplicated but government ownership is a choice of the Tasmanian Government. There is significant evidence from sources such as the Australian Energy Regulator's (AER) economic benchmarking studies that privately owned networks in the NEM are more efficient and productive than government owned ones. We also note that TasNetworks, in line with other network businesses, especially government owned ones, sought large increases in expenditure and excessive rates of return around the turn of the last decade (also referred to in the ACCC's Preliminary Report). Although TasNetworks' recent proposals to the ACCC have moderated, this has been significantly impacted by the position of the Tasmanian Government in supporting lower electricity prices. Nevertheless, we remain concerned that its asset base and expenditures reflect inflated costs that consumers will continue to pay for in decades to come, as the ACCC has observed in its Preliminary Report. Our concern is that it remains inefficient, notwithstanding some welcome recent steps to lower the extent of these inefficiencies, and that current Government support for lower network prices could turn against consumers in future, depending on fiscal and political exigencies. With network charges in Tasmania accounting for around 46 per cent of a typical small business electricity bill, these are important considerations.
- The Renewable Energy Target (RET) now accounts for around 5 per cent of small business electricity costs, having increased its share considerably over the past decade. The TSBC is agnostic in regard to electricity generation technologies whilst recognising the contribution that renewable technologies (hydro-electric and to a lesser but growing proportion wind and solar) make to Tasmania's electricity

production, at the same time keeping its carbon output down. However, the RET subsidy is a costly addition to small business electricity bills and the TSBC does not support its continuation. Over-reliance on intermittent renewable technologies, such as wind and solar, can also create reliability issues or impose additional costs on consumers to keep the system reliable – a concern for Tasmanian small business given its heavy operational reliance on electricity. We note the renewable industry's claims that wind and solar are now cost competitive with thermal generation and on this basis an important argument in support of the RET is no longer applicable. Its removal would help to take some of the pressure off small business electricity bills.

- A lack of action on and uncertainty about carbon reduction policy has been identified as a factor in forestalling investment in new thermal generation and in the price pressures in the wholesale electricity market. Tasmania has sufficient capacity and hence little need for new generation capacity to serve its local consumers at present but, due to its links to the NEM, is being impacted by this policy uncertainty elsewhere in the NEM, including through wholesale price pressures. This is therefore an issue of concern to the TSBC.
- The TSBC supports the introduction of electricity competition and choice for small businesses in Tasmania. Competitive electricity prices and more innovative services are a key outcome sought by Tasmanian small businesses. Notwithstanding the application of FRC in Tasmania, the virtual absence of any real competition for small business consumers has been a frustration for the TSBC and its members.
- The TSBC is concerned with the current state of the Tasmanian gas market which suffers from a range of shortcomings that could even threaten its viability. These include: its very small size; its lack of expansion to attain critical mass; its retail duopoly and the almost complete absence of competitive tension; the high transportation charges imposed by the unregulated monopoly transmission and distribution pipelines; its lack of diversity in gas consumption; the need for the major gas user, Hydro Tasmania's Tamar Valley Power Station (TVPS), to negotiate a new gas transmission contract by the end of 2017; the gas security risk posed by a single source of supply through a single transmission pipeline; and the apparent lack of progress in addressing such issues. Given Tasmania sources gas from Longford Victoria, it is also exposed to the risks to gas supply and gas commodity and transportation price pressures being seen in Eastern Australia.
- The Tasmanian gas market has important relationships to its electricity market including: through the use of gas fired generation, mainly through the TVPS; through its ability to act as a substitute for some forms of electricity use (e.g., space and hot water heating, cooking and some production processes; as the gas market could provide additional market opportunities to electricity retailers entering Tasmania, who mostly offer dual fuels, especially if it is encouraged to grow and expand.

We are seeking that the ACCC consider our positions in its assessment of the Tasmanian electricity market as part of its Final Report and recommend necessary improvements to ensure the market works more for the long term benefit of Tasmanian electricity consumers, including small business.

3 Responses to ACCC Preliminary Report

Below are our responses to the ACCC's Preliminary Report.

3.1 Overall Views

We find the Preliminary Report to be a welcome addition to and extension of the analysis of and knowledge about how the NEM is impacting on electricity consumers, including small business. In some cases, it confirms what is already known and generally accepted but adding the ACCC's authority to this is still important. Whilst the ACCC makes clear that the report is preliminary in nature, that it lacked or did not have the time to consider some information and data in putting the report together, and that it will be undertaking substantially more analysis and assessment in preparing its Final Report, the narrow range of recommendations contained in the Preliminary Report is somewhat disappointing. This also makes responding to the ACCC's current thinking more problematic.

The limited commentary and recommendations on Tasmanian (and other jurisdictionally specific) issues is of concern to the TSBC and we hope that the ACCC will place more emphasis on this in its Final Report, especially as Tasmania has some unique characteristics that differ from most other parts of the NEM (outlined in our earlier submission).

Whilst the formation of the NEM and other reforms that followed, such as the National Energy Retail Law and Rules (NERL and NERR), have created a more national energy market, the jurisdictions still play an important role in determining market outcomes, including competition and prices. In Tasmania, the State Government plays such a role through its ownership of assets, regulation of retail and wholesale prices for small customers, licensing of energy businesses and its role in energy security.

Nevertheless, we welcome both that the ACCC has reached some strong conclusions and that the directions it intends to take on a number of important issues are reasonably clear.

We note that, based on its consultations and information gathering to date, the ACCC has concluded that:

> *"… there is a severe electricity affordability problem across the NEM and the price increases over the past ten years are putting Australian businesses and consumers under unacceptable pressure."*[1]

We would strongly agree with and endorse this comment and note its application to Tasmanian small businesses. Notwithstanding the Tasmanian Government's decision to cap wholesale price increases for 2017/18 (at least partly due to past electricity price increases) and reductions in TasNetworks' small business tariffs, this was preceded by earlier large increases in small business electricity tariffs. Tasmanian small businesses were also further disadvantaged by these increases through their inability to seek out competitive market offers and discounts due to the lack of competing retailers.

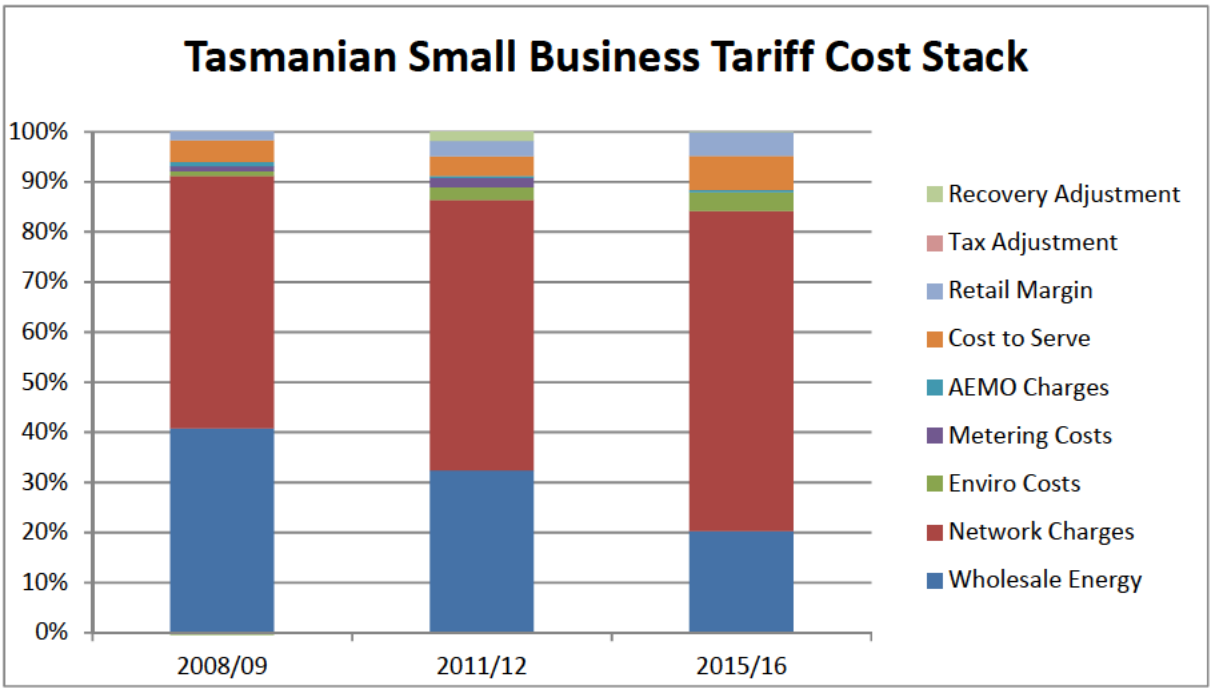
The Commission has also reached the broad conclusions that there is insufficient competition in the generation and retail markets, which both raises prices and increases barriers to entry, that retail price deregulation has benefited some and hurt others, that the market is exceptionally complex, and that consumers have no ability to exit the market. We concur with these conclusions and note that in Tasmania there is virtually no competition in the small business retail market. Consequently FRC operates in a 'Claytons' environment and consumers rely on the benevolence of the Tasmanian Government and its three electricity entities to ensure they pay fair and reasonable prices. Whilst the Tasmanian electricity market may not be as complex as most other parts of the NEM, this comes at the expense of a lack of access to competition and discounting.

3.2 Drivers of Electricity Price Increases

Analysis of small business tariffs in Tasmania for the TSBC shows some differences relative to the ACCC's national cost stack but similar trends (based on annual expenditure). The Tasmanian small business cost stack is shown in the Figure below.

Most importantly, network charges contributed 64 per cent in 2015/16 (compared to 48 per cent nationally), wholesale costs accounted for 20 per cent (22 per cent nationally), retail costs and margin 12 per cent (24 per cent) and environmental costs 4 per cent (7 per cent nationally). Moreover, network charges had increased from 50 per cent in 2008/09, whilst wholesale costs had decreased from 41 per cent. Retail charges have increased from 7 per cent and environmental costs from just 1 per cent.

[1] ACCC, *Retail Electricity Pricing Inquiry – Preliminary Report*, p. 5 (hereafter *Preliminary Report*)



Source: Goanna Energy Consulting Pty Ltd and Savvy Plus Consulting Pty Ltd.

This analysis further shows that wholesale costs increased to 24 per cent in 2016/17 (driven mainly by the treats to Tasmania's energy security in the second half of that year) and would have increased to 35 per cent of the small business cost stack in 2017/18 were it not for the State Government cap on wholesale prices. Meanwhile, network charges reduced their share to 57 per cent in 2016/17 and 46 per cent in 2017/18, driven by TasNetworks' lower growth in revenue and the reduction in the small business tariff cross-subsidy. The share of retail charges remained steady.

3.3 How Electricity Markets Are Functioning

We note the ACCC's comment that "the wholesale (generation) market is highly concentrated and this is likely to be contributing to higher wholesale electricity prices."[2] This is of interest to the TSBC for two reasons.

First, as the Tasmanian market is dominated by Hydro Tasmania it certainly has the ability to impact Tasmanian wholesale spot and contract prices should it wish to do so. This was a concern for the Independent Panel who described Hydro Tasmania as possessing "latent

[2] *Preliminary Report*, p. 7.

market power" and recommended structural reform to make the Tasmanian wholesale market more competitive and encourage entry by new retailers. The Independent Panel recognised that Hydro Tasmania had shown restraint in exercising its market power but found that reliance on its benevolence was not sufficient to give comfort to potential new entrants. As mentioned earlier, the then Government decided to impose regulation of Hydro Tasmania's wholesale contracts in the hope of encouraging new retail entry but there has been none forthcoming. This is consistent with the position of potential new entrants in their input to the Independent Panel on the regulatory option for reform.

Secondly, the Tasmanian and mainland NEM wholesale markets are linked (through physical and financial flows) so that outcomes in the latter (especially in Victoria) will have an impact on Tasmania. In the case of smaller customers on regulated retail tariffs, the setting of wholesale costs in these tariffs has, until this year, had a direct link to Victorian wholesale prices. The Preliminary Report makes clear that the closure of coal-fired plant and the subsequent substitution of gas-fired generation (which is subject to gas price and availability pressures) has contributed to wholesale electricity price pressures. It specifically refers to the closure of Hazelwood power station in Victoria as contributing to tighter supply, higher concentration and higher prices in the wholesale market. Given the links that Tasmania has to the Victorian wholesale market this is a matter of concern to the TSBC.

Hydro Tasmania also exercises significant control over the Basslink interconnector and (subject to hydrological considerations) normally exports electricity into Victoria when prices there are high and imports from Victoria when prices there are low. Its control of Basslink adds further to its considerable market power.

We urge the ACCC to examine the Tasmanian wholesale market closely in the lead up to its Final Report and make recommendations on how it could be improved for the long term benefit of Tasmanian electricity consumers.

The ACCC Preliminary Report outlines how retail markets in the NEM have an abundance of retailers but are, for the most part, dominated by 'the big three' vertically integrated retailers. The report also shows how this market structure has disadvantaged the smaller and non-vertically integrated retailers through limiting their access to risk management products and produced outcomes for consumers that are not consistent with vigorous competition. In Tasmania retail concentration is even more detrimental to consumers, especially small ones. There is simply no retail competition. ERM has attempted to compete for small business customers but has apparently found the going tough. With little 'head room' in regulated tariffs, it has lost customers and market share and the capping of wholesale prices within the retail tariffs for 2017/18 has driven small customers on market contracts back to the safety of regulated tariffs, which are now lower than market offers.

Vertical integration is not an issue *per se*, but government ownership of both Hydro Tasmania and Aurora Energy creates at least a perception of opportunities for joint action and market dominance, which is a barrier to new retail entry. Hydro Tasmania's dominance of the wholesale market also acts as a risk management constraint and deters new entry.

As alluded to earlier in this submission, in setting regulated retail tariffs, the TER sets a CARC and a retail margin for Aurora as if it were competing with a new entrant retailer, which it is not and has no real risk of facing unless current policy settings change. Whilst retail charges remain a far lower proportion of retail bills in Tasmania than nationally, this merely imposes additional (unnecessary) costs on Tasmania's small businesses and households. In the unlikely event that Aurora was to face a competitor, it could always seek to reopen the TER's determination.

Notwithstanding its finding of shortcomings in retail markets, we note that the ACCC has made few recommendations to overcome these in its Preliminary Report. We assume that this is due to the fact that it has not yet completed its analysis of data and information about the retail sector. We look forward to a stronger and more comprehensive set of recommendations and actions in the Final Report. We also urge that, in its Final Report, the ACCC more closely consider the impacts of the Tasmanian specific retail issues we have raised above on Tasmanian consumers and recommend appropriate reforms.

In relation to network charges and their regulation, the ACCC has found that electricity network operators have been able to over-invest in poles and wires as a result of the network regulation framework and the limited merits review (LMR) regime. This is a disturbing but factually correct conclusion. As mentioned in section 3.2, network charges in Tasmanian small business tariffs increased significantly from around 2008/09 until 2015/16 reflecting these factors. Since then network charges for small business have fallen on account of the changes to the regulatory regime mentioned by the ACCC and (even more importantly), the impact of low interest rates on the cost of capital and TasNetworks' moderating its expenditure proposals (in support of the Tasmanian Government's policy to restore Tasmania's advantage in competitive energy).

Nevertheless, the TSBC has concerns about several aspects of network pricing and its regulation, which can embed inefficiencies in energy networks and spark a new outbreak of price increases in future:

- Notwithstanding some improvements, the network regulation remains imperfect (this is recognised in the Preliminary Report) and is in need of further overhaul. Some examples of this include, still excessive rates of return due to inappropriate setting of some Weighted Average Cost of Capital (WACC) parameters (hopefully the current AER review of its Rate of return Guideline will progress this) and setting the cost of debt for government owned networks so that it reflects their actual debt raising costs not (higher) private borrowing costs.

- Available evidence such as AER economic benchmarking of networks and other research confirms that government owned networks are less efficient and productive than privately owned ones, with consumers paying higher prices as a result. Whilst public ownership gives Governments more control over network price outcomes, this can work for or against consumers. In Tasmania at present the Government is supportive of efforts to lower network prices or maintain them at current levels. But this is not always the case with governments also supporting (or turning a blind eye towards) substantial increases in network prices, from which they can benefit financially through higher dividends and taxes.
- There should also be ongoing monitoring of and improvement to recent changes in the regime, including areas such as the capex and opex efficiency benefit sharing schemes, economic benchmarking and service target performance incentives.
- The ACCC has welcomed and supports the removal of LMR. We agree that this means of appeal has worked massively to the advantage of network owners and against consumers. Nevertheless, an appeal mechanism (if well put together) can play an important role in keeping the AER accountable. Our concern is that reliance on judicial review will lower the AER's accountability and will not be accessible to consumers. The AER has signalled that it intends to engage in more detail with networks and consumers after the removal of LMR in order to obtain less adversarial regulatory outcomes. This is welcome but it remains to be seen if it will achieve an acceptable level of accountability and agreement between the parties.
- Consumer engagement has improved but the efforts of the networks need to progress further so that customer preferences are more central to their efforts. We note that TasNetworks is actively engaged in such a process and welcome this.

The ACCC has noted that the impact of past regulatory decisions will be felt in network prices for decades to come, but appears to have accepted this as a *fait accompli*. It is not acceptable to the TSBC that regulatory shortcomings should be paid for by consumers and we strongly urge the ACCC to consider how these can be unwound from network prices, including options such as downward adjustment in asset valuation.

The TSBC encourages the ACCC to develop a set of strong recommendations that will deliver better network regulation with prices based on improved cost efficiency and productivity, efficient rates of return (reflecting realistic costs of debt and equity), the knowledge that private ownership delivers better outcomes for consumers and that involves a high degree of accountability to consumers.

We note and support the ACCC's finding that environmental schemes have increased the cost of electricity to consumers and created cross-subsidies. As alluded to in Section 3.2, they have grown from 1 per cent of small business electricity bills in Tasmania to 5 per cent in less than ten years. Given this and the renewable energy sector's position that the

continuing decline in wind and solar costs is now approaching the point where they can compete with thermal power, we can see no reason why the RET should continue to support new projects beyond 2020. Moreover, under the National Energy Guarantee the RET would be closed off to new projects after that date.

3.4 Consumer Experience

The most significant issue for customer interaction with the Tasmanian retail electricity market is, without doubt, the lack of competition in the market for the reasons explained in other parts of this submission and in our previous submission. The matters raised in the ACCC's Preliminary Report in relation to customer experience are no doubt very important in parts of the NEM where competition is active but are of limited relevance to Tasmanian small businesses in the absence of retail competition. Hopefully, this will change in future including as a result of the ACCC's Final Report. In the meantime, we support many of the findings of the ACCC in relation to gaps in customer interaction with the retail market and look forward to additional recommendations on these matters in its Final Report, recognising that improved interaction with the retail market will benefit Tasmanian consumers once they have access to a competitive market.

4 Tasmanian Electricity Issues for Further ACCC Consideration

Although we do not intend to repeat all the information provided in our submission on the ACCC's Issues Paper here, in light of the limited recommendations in the ACCC's Preliminary Report, its limited coverage of Tasmanian issues and the Commission's intention to undertake further assessments for its Final Report, we will summarise below some of the issues raised in our earlier submission (not discussed earlier in this submission) that are relevant to Tasmanian small business, as well as updating some in light of more recent information. The Commission is referred to our earlier submission and the various supplementary documentation we provided in support of it for more detail.

We reiterate our comment that the TSBC looks to this Inquiry to propose reforms that will deliver competitive retail electricity prices in future that are commensurate with Australia's rich energy endowment, including in Tasmania.

We maintain our belief that neither the CARC nor the high retail margin is consistent with the TER's role of ensuring Aurora does not price with monopoly power and has efficient costs. Aurora's costs and returns are unnecessarily inflated by the TER's approach (i.e., not efficient) and it is possible for Aurora to use this revenue to help it fend off competition.

The review of Tasmanian wholesale market price regulation by the Tasmanian Department of Treasury and Finance referred to in our earlier submission has now commenced[3] and the TSBC hopes to contribute input to the review. One early concern we have is that the review should not be narrowly focused and should not focus solely on regulatory options.

The introduction of time-of-use (TOU) network tariffs in Tasmania is estimated by TasNetworks to allow a typical small business to save $2,400 per annum (42 per cent) compared to 2016/17 tariffs (with around $1,800 of this accounted for by the cross-subsidy in the legacy network tariff). Such savings are welcome but we note that not all small businesses can take advantage of TOU pricing (e.g., their ability to change their consumption patterns may be constrained by inflexible operations) and to take advantage of TOU tariffs, they must install a three rate meter, which carries additional offsetting costs. In addition, Aurora has only recently introduced corresponding TOU pricing at the retail level and little promotion of these new options has been undertaken.

Additionally, the timeframe for removing cross-subsidies in Tasmanian network tariffs is inordinately long (up to 15 years), disadvantaging those who bear the costs of cross-subsidies (including small business) and there are inconsistencies between small business network and retail tariffs (e.g., the latter contain two consumption blocks).

In Tasmania the RET contributes to the market dominance of Hydro Tasmania, which owns (solely or jointly) nearly all the State's wind capacity and it is virtually the only party entering into Power Purchase Agreements for wind energy as the only natural seller of "Firming" capacity. This poses a further barrier to entry.

Hydro Tasmania also owns the TVPS (previously it was owned by Aurora Energy), which has further enhanced its market dominance and discouraged generator competition. The change in ownership has altered the role of the power station from one of competing with Hydro Tasmania to a portfolio optimisation tool and being operated for energy security purposes. The Independent Panel had recommended the sale of the TVPS, with transfer to Hydro Tasmania being its least preferred option and then only if accompanied by the separation of Hydro Tasmania's trading functions into three competing entities.

The introduction of TOU tariffs in Tasmania should be an incentive for competition in energy services but to be fully taken advantage of by consumers this needs to be complemented by retail competition.

[3] See http://www.treasury.tas.gov.au/government-businesses/strategic-reviews/review-of-the-tasmanian-wholesale-electricity-market-regulatory-pricing-framework.

Brokers and energy consultants, who can assist small business exercise choice and access competing market offers find the Tasmanian market difficult due to the lack of competition, a situation exacerbated by the capping of 2017/18 wholesale prices in regulated tariffs, which has resulted in market offers often being higher than regulated tariffs. A brokerage firm identifying a regulated tariff as the most economical choice for the consumer is unable to access a Retail commission where the consumer takes up that impartial advice.

At the time of writing, the contract for gas transmission to the TVPS (which needs to be renegotiated by the end of the year) remains outstanding. As indicated in our previous submission, the existing contract largely underpins the viability of the Tasmanian Gas Pipeline (TGP) and keeps transmission charges for all gas customers lower. This is a matter that could impact the survival of the Tasmanian gas market and the access of Tasmanian small business to gas. We remain hopeful that it will be satisfactorily resolved but register it as an ongoing concern for the ACCC Inquiry to consider.

5 Conclusions and ACCC's Next Steps for the Inquiry

The ACCC has said that it intends to undertake additional work and thinking in the period between the release of its Preliminary Report and due date for its Final Report. We welcome this and urge that it focus on the key areas of the cost stack, that is, how to improve the wholesale market, network regulation and pricing, environmental charges and the retail market. On the latter, its competitiveness, its costs and what reforms would benefit consumers would seem to be paramount for consumers.

More generally, we note the limited range of recommendations and actions in the Preliminary Report and urge the ACCC to provide a comprehensive blueprint for competitive electricity throughout the NEM in its Final Report. Its information gathering powers can be used to assist in this regard. Moreover, we would welcome a stronger jurisdictional focus encompassing Tasmania and its small business consumers.

The ACCC has indicated that it intends to engage with consumers, electricity businesses and other stakeholders in developing its Final Report, that it may hold meetings with stakeholders and that it may convene public hearings. It should include Tasmania in such consultations, including public hearings. The TSBC would welcome additional engagement with the ACCC as it prepares its Final Report, including in helping it formulate its final recommendations, especially as they impact Tasmanian small businesses.

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

Goanna Energy Consulting Pty Ltd

Tasmanian Small Business Council
Uniting Small Business

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

What are cross-subsidies?	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).
Tasmanian electricity tariffs	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. 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.

	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. Whilst small business is able to enter the competitive market and by-pass regulated tariffs, the fact is that very few have done so.
How are costs allocated to electricity tariffs? Does this show that cross-subsidies exist?	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. 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.
Is small business subsidising other electricity tariffs?	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.
What is the impact of small business cross-subsidies?	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. 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.

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 intension 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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- Tasmanian small business electricity tariffs
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1 Introduction

The Tasmanian Small Business Council (TSBC)[1] 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).

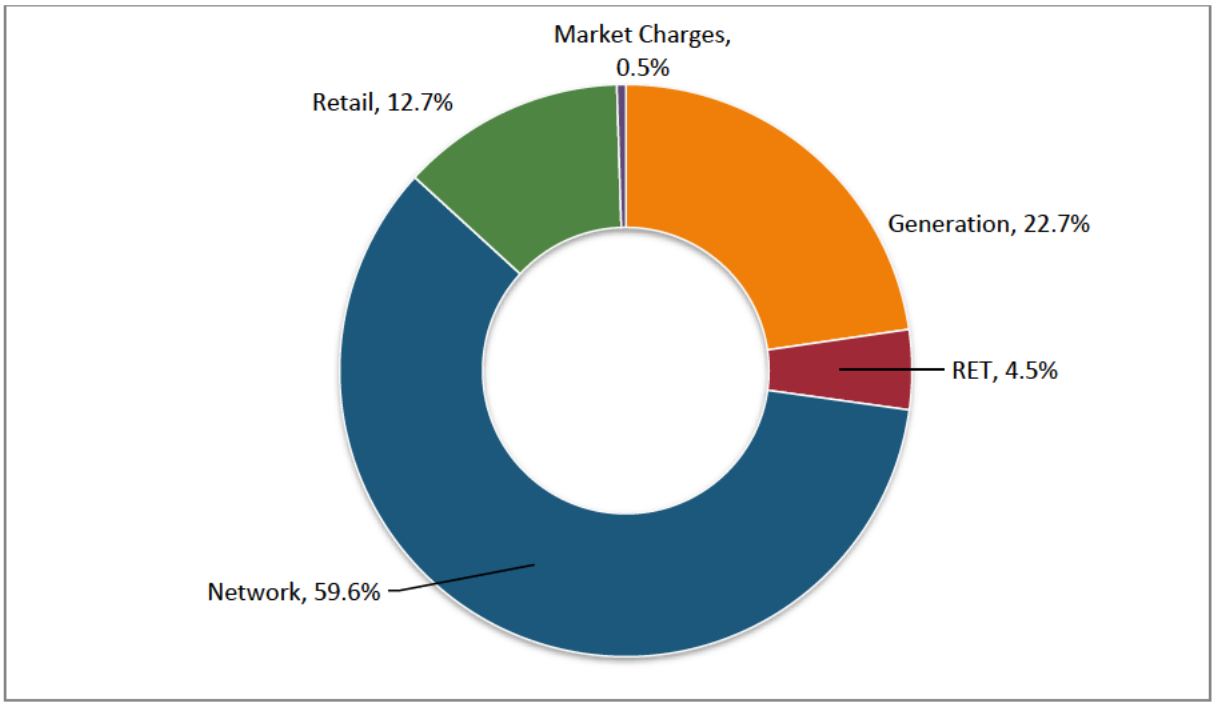
[1] The TSBC is the representative body on small business in Tasmania. Among the services it provides to Tasmanian small businesses is acting as an informed voice through its advocacy. For a number of years, it has taken a leading role in energy (electricity and gas) advocacy. See http://www.tsbc.org.au/.

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

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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[2], attributable[3] and unattributable[4] 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.

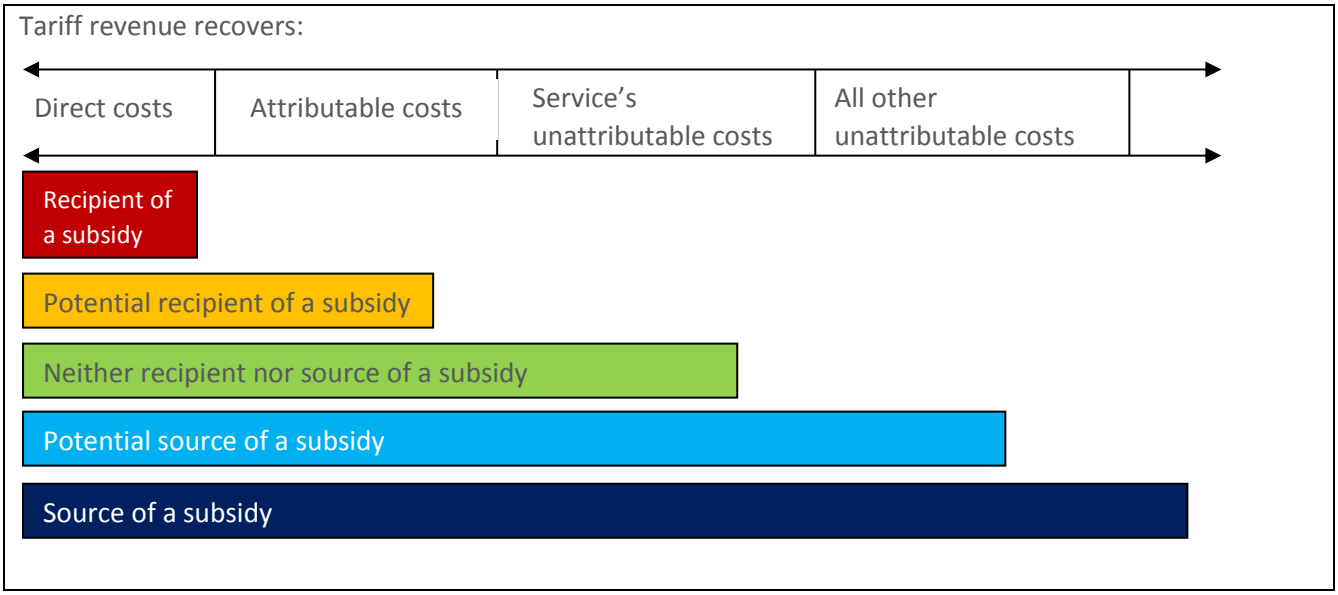
The above discussion is shown diagrammatically in Figure 2 on the following page.

[2] 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.

[3] 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.

[4] 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.

3

Are There Cross-subsidies in Tasmanian Electricity Tariffs?

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

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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.[5]

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).

[5] 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."*[6]

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 an 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.

[6] 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.[7]

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."*[8]

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."*[9]

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.

[7] 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.
[8] Office of the Tasmanian Economic Regulator, *2013 Standing Offer Determination*, June 2013.
[9] 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.[10]

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.[11] 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

[10] 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.
[11] 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."[12] 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.

[12] 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."*[13]

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."*[14]

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."*[15]

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.

[13] Aurora Energy, *Draft Standing Offer Price Strategy*, 12 Feb 2016, p. 15, our parenthesis
[14] Aurora Energy, *Final Standing Offer Price Strategy*, May 2016, p 14.
[15] 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 (TASSDM)	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-subsides, there is lack of transparency associated with the cross-subsidies in Tasmanian electricity tariffs. Whist 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."*[16]

[16] 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."*[17]

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 intension 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.

[17] TasNetworks, *Tariff Structure Statement*, 29 January 2016, p. 27.

Individual small businesses may benefit from these new tariffs and should investigate them further.[18] 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.[19] 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 pubic 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.

[18] Goanna Energy has advised customers who benefitted by changing their network tariff.
[19] Aurora Energy, *2016 Standing Offer Price Strategy*, p. 23.

4

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.[20] 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).[21] 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.

[20] Office of the Tasmanian Economic Regulator, *Typical Electricity Customers Information Paper,* May 2014.
[21] *Ibid*.

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

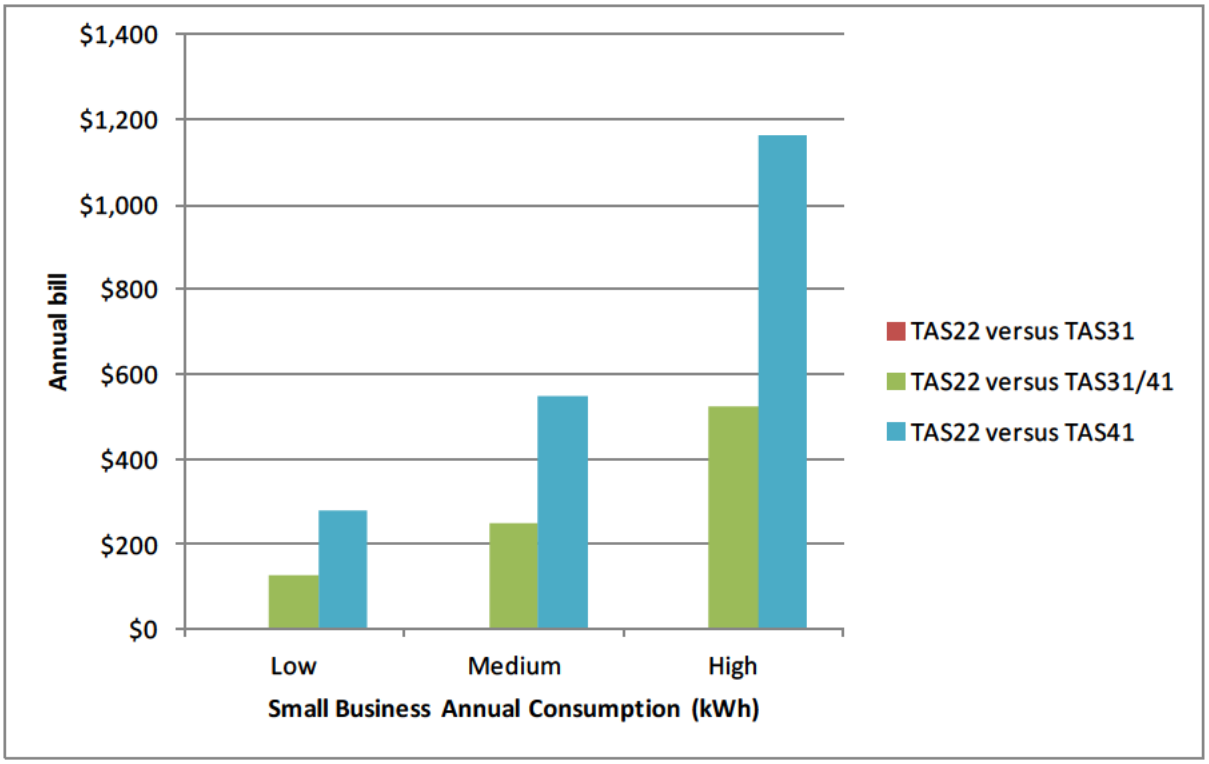
4.2 Small Business Tariff Cost Disadvantage

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

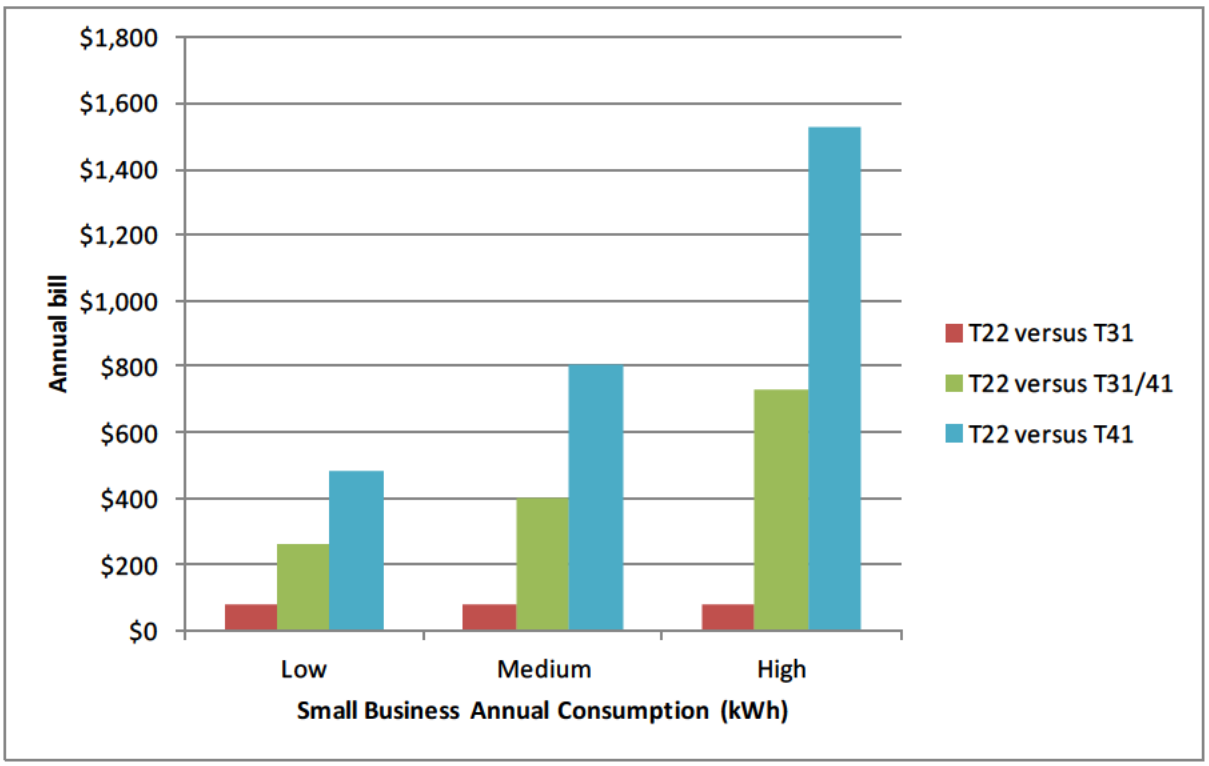


Source: Goanna Energy Consulting

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

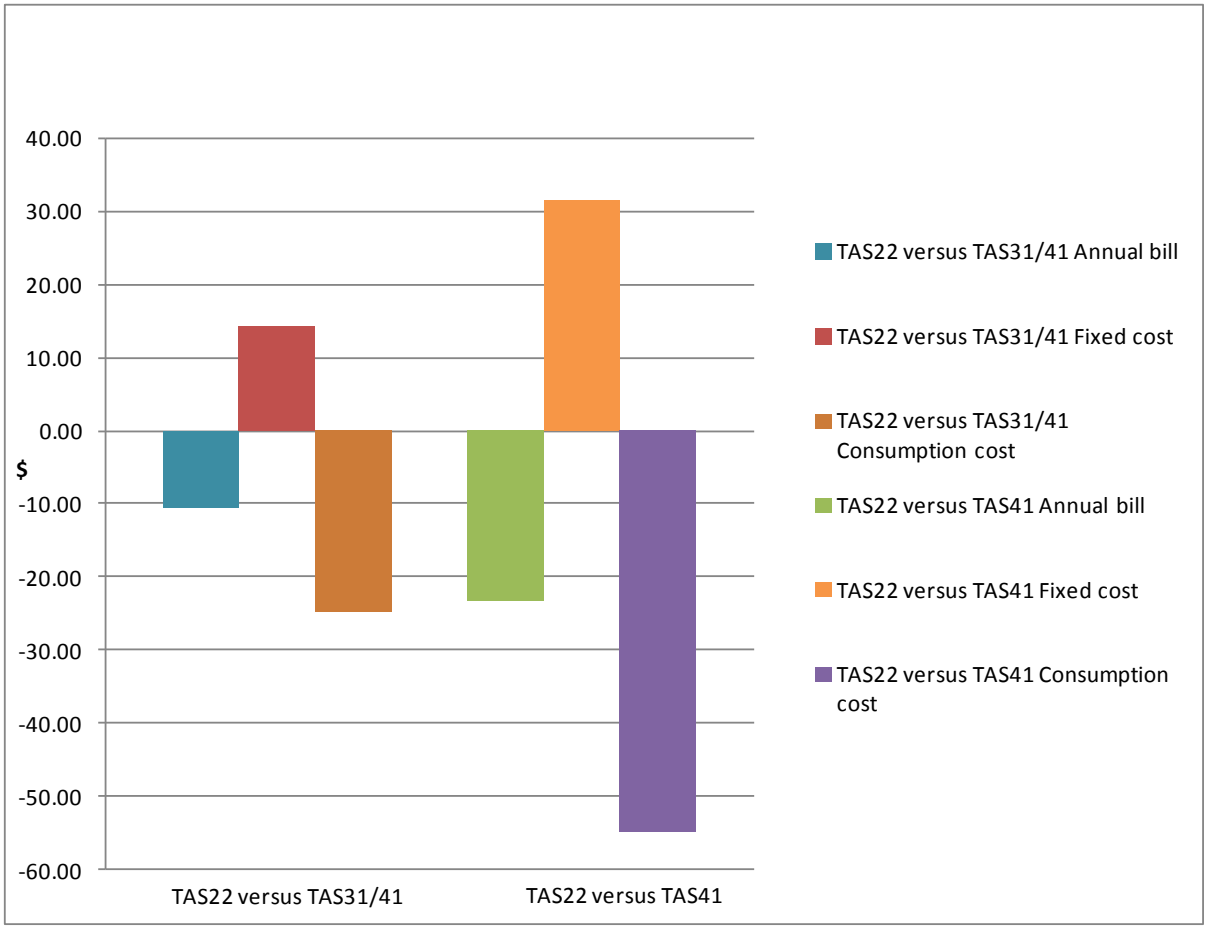


Source: Goanna Energy Consulting

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.

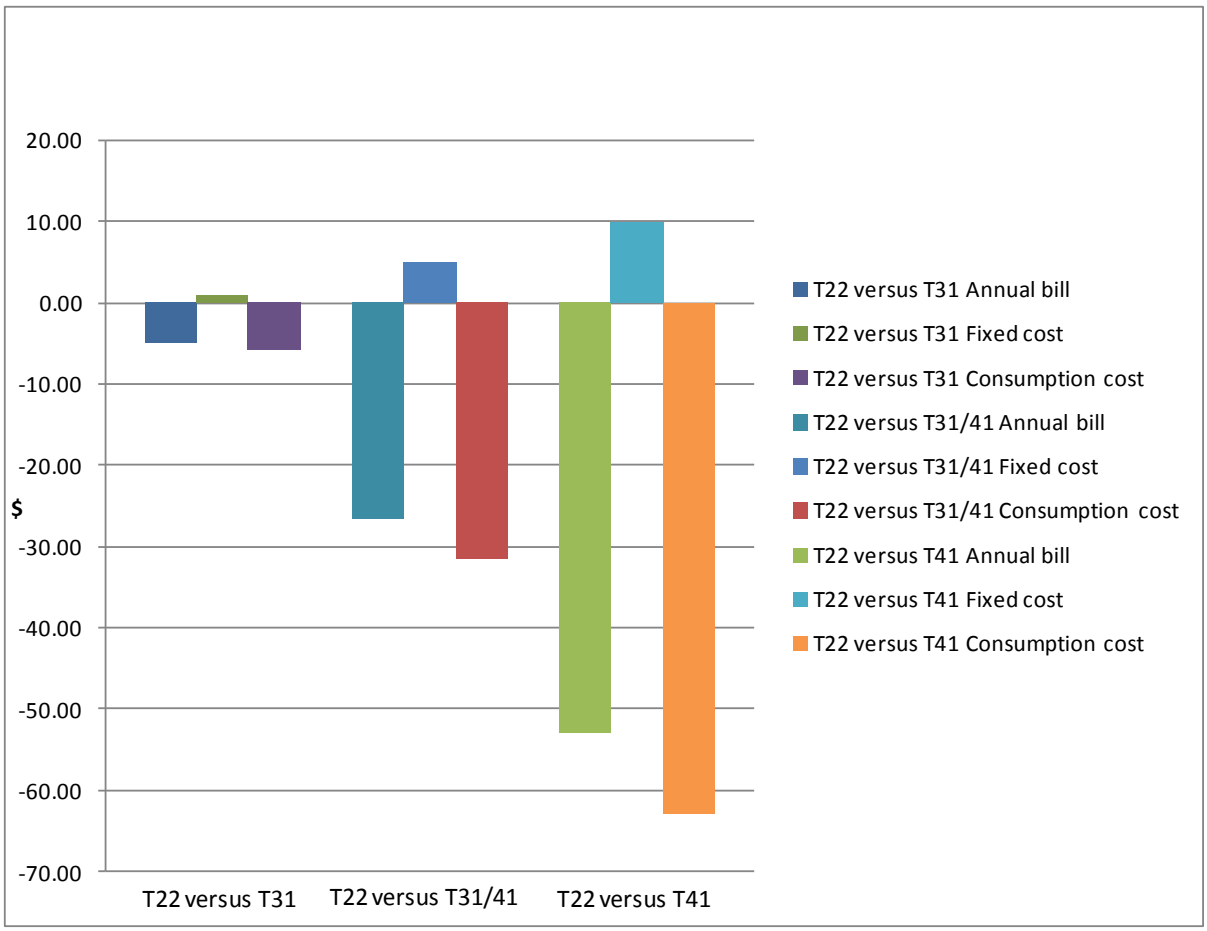
Figure 5: Change in Small Business NUoS Tariff Cost Disadvantage, 2012/13 to 2016/17 (nominal)



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.[22]

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 intension 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.

[22] 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.

5

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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Tasmanian Small Business Council
Uniting Small Business

Tasmanian Wholesale Electricity Market Study

Final Report

January 2018

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We would like to thank the TSBC for giving us the opportunity to undertake this project.

KEY POINTS

- The report begins by describing the National Electricity Market (NEM) wholesale market, how it works, its key features and competition within the market (including highlighting its gaps).
- The structure of the Tasmanian wholesale electricity market is then examined, including its lack of competition, the dominance of Hydro Tasmania, the Tasmanian market's strong links to the Victorian market and the former's high degree of regulation.
- The study describes how Tasmanian wholesale electricity prices are determined and examines historical wholesale prices in Tasmania and the NEM, noting price volatility, its causes and the close links between Tasmanian and Victorian prices.
- Tasmanian wholesale electricity prices have a significant bearing on retail electricity prices for small business, accounting for about 37 per cent of small business electricity bills.
- Tasmania is the most regulated and least competitive wholesale electricity market in the NEM and is also the only NEM State with near total Government ownership of electricity assets.
- Following an extended period of (almost a decade of) relatively benign wholesale electricity prices, they began to increase significantly in Tasmania in 2015 in response to low dam levels and a prolonged outage of the Bass Strait interconnector.
- Then in 2017 wholesale electricity prices increased rapidly across the NEM, including Tasmania, due to factors such as major coal and gas electricity generation plant closures (due in part to subsidy driven renewable energy capacity flooding into the NEM), tight gas supply and high gas prices, the exercise of market power by generators and significant uncertainty in policy settings.
- Wholesale market power and regulation are strong barriers to competing electricity retailers entering Tasmania. Structural reform is needed to change this and give small business access to competing retailers and price discounting.
- Whilst this is challenging, e.g., because any change to Hydro Tasmania's ownership and the inclusion of 'head room' in regulated retail electricity tariffs is likely to be initially unpopular, major benefits are possible, especially if reforms in Tasmanian and the NEM succeed in making the market more competitive.

- Nevertheless, wholesale market regulation has provided Tasmanian small businesses with some benefits including: regulated retail electricity prices that contain only limited 'head room', albeit with retail costs that are inflated by the inclusions of retail costs reflecting a (non-existent) competitive Tasmanian market: and government intervention in 2017 to cap the increases in wholesale costs in 2017/18 regulated retail electricity prices.
- The large increases in Tasmanian wholesale electricity prices in 2015 and the first half of 2017 are described and assessed. Record high prices were experienced in both periods. Causes include: the closure of significant baseload capacity in the NEM; associated changes in interconnector flows; changes in the bidding behaviour of generators; tight gas supply and higher gas prices (gas is a significant fuel for power generation in the NEM).
- Forward wholesale prices for 2018 and 2019 remain historically high but have softened somewhat on 2017 levels.
- Consistent with the forward prices, our modelling of the wholesale electricity price outlook shows high prices remaining in 2018, 2019 and 2020, but with some softening apparent. Victorian prices generally soften by more and faster than do Tasmanian prices.
- Regulation of Tasmanian wholesale electricity prices is via Hydro Tasmania's wholesale contracts and application of Victorian wholesale prices (adjusted for transportation losses) in setting regulated retail tariffs for small business and households.
- As already mentioned, the Tasmanian Government intervened in this process in 2017 to prevent large increases in Victorian wholesale prices from being fully reflected in Tasmanian regulated retail tariffs.
- It also signalled its intent to do so again if future wholesale price increases warrant.
- This has benefitted Tasmanian small businesses (and households) by keeping electricity prices lower than they otherwise would be, but also raises important issues about the independence of price regulation, has increased the risks to retailers of entering the Tasmanian market, which is a barrier to competition and raises numerous potential unintended consequences.
- Meanwhile, the Tasmanian Department of Treasury and Finance is reviewing the regulation of wholesale electricity prices. The review will report by mid 2018 and will need to examine the efficacy of price regulation and its impacts on consumers, including small business.
- This report is an important basis for information, advocacy and capacity for the TSBC which should advocate strongly on wholesale market reforms (national and Tasmanian) that would benefit Tasmanian small businesses.

Executive Summary

- The NEM Wholesale Market
- The Tasmanian Wholesale Market
- Tasmanian Wholesale Market Regulation
- Second Bass Strait Interconnector & Hydro Tasmania Expansion
- Tasmanian Wholesale Market & Energy Security
- Tasmanian Wholesale Prices & Their Drivers
- High Wholesale Electricity Prices & Outlook
- Tasmanian Government's Response
- Conclusions & Findings

Goanna Energy Consulting Pty Ltd

Tasmanian Small Business Council
Uniting Small Business

Executive Summary

This study examines the role, purpose and performance of the Tasmanian wholesale electricity market and its relationship to and impacts on small business in Tasmania. It was commissioned by the Tasmanian Small Business Council (TSBC).

There are three important reasons for the study. First, the role of the Tasmanian wholesale market in a small business context has never been examined before. Secondly, wholesale electricity prices have been rising rapidly across the National Electricity Market (NEM), including in Tasmania, and electricity futures prices remain high. Finally, the results of the study will allow the TSBC to build its capacity on the Tasmanian wholesale electricity market and to advocate for its further development and reform.

The NEM wholesale market

There are important relationships between the NEM and Tasmanian wholesale markets, including similar pricing outcomes that reflect electrical interconnection and associated trade.

The Australian wholesale electricity market comprises a physical market for electricity and an associated financial derivatives market. The physical market is an electricity spot market into which generators sell and retailers buy electricity to on-sell to consumers. The Australian Energy Market Operator (AEMO) dispatches generation so that supply and demand are met instantaneously.

The electricity spot market is extremely volatile due to factors, such as available capacity and demand, the need to continuously and instantaneously meet demand, unexpected generator outages, network constraints and weather. Volatility exposes wholesale market participants to considerable financial risks. To manage volatility, generators and retailers negotiate financial contracts (known as derivatives or hedges) that lock in a price for a specified volume of electricity bought in the future. This process is independent of the spot market, as either ASX energy market or over-the-counter trades. Derivatives generally include a premium for risk over the expected spot market price. NEM participants may therefore choose to retain some exposure to the spot market.

Although there is competition between generators and retailers in the NEM, many parts of the NEM are highly concentrated (and becoming more so) through the vertical integration of generators and retailers into so-called ‘gentailers’, due to thermal generation plant closures, tight gas supply and high gas prices. This is confirmed by the Australian Energy Regulator’s (AER) competition indices and its analysis of generator market behaviour. NEM retail markets are also concentrated with ‘the big three’ retailers – AGL, Energy Australia and Origin Energy – dominating. The Australian Competition and Consumer Commission (ACCC) have also raised serious competition concerns about the NEM.

Wholesale prices in all parts of the NEM increased significantly in 2016/17, following a sustained period of relatively benign prices. By May 2017, Victorian base futures prices had reached around $120/MWh, having risen from a level of around $40/MWh a year earlier. This reflects the closure of a significant thermal generation capacity (coal and gas), a flood of new subsidised renewable energy capacity, tight gas supply and rising gas prices, uncertainty over government energy and climate policies, and strategic bidding by some generators with market power.

The Tasmanian wholesale market

The Tasmanian wholesale electricity market is different to the rest of the NEM. It is even more concentrated and regulated with competition all but absent. This structure is not just a product of the small size of the market, but also reflects past policy choices.

Changes to wholesale contract regulation were introduced in 2014 to assist new entrant retailers manage the risks of entering spot and contract markets dominated by Hydro Tasmania, to help counteract Hydro Tasmania's market power, and to facilitate the introduction of Full Retail Competition (FRC).

Hydro Tasmania, a government owned business, owns, or otherwise through Joint Ventures controls, 96 per cent of generation capacity. Measures of generator concentration show Tasmania to be by far-and-away the most concentrated region of the NEM. Moreover, Hydro Tasmania also exercises significant influence over the Basslink interconnector, so that the competitive role that inter-regional trade plays elsewhere in the NEM is all but absent in Tasmania.

The Expert Panel on the Tasmanian Electricity Supply Industry (Expert Panel), which reported in 2012, found that: Hydro Tasmania controlled both the spot and derivatives markets in Tasmania; it could set prices at will; its output is required to meet Tasmanian demand under virtually all market conditions, giving it a unique ability to 'give less and take more'; it has the ability to determine a new entrant's retail margin through its unilateral pricing decisions, thereby creating a squeeze between the cost of supply and regulated retail prices; growth in on-island supply from Hydro Tasmania controlled wind farms has added to an oversupply of electrical capacity; and its low historical costs and economies of scale mean that any new generation would suffer from a cost disadvantage.

The Expert Panel recognised that Hydro Tasmania did not always use its market power and described it as having a high degree of *latent* market power, but found that the above conditions were sufficient to deter new entry into Tasmania, especially by the larger mainland retailers, who it recognised would be needed for retail competition to take hold in Tasmania.

Moving beyond the current regulatory approach to the Tasmanian wholesale market is critical to improving the opportunities for competition in Tasmania. The Expert Panel raised for consideration a range of structural reform options starting with the separation of the Tamar Valley Power Station (TVPS) from Hydro Tasmania, but found this to be insufficient to deal with Hydro Tasmania's market power, whilst being a worthwhile step to consider as part of deeper structural reforms. Its preferred 'gentrader' recommendation would see Hydro Tasmania's trading functions hived off into three government-owned trading entities, which it found would deal effectively with Hydro Tasmania's market power. However, some of the larger mainland retailers expressed the strong view that to either selling the 'gentraders' to potential new entrants, or selling Hydro Tasmania's joint physical and trading functions as three separate businesses, was necessary to attract them to Tasmania. This option is therefore more likely to stimulate retail competition.

Tasmanian retailers serving small business and residential customers can either enter into market based wholesale contracts or use Hydro Tasmania's regulated contracts. Tasmanian retailers can also buy electricity from the NEM spot market. In actuality, retailers will adopt a mix of these.

The presence of a single retail buyer and (more importantly) a single seller of generation products in the Tasmanian wholesale market is a major reason for the lack of competition in the State's retail electricity market. Potential new entrants, including large mainland retailers, have consistently raised Hydro Tasmania's dominance as a significant barrier to entry.

This has deterred new retailers from entering Tasmania and placed FRC in a 'Clayton's choice' framework. Consequently, small businesses have very limited access to competitive market pricing and miss out on the benefits of competition enjoyed by their peers elsewhere in the NEM, such as discounting.

Structural reform is, in our view, needed to stimulate retail entry so that small business gets access to a competitive retail market and competitive prices.

Tasmanian wholesale market regulation

The current regulated wholesale market framework has been in place for three years and retail competition, including for small businesses, has largely failed to materialise. As a result, small business is virtually excluded from retail choice and competitive prices, and the Tasmanian wholesale electricity market is the most regulated wholesale market in the NEM. This is achieved through the regulation of Hydro Tasmania's wholesale electricity contracts by the Tasmanian Economic Regulator (TER). Regulated contracts must be offered to retailers operating in Tasmania that closely resemble derivative contracts commonly used in the NEM. This is to ensure consistency with other parts of the NEM so that the risks of operating in Tasmania are no greater than those in other parts of the NEM and limit Hydro Tasmanian's market power so as to encourage new retailers to enter Tasmania.

This has been a forlorn hope. The failure of any new retailers to enter the Tasmanian market in response to wholesale market regulation is undoubtedly due to the continued existence of structural impediments in the Tasmanian wholesale market, which the regulatory approach has not overcome. This is as predicted by the Expert Panel.

There are some positive aspects to wholesale market regulation in Tasmania, such as its stability, the familiarity of the regulated contracts used, the 'safety net' they offer against Hydro Tasmania's market power and oversight by an independent regulator. However, regulation has failed to deliver its main objective of retail competition and must be judged a failure. Even 'hit and run' niche entry has not materialised and there is no sign of any additional new entrants in the foreseeable future.

Second Bass Strait interconnector and Hydro Tasmania expansion proposals

Two prospective projects that could impact on the Tasmanian wholesale market are a second Bass Strait interconnector and expansion of Hydro Tasmania's hydro system, including pumped storage.

A second interconnector has recently been assessed as materially net benefit positive but only under two restrictive scenarios. If built as a regulated link, consumers would pay additional transmission charges in proportion to their use of the link, but could benefit if lower Victorian wholesale prices are reflected in Tasmania. If unregulated, consumer benefits would depend on the owner's bidding strategy, as well as on spot price differences between the Victorian and Tasmanian regions, the volume of the flows between them and competitive conditions in wholesale and retail markets.

Possible Hydro Tasmania expansion is being assessed. Whilst Tasmanian consumers could benefit, e.g., when exports to the NEM are not profitable, the additional electricity supply could be in the hands of Hydro Tasmania with its already substantial market power. Moreover, Tasmania already has significant excess electrical "capacity" (as opposed to "energy" in storage), which is already a barrier to new entry.

Pumped storage would compete to buy low priced "off peak" energy alongside irrigators, supermarkets, aged care providers, dairies and other small businesses, whilst seeking to arbitrage the value of this energy during "peak" price times. In essence, pumped storage reduces peak prices, at the expense of increasing off peak prices, with an inbuilt energy loss of about 20 per cent.

The Tasmanian wholesale market and energy security

Energy security is important to small businesses in Tasmania given their heavy reliance on electricity for their operations. The current wholesale market structure in Tasmania could pose some threat to energy security. The threat to energy security in the first half of 2016 highlighted possible deficiencies in present arrangements, including conflicts or tensions in Hydro Tasmania's energy security (water management) and commercial roles. Spot prices spiked to historically high levels in response to the supply shortages that followed. There were suggestions in a Goanna Energy report and in evidence to the Public Accounts Committee that Hydro Tasmania had placed its desire to maximise revenue during and after the carbon price period above the need for prudent water management. Its approach to the TVPS, which can play an important role in energy security, was also called into question, especially its attempted sale of the main closed cycle baseload turbine just before the emergency, then having to reverse this in the face of the energy security threats.

The Tasmanian Energy Security Taskforce (TEST) was established by the Government in the aftermath of the emergency and it has recently recommended some changes intended to strengthen Tasmania's energy security arrangements. This includes a degree of separation of Hydro Tasmania's commercial role through independent oversight, a new energy security framework and assessment process (including competitiveness criteria), more prudent water management, confirming the important roles of Basslink and the TVPS, timely negotiation of new gas supply arrangements for the TVPS (which are yet to be concluded but are now subject to compulsory arbitration) and ensuring that the Tasmanian gas market does not falter. However, the TEST did not make any recommendations to improve competitiveness in Tasmanian electricity, other than supporting new entrant renewables. The Government has accepted all the TEST's recommendations in full or in principle and has commenced the implementation of some.

Tasmanian wholesale prices and their drivers

Wholesale prices are an important component of regulated retail standing offer prices. The TER determines the Wholesale Electricity Price (WEP) as a key input to determining the Wholesale Electricity Cost (WEC) in Aurora's annual regulated revenue. The WEP is set with reference to Hydro Tasmania's regulated Load Following Swap (LFS) contract, which is then used along with a load forecast and (distribution and marginal) network loss factors to determine the WEC.

Wholesale costs make up around 37 per cent of the delivered cost of electricity to smaller Tasmanian consumers who are on regulated tariffs. This includes the vast majority of the 37,000 small businesses. Recently, wholesale costs have increased significantly right across the NEM, including Tasmania. The reasons for this were discussed earlier. Wholesale prices (2017/18 Flat Swaps) in Tasmania increased significantly from around $60/MWh in mid 2016 to reach a high of around $125/MWh in April 2017. Whilst they have fallen somewhat since then, they remain historically high. Wholesale prices in Victoria are comparable, albeit somewhat higher. Prices for 2018/19 remain high at around $90/MWh.

The Tasmanian wholesale electricity spot market is characterised by repeated dramatic and short-term price spikes with prices heavily influenced by water storage levels and Hydro Tasmania's latent market power. Opportunistic or unexpected events can also have a major bearing on Tasmanian

wholesale prices, for example, the carbon tax drove prices up as did the extended six-month outage to Basslink from December 2015. Under normal conditions, wholesale prices closely approximate those in Victoria due to interconnection via the Basslink cable and its ACCC approved operating conditions, but if the link is constrained, local generation sets the spot price unfettered by competition from Victoria.

There have been numerous examples in the past where Hydro Tasmania has reduced non-scheduled generation during periods of high demand, with a cutback in the amount of low-priced generation capacity offered and an ensuing dispatch of high-priced generation, or where it has used outages in the TVPS (when owned by Aurora) to offer high prices. The most recent and significant of these high price events was prior to Basslink failing in late December 2015, and then during the interconnector's outage, which ended in June 2016. Hydro Tasmania had preceded this by running down storages during and after the carbon tax period (e.g., it created almost 1 million Large Electricity Certificates (LGCs) in 2015, valued at around $60M by late 2015), illustrating its conflicting commercial and energy security priorities and poor water storage management.

High wholesale electricity prices and price outlook

The average annual spot price in Tasmania for 2017 has been the highest on record, even including 2016 (when Basslink was out-of-service for six months). Victoria has also had record spot prices. Tasmanian forward wholesale prices for 2018 and 2019 remain historically high, but have declined somewhat from their record 2017 levels. The outlook for Victorian prices is marginally softer.

The cause of the 2017 record wholesale prices (and of the price outlook remaining high) reflects multiple local and national factors. First, there have been many coal and gas plant closures since 2009, amounting to a total of 6,000 MW, with replacement capacity around one-third of this, insufficient to maintain low prices. The impact of the closure of the large baseload Hazelwood Power Station in Victoria has been especially pronounced.

Secondly, interconnector flows have changed due to generation closures. Since Hazelwood closed, Victoria has been a net importer of (higher cost) generation from NSW and SA and this has lifted wholesale prices. At the same time, NSW has imported more electricity from Queensland and NSW's situation could worsen early next decade when the 2,000 MW Liddell power station closes.

Thirdly, there is evidence of strategic bidding of capacity in both Tasmania and Victoria impacting Tasmanian wholesale prices outside their competitive market levels. From January 2017, Hydro Tasmania re-priced its hydro generation and substituted more expensive gas generation. This turned around in May, which contributed to a softening of spot prices. Related to the closure of Hazelwood, generators in Victoria and Tasmania have also reduced low-priced capacity and replaced it with more expensive offers, with a significant impact on spot prices. Furthermore, during the second half of 2016, Hydro Tasmania generated above the baseline and created 1.7 million Large Generation Certificates (LGCs) under the RET, at an estimated value of some $140M.

Fourthly, high gas prices have led to gas-fired generation making offers at higher prices than in previous years. Gas prices in Victoria spiked in the first half of 2017 and they remain high in Queensland, albeit having softened somewhat. Gas prices may continue a downward trend as reports emerge of new coal seam gas being detected in NSW and Victoria and as other measures to increase supplies impact.

Finally, we also analysed demand to see if it has had any impact on the high wholesale prices. This showed that there was no discernible impact of demand on spot prices in Tasmania and Victoria.

Based on forecasts undertaken for this report, the outlook for Calendar Years 2019 and 2020 is for spot prices to soften further from 2018 levels due to an increase in generation supply, with Victorian spot prices to soften at a faster rate than in Tasmania. By 2019 and 2020, Victoria is expected to have a lower average spot price than Tasmania.

A recent wholesale price outlook published by the AEMC confirms these broad trends but suggests that Tasmanian wholesale prices could fall even further based on an anticipated large influx of renewable energy capacity into the NEM. However, the AEMC also warn that this will eventually result in thermal generation exiting the market, putting upward pressure on prices.

The Federal Government expects that the successful negotiation of the National Energy Guarantee (NEG) will reduce electricity prices further, but this policy has been criticised as being a disincentive to renewable energy investment and likely to put more market power into the hands of large incumbent retailers and generators, which could include Hydro Tasmania.

Some NEM businesses have responded to high electricity prices by searching for new ways to both save energy and contract for electricity. Energy efficiency efforts have become more commonplace, buying groups have been formed and some businesses, especially larger ones, have contracted to purchase renewable energy capacity either directly or indirectly. However, forecast softer wholesale prices and the lack of a competitive market in Tasmania may reduce the incentives to do so.

Tasmanian Government's response

Changes in wholesale electricity prices are normally passed through into retail prices. In the past, benign wholesale pricing has benefitted Tasmanian small electricity consumers due to this relationship in the determination of regulated retail prices. However, the Tasmanian Government recently legislated so that the wholesale price can be set by Ministerial Order rather than using the Victorian contract price. It did this because of an expected 15 per cent increase in regulated retail prices for small consumers due to large wholesale price increases in Victoria, with the aim of holding prices to no more than the CPI. It flagged its intent to do so again if future wholesale price increases warrant.

Notwithstanding the Ministerial Order, the WEP in this year's pricing approval has still increased by 35 per cent. Typical small business bills are still expected to fall by between 4.1 and 5.7 per cent due to significant reductions in network charges. If wholesale prices increase again in future, there may be no significant reduction in network charges to offset these (as occurred this financial year).

Whilst small business should welcome the Tasmanian Government's decision to insulate them from the full impact of the large increase in wholesale electricity prices, and acknowledging that the Government has placed a significant priority on keeping electricity prices affordable, there are broader and longer term implications from the Government's actions that should also be considered by the TSBC. These include: intervention in the previous method of determining wholesale prices in standing offers; a risk of prolonged, or uncertainty about, intervention if large increases in wholesale prices persist or return; detailed intervention in an independent regulatory process that helps to lower the risks of entry by potential new retailers; it might be perceived as a form of 'forum shopping' that increases the regulatory risks of retail entry; it represents intervention in the commercial decisions of Hydro Tasmania and Aurora and could impose a cost-price squeeze on them; higher wholesale costs have been accepted in other jurisdictions, albeit with some signs of greater intervention in future; it could raise unintended arbitrage opportunities; and it raises the

already high sovereign and regulatory risks associated with a lack of retail competition in the Tasmanian electricity market.

A Department of Treasury and Finance review of wholesale electricity market regulation now underway will need to consider these and other factors in developing Tasmanian wholesale electricity market reforms that help small business gain access to competitive electricity prices on a sustainable basis.

Conclusions and Findings

Tasmania has the most regulated and least competitive wholesale market in the NEM. It is also the only NEM State with near total government ownership of electricity. To date this has still benefitted small businesses to some extent thanks to a prolonged period of benign wholesale prices followed by intervention (once wholesale prices increased) based on government policy that is supportive of energy users, including small business. However, the wholesale market structure and its regulation have also prevented competition emerging and small business has missed out on the benefits of competition, such as price discounting, that is a feature of other parts of the NEM – even though there are market imperfections.

The Tasmanian wholesale market will need to change if small business is to get competitive pricing benefits on a sustained basis and be encouraged to innovate in their electricity use and purchasing. But such change is very challenging due to community scepticism about a sale of Hydro Tasmania and the presence of regulated tariffs that are a disincentive to new entrant retailers. Nevertheless, the TSBC should seek out and advocate for Tasmanian (and NEM) reforms that will benefit small business.

Contents

Abbreviations

ACCC	Australian Competition and Consumer Commission
ACT	Australian Capital Territory
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
ARENA	Australian Renewable Energy Agency
ASX	Australian Securities Exchange
COAG	Council of Australian Governments
Expert Panel	Expert Panel on the Tasmanian Electricity Supply Industry
FRC	Full Retail Competition
GJ	Giga joule (of gas)
HHI	Herfindahl–Hirschman Index
IRSR	Inter Regional Settlement Residue
JV	Joint Venture
kWh	kilo Watt hour
LFS	Load Following Swap contract
LGC	Large Generation Certificates
MPC	Market Price Cap
MW	Mega Watts
MWh	Mega Watt hour
NEG	National Energy Guarantee
NEM	National Electricity Market
NSW	New South Wales
OTC	Over-the-counter
QLD	Queensland
RET	Renewable Energy Target
RSI	Residual Supply Index
SA	South Australia
TAS	Tasmania
TER	Tasmanian Economic Regulator
TEST	Tasmanian Energy Security Task Force
TSBC	Tasmanian Small Business Council
TVPS	Tamar Valley Power Station
TW	Terra Watts
TWh	Terra Watt Hours
VIC	Victoria
WEC	Wholesale Electricity Cost
WEP	Wholesale Electricity Price

1

Introduction

- Background
- Purpose of Report
- Wholesale Market & Small Business
- Report Outline

1 Introduction

1.1 Background to and purpose of study

This study examines the role, purpose and performance of the Tasmanian wholesale electricity market and its relationship to and impacts on the small business sector in Tasmania. It also considers the relationship of the Tasmanian wholesale electricity market to the retail electricity market in Tasmania and the National Electricity Market (NEM) wholesale market.

There are three essential reasons for this study.

First, the role of the Tasmanian wholesale market in a small business context has never been examined before and the report will allow the Tasmanian Small Business Council (TSBC) and the broader small business sector in Tasmania to better understand how their electricity prices and supply are impacted by the wholesale market. In fact, wholesale costs are the second biggest component of small business electricity bills in Tasmania behind network (transportation) charges and make up 37 per cent of their bills.

Secondly, wholesale electricity prices have been rising rapidly over the past couple of years across the NEM, including Tasmania, and are forecast to remain high for the foreseeable future. As a result, the wholesale cost share of small business electricity bills has also increased. It is important for the small business sector in Tasmania to understand the reasons for this, how it has impacted their electricity bills (and might impact their bills going forward) and what steps could be taken to help alleviate the large increases in wholesale prices. As a supplementary point, the closure of the large baseload coal-fired Hazelwood Power Station in Victoria in March 2017, added impetus to the desire of the TSBC to increase its understanding of the impacts of this decision on electricity prices for Tasmanian small businesses.

Finally, the results of the study will allow the TSBC and Tasmanian small businesses to build their capacity in relation to the Tasmanian wholesale electricity market and to advocate on its further development and reform to the Tasmanian Government, the Tasmanian Economic Regulator (TER) and bodies such as the Australian Competition and Consumer Commission (ACCC), Australian Energy Market Commission (AEMC) and Australian Energy Regulator (AER).

1.2 Commissioning of Goanna Energy Consulting

The TSBC commissioned Goanna Energy Consulting Pty Ltd (Goanna Energy) to undertake the study. This was in recognition of our work and involvement in, and knowledge of the Tasmanian electricity sector, including the wholesale market, our work with Tasmanian small and medium sized businesses, our knowledge of the small business sector and our past electricity work for the TSBC.

1.3 Tasmanian Wholesale Electricity Market and Small Business

As alluded to earlier, wholesale electricity costs make up close to 40 per cent of small business electricity bills.

Small business electricity prices in Tasmania increased significantly from 2008/09 until 2012/13 driven mainly by large increases in network charges, the introduction of a carbon tax and rising

renewable energy subsidies. Wholesale electricity prices remained relatively flat through most of this period.

Thereafter, there was a short period of flat electricity prices as network charges peaked and began to decline to some extent, wholesale prices remained flat and the carbon tax was abolished. However, this was offset to some extent by rising renewable energy and retail charges.

From 2015/16, wholesale prices began to increase significantly although overall price increases for small business were somewhat offset by further reductions in network charges, and relatively constant retail charges and renewable subsidies. (It should also be noted that intervention by the Tasmanian Government in the setting of wholesale prices in regulated retail tariffs for 2017/18 has prevented the large increases in wholesale prices from flowing through to small business tariffs.)

These trends underlie a growing concern amongst Tasmanian small businesses about their electricity prices and a concern that they will increase further in future with significant impacts on their operations and ability to invest in Tasmania and employ Tasmanians. Partly as a result of this, the TSBC has significantly increased its interest in and advocacy on energy issues.

1.4 Outline of Report

This report is structured as follows.

Chapter 2 examines the Tasmanian wholesale electricity market. It considers its relationship to the NEM wholesale market, the structure of the Tasmanian wholesale market, its regulation, proposals to expand interconnection and hydro-electric capacity, the market's impacts on small business and the links between the wholesale market and energy security. There is also discussion of possible reform of the Tasmanian market and options for doing this.

Chapter 3 discusses NEM and Tasmanian wholesale electricity prices, key drivers for recent increases in wholesale prices, the outlook for wholesale prices and the results of some modelling of future wholesale prices. It further examines how wholesale prices in Tasmania are regulated and their impacts on small business retail electricity prices. There is also discussion of the recent decision by the Tasmanian Government to cap retail electricity price increases for small business and residential consumers for 2017/18 in order to avoid otherwise large increases in wholesale prices.

Finally, Chapter 4 presents our findings and conclusions for our client, the TSBC

2

The Tasmanian Wholesale Electricity Market

- NEM Wholesale Market
- Structure of the Tasmanian Wholesale Electricity Market
- Key Points

2 The Tasmanian Wholesale Electricity Market

This Chapter discusses the Tasmanian and NEM wholesale electricity markets, how the Tasmanian market relates to the NEM, how the Tasmanian wholesale market is regulated, the role of interconnection and its possible expansion in the Tasmanian wholesale market, the impact of possible expansion of Tasmania's hydro-electric capacity on the wholesale market and the relationship between the Tasmanian wholesale market and energy security. It includes commentary on the impacts of the Tasmanian wholesale electricity market on the State's small business sector.

2.1 Description of the NEM Wholesale Market

Central to the generation of electricity in the NEM is a wholesale spot (real time) market into which generators above 30 MW capacity must sell their electricity (unless exempted). The NEM covers New South Wales, Victoria, Queensland, South Australia, Tasmania and the ACT. Each State forms a separate region within the NEM with separate spot prices. The Australian Energy Market Operator (AEMO) schedules the lowest cost generation to meet demand every five minutes in its five regions and despatches generation up to the highest bidder. Financial settlement takes place every 30 minutes. This is a 24/7 operation. The production of electricity, which cannot be easily or economically stored[1], must be matched with its demand in real time. Table 1 below provides a snapshot of the NEM.

Table 1: The NEM at a Glance

PARTICIPATING JURISDICTIONS	QLD, NSW, VIC, SA, TAS, ACT
NEM regions	Qld, NSW, Vic, SA, Tas
Installed capacity	47 148 MW
Number of registered generators	336
Number of customers	9.6 million
NEM turnover 2015–16	$11.7 billion
Total energy generated 2015–16	198 TWh
National maximum winter demand 2015–16	31 977 MW[a]
National maximum summer demand 2015–16	32 859 MW[b]

MW, megawatts; TWh, terawatt hours.

a The maximum historical winter demand of 34 422 MW occurred in 2008.

b The maximum historical summer demand of 35 551 MW occurred in 2009.

Source: Australian Energy Regulator, *State of the Energy Market, May 2017,* Table 1.1., p. 24.

[1] The viability of storage is being impacted by technologies such as large-scale batteries, the costs of which are reducing, and Government interest in pumped storage hydro-electric generation.

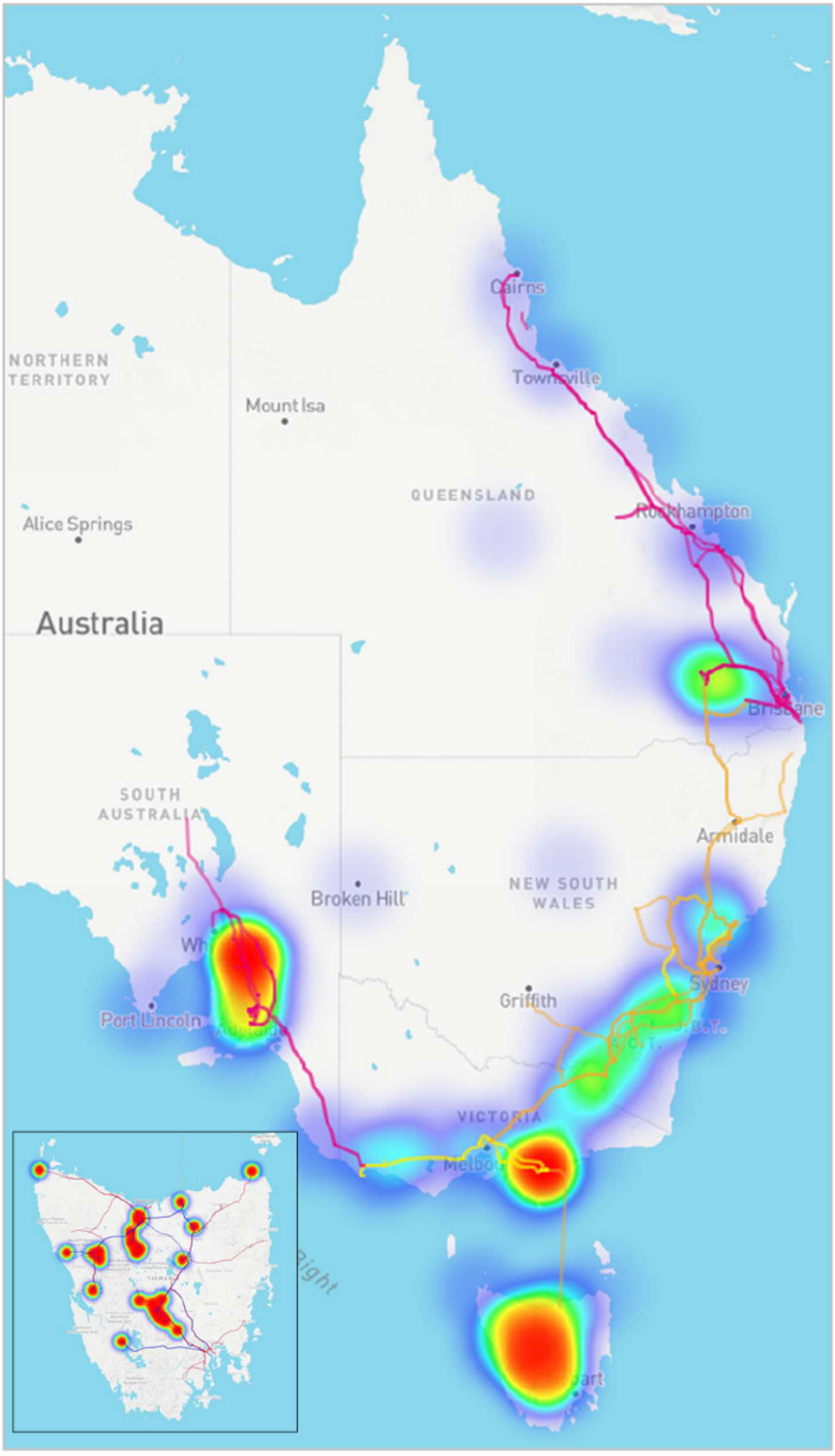
The NEM operates at both physical and financial levels. Power flows physically from generation plants (supply) to load centres where it is consumed (demand). Buying and selling of this physical electricity takes place in the NEM spot market. As the spot market can be very volatile, sitting alongside it is a financial hedging market that allows buyers and sellers to manage this volatility.

A map of the NEM with transmission lines and the density of generation assets (warmer colours indicate greater density) is shown in Figure 1 below. An inset providing greater granularity for the Tasmanian transmission system and generation density is also included. As can be seen, it covers eastern and south-eastern Australia, stretching from far north Queensland, south to southern Tasmania and west as far as Port Lincoln in South Australia. The NEM is based on one of the largest and longest lateral transmission networks in the world. Losses of electricity transported over such a long and skinny network can also be substantial, rising up to around 10 per cent.

Each State forms a separate region within the NEM. High voltage transmission interconnectors link all five NEM regions together and facilitate power flows and wholesale market trade between the regions. Trade enhances the reliability and security of the NEM by allowing each region to draw on generation plant from across the entire market, especially adjoining regions through interconnectors (i.e., transmission links). It also allows high cost generating regions to import electricity from lower cost regions. These were central considerations leading to the establishment of the NEM in late 1998, along with a joint market enabling greater resource efficiency in the use of existing generation and transmission resources and future investment in new ones.

Historically, Queensland and Victoria are the NEM's principal electricity exporters, while South Australia and NSW typically import electricity. Tasmania's trade position fluctuates, depending on market and weather conditions. Due to market changes, the energy flows have changed following significant power station closures, which are discussed further in Section 3.5.2.

Figure 1: Map of the National Electricity Market



Source: AEMO

Key aspects of how the NEM is structured and operated are shown in the Box 1 below.

Box 1: Key Aspects of the NEM

- AEMO manages the spot market and transmission system and is responsible for energy security ('keeping the lights on') in conjunction with jurisdictional agencies.
- To maintain system security, AEMO operates and procures separate markets for ancillary services to maintain a safe electrical frequency range, to correct minor deviations in load or generation and to correct for major electricity supply or demand events.
- AEMO can instruct network service providers to temporarily cut electricity supply to some customers if protection of the power system is urgent.
- Most customers, including small business, buy electricity from a retailer and are not directly involved in the wholesale market, or directly exposed to its volatility, though their prices reflect the cost of retailers managing wholesale market volatility.
- A few large customers also buy some of their electricity from the wholesale market, reflecting their greater resources, sophistication and ability to manage its risks.
- Demand varies significantly by time of day (morning and evening peaks), season (summer and winter peaks, with most of the NEM summer peaking but Tasmania has a winter peak) and ambient temperature (very high or low). This can impact significantly on spot prices.
- NEM maximum demand rose up to 2009, then flat-lined or declined before beginning to rise again in 2015/16. AEMO forecast demand to remain flat over the next decade.
- The NEM contains a mix of generation technologies, but is dominated by coal (52 per cent of capacity and 76 per cent of power generated in 2015/16). There is also gas-fired plant (19 per cent of capacity and 7 per cent of power generated), hydro (17 per cent and 10 per cent), wind (7.5 per cent and 6.1 per cent) and roof-top solar (9 per cent and 3 per cent).
- The fastest growth in capacity is occurring in the renewable space (wind and solar), which accounts for 92 per cent of new capacity (mainly wind) installed over the past five years, driven heavily by Federal Renewable Energy Target (RET) and State feed-in-tariff subsidies.
- AEMO forecast that rooftop solar will contribute 11 per cent of NEM energy by 2035/36.
- Renewable energy subsidies are paid for by customers through higher retail electricity prices. They are not levied at the wholesale level, but impact wholesale prices as renewable energy is bid (low) into the spot market reflecting the subsidy. This has created a major distortion in the market as renewables first drove down wholesale prices but then helped to drive thermal plant (coal and gas) out of the market, contributing to wholesale price increases.
- Wind generation is traded in the market, but rooftop solar is treated as a demand reduction.
- Rooftop solar is reducing grid demand around midday and shifting peaks to later in the day.
- There have been no new baseload (coal or gas) investments in the NEM since 2013.
- The combined impacts of age, low demand growth, subsidised renewables and rising gas prices have seen significant spare capacity withdrawn from the market. Between 2011/12

and 2016/17 a total of 6,433MW of capacity was retired or mothballed, all of it coal or gas fired[2, 3], significantly more than the 2,000 MW of renewable capacity added to the NEM.

Source: Goanna Energy Consulting Pty Ltd

The permanent closure of the brown coal baseload Hazelwood power station in Victoria (1,600MW) in March 2017 has been a controversial decision, which has impacted not just Victoria but also adjoining regions, including Tasmania. This station provided about 20 per cent of electricity generated in Victoria. AEMO has projected that its retirement, without any market response, may lead to insufficient capacity to meet maximum demand in Victoria and South Australia by summer 2017/18. The AEMC has also projected an impact on wholesale electricity prices with flow through to retail prices, with wholesale prices forecast to rise by $204 in Tasmania by 2018/19 due to this closure.[4]

To date, beyond the subsidy driven 'dash for renewables', there has been a muted market response to plant closures.[5] This reflects high and rising gas prices, threats to future gas supply for power generation, the continuation of the RET enacted in 2015 (albeit with a reduced target), uncertainty about carbon pricing, how Australia will meet its international commitment to reduce its emissions by 28 per cent by 2028 and (perhaps) a desire by the owners of existing generation to hold wholesale prices at higher levels following a sustained period of stagnant prices.

One consequence has been an unprecedented level of intervention in the market, including announcements for government investment in new gas generation capacity in South Australia, and government sponsored feasibility studies for upgrading hydro-electric capacity in the Snowy Mountains (by 2,000 MW) and Tasmania (2,500 MW of pumped storage).

2.1.1 How Competitive is the NEM?

Competition between generators and retailers is a key building block for well-functioning electricity markets. As such, it is also important to the NEM. Competitive tension between wholesale market players is intended to deliver competitive prices to electricity consumers on a sustained basis.[6]

The competitive dynamics of the NEM are assessed in Box 2. It draws on analysis by both the Australian Energy Regulator (AER) in its 2017 *State of the Energy Market* Report and the Australian Competition and Consumer Commission (ACCC) in its recent *Retail Electricity Prices Inquiry Preliminary Report*.

[2] Early in 2017 it was announced that one of the two units at the Pelican Point gas-fired plant in South Australia was being brought out of mothballs (249 MW).
[3] A further 2,446 MW of capacity has been announced as permanently or temporarily closed between 2017 and 2022 (all coal or gas fired). This includes the 208 MW Tamar Valley Combined Cycle Gas Turbine (CCGT) in Tasmania, which has since been restored to service.
[4] AEMC, *2016 Residential Price Trends Report*, 14 December 2016.
[5] AGL announced on 7 June 2017 that it would build a 210MW reciprocating engine power station in South Australia, but this will replace two of the four units at the aged Torrens Island A Power Station.
[6] Competitive prices refers to the lowest possible prices given the most efficient costs possible, where profits are kept at a minimum to sustain production and are bid down to this level by firms competing with one another. In the longer term, firms' ownership, market structures, resource endowments, technologies and government involvement may change and impact on competitive price levels.

Box 2: How Competitive is the NEM?

- Simple generation market shares show that the NEM is highly concentrated across its regions, with AGL holding a particularly strong market position in South Australia, NSW and Victoria. Government owned generators hold a strong position in Queensland and dominate in Tasmania.
- The *Herfindahl–Hirschman index* (HHI)[7] shows that all four mainland NEM regions are at or above the level of the index (1,800) often taken to signal the threshold between a competitive market and market power. In Tasmania's case, the index would be close to the level that signifies a monopoly market (10,000).
- Moreover, recent trends in the HHI driven by factors such as mergers and acquisitions and the closure of large coal-fired generating units have pushed the index up in Queensland, South Australia and Victoria. The latter, in particular, has an impact on Tasmania given its links to the Victorian market.
- The *Residual Supply Index* (RSI)[8] shows that the largest generator in each mainland region became more pivotal in *every* region in 2015–16, due to a recovery in peak demand, plant closures, mergers and changes in plant availability.
- The AER also examines behavioural indicators to gauge not only market power in generation but also the incentives on generators to exploit their market power.[9] It found that generators sometimes reduce their output as prices increase above $100/MWh. The AER noted that "this behaviour may be explained by deliberate capacity withholding to tighten supply and thus influence prices."[10] Other possible explanations include the inability of some plant to respond quickly to sudden price movements, network congestion, and maintenance and outages.
- Vertical integration of generators and retailers has attracted significant commentary, particularly noting that this reduces competition and wholesale contract price discovery. In this regard, three retailers—AGL Energy, Origin Energy and Energy Australia—supply 70 per cent of retail electricity customers in the NEM. The same entities expanded their market share in NEM generation capacity from 15 per cent in 2009 to 48 per cent in 2017.
- In its Retail Electricity Prices Inquiry Preliminary Report, the ACCC found that the NEM wholesale (generation) market is highly concentrated, that concentration has increased with plant closures (so far not matched by offsetting new capacity although this may change in future) and with a demand-supply balance that has tightened significantly. Hazelwood's closure has contributed to higher wholesale prices. It noted that uncertainty in policy

[7] The *Herfindahl–Hirschman index* (HHI) accounts for the relative size of firms by tallying the sum of the squared market shares for all firms in a market. The index can range from zero (in a market with many small firms) to 10 000 (that is, 100 squared) for a monopoly. The higher the HHI, the more concentrated and less competitive is a market. It provides a useful starting point for assessing how competitive a market is.

[8] The *Residual Supply Index* (RSI) measures the extent to which one or more generators are 'pivotal' to clearing the market. A generator is pivotal if market demand exceeds the capacity of all other generators. In these circumstances, the generator *must* be dispatched (at least partly) to meet demand. The RSI–1 measures the ratio of demand that can be met by all but the largest generator in a region. An RSI–1 *below* 1 means the largest generator becomes pivotal to meeting demand.

[9] A generator's incentives will link to its exposure to spot or contract prices, and to its strategies to deter competition. Behavioural indicators explore the relationship between a generator's bidding behaviour and market outcomes.

[10] AER, *State of the Energy Market*, May 2017, p. 51.

settings was contributing to a lack of investor confidence. Moreover, generator market power is assisted by the ability of generators to shift capacity from low to high prices when circumstances suit and certain generators also have the ability to set price through their effective control of regional residual demand. Some reforms are under consideration that may help to offset these bidding strategies to some extent.

- It also found that vertical integration may be limiting access to risk management products for non-vertically integrated retailers and that it allows 'gentailers' to reallocate costs between their generation and retail arms.
- The ACCC concluded that high levels of concentration are a risk to wholesale prices and barrier to effective competition.
- Furthermore, the ACCC found that high gas prices and tight supply had impacted both the wholesale market and high wholesale prices. Existing generators were finding gas difficult to obtain and having to pay higher prices for it. Gas prices have a significant impact on the costs of gas generation and gas generation often sets the marginal price when demand is tight. Some gas generation had exited the market due to a lack of gas supplies.
- Overall, these indicators show clear evidence of market power in NEM generation, that market power has increased over time and that it has increased wholesale prices.

Source: Goanna Energy Consulting Pty Ltd, AER, *State of the Energy Market*, May 2017 and ACCC, *Retail Electricity Prices Inquiry – Preliminary Report*, 22 September 2017.

2.1.2 Hedging and Management of Exposure to Wholesale Market Risk

As alluded to earlier, wholesale market participants in the NEM (generators, retailers and a few of the largest customers) manage their exposure to the volatile spot market by hedging their positions. Several retailers have also acquired or built generation assets as a means of internally managing this risk through the direct access this provides to physical generation assets (they are often referred to 'gentailers').

Wholesale market hedging involves either:

- Over-the-counter (OTC) trades whereby counterparties contract with each other; or
- Exchange traded products traded on the Australian Securities Exchange (ASX).

Box 3 below sets out key aspects of wholesale market hedging in the NEM.

Box 3: Key Aspects of NEM Hedging Products

- Futures such as swaps, or contracts for differences, lock in a fixed price to buy or sell a specified amount of electricity in a region for a nominated time of day at a pre-set date.
- These products include quarterly base contracts (covering all trading intervals) and peak contracts (covering specified times of peak demand) for settlement in the future.
- Futures are traded as calendar or financial year strips covering four quarters.
- Options give the holder the right—without obligation— to enter a contract at an agreed price, volume and term in the future. The buyer pays a premium for this added flexibility.
- Caps set an upper limit on the price that the holder will pay for electricity in the future and floors set a lower price limit. Both are traded as both futures and options.

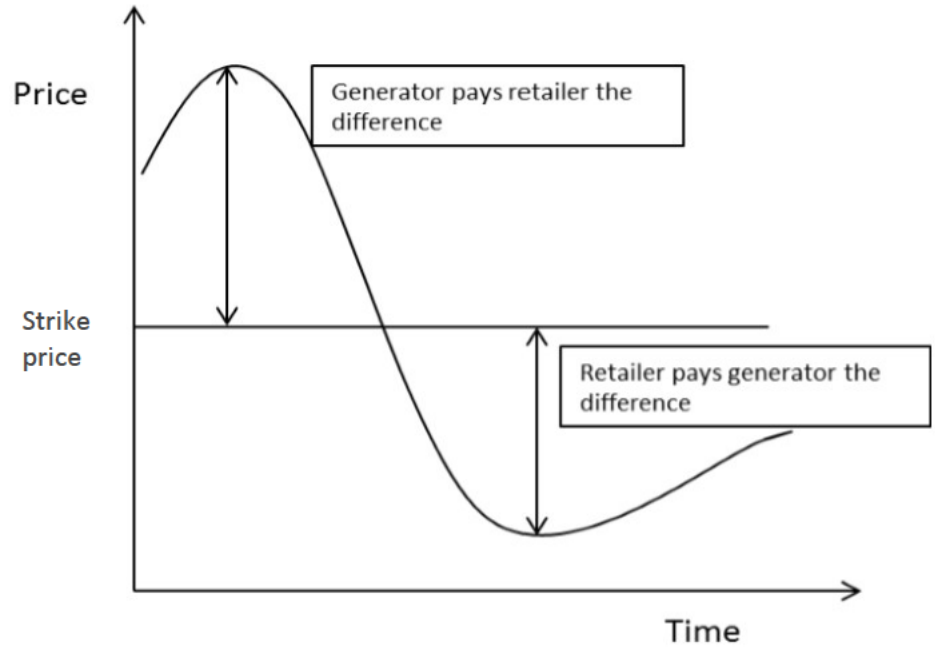
- Over-the-counter (OTC) trades are confidential between parties and have little transparency.
- Exchange traded products are publicly reported and available.
- ASX exchange traded products are standardised.
- OTC products are sculpted to suit counterparties.
- In 2015/16, contracts covering 396 TWh of electricity were traded on the ASX, equivalent to twice NEM demand.
- Victoria accounted for 36 per cent of ASX traded volumes in 2015/16, followed by Queensland (33 per cent) and NSW (30 per cent). Liquidity in South Australia is low, accounting for only 1 per cent of overall volume.
- The most heavily traded ASX products in 2015/16 were baseload quarterly futures (55 per cent of traded volume), followed by options (25 per cent) and cap futures (13 per cent).
- Liquidity is mostly in products traded 12–24 months out.

Source: Goanna Energy Consulting Pty Ltd from various sources

Figure 2 below shows a diagrammatic representation of a basic hedging contract in the NEM.

Figure 2: A Basic Hedging Contract in the NEM

It is not possible for parties to trade in electricity directly, because in the National Electricity Market (NEM), all electricity must be bought and sold through the central pool. However, it is possible for generators and retailers to agree to a contract that effectively delivers the same outcome. That is, if the spot price is 'high', the generator agrees to pay the retailer; and if the spot price is 'low', the retailer agrees to pay the generator.



Source: http://www.pc.gov.au/inquiries/completed/electricity/report/28-electricity-appendixc.pdf p. 834

2.2 Structure of the Tasmanian Wholesale Electricity Market

The Tasmanian wholesale electricity market is different to the rest of the NEM. It is a far more concentrated and regulated market with competition all but absent. This structure is not just a product of the small size of the market but also reflects past policy choices.

In Tasmania, in addition to the derivatives contracts negotiated by NEM participants, authorised retailers operating in the small customer market (currently only Aurora Energy and ERM Business Energy) have access to a set of regulated derivatives contracts provided for in the *Electricity Supply Industry Act 1995* (ESI Act) and approved by the Tasmanian Economic Regulator (TER). Hydro Tasmania is required to offer prices for these regulated derivative products. It should be noted that market participants (that is, generators and retailers) are also free to negotiate their own market derivative contracts.

Wholesale contract regulation dates from 1 January 2014, forming part of the former Tasmanian Government's electricity reform package. It was intended to:

- Assist retailers in mitigating against the contracting risks associated with Hydro Tasmania's dominance in the Tasmanian wholesale market;
- Reduce the risk faced by Tasmanian market participants to a level comparable with that facing retailers in other regions of the NEM; and
- Facilitate the introduction of full retail competition (FRC) on mainland Tasmania.

The TER approves the types of regulated derivatives contracts offered, the prices at which the contracts are offered and monitors the sale of these contracts.

These arrangements are part of the Tasmanian wholesale regulatory framework.

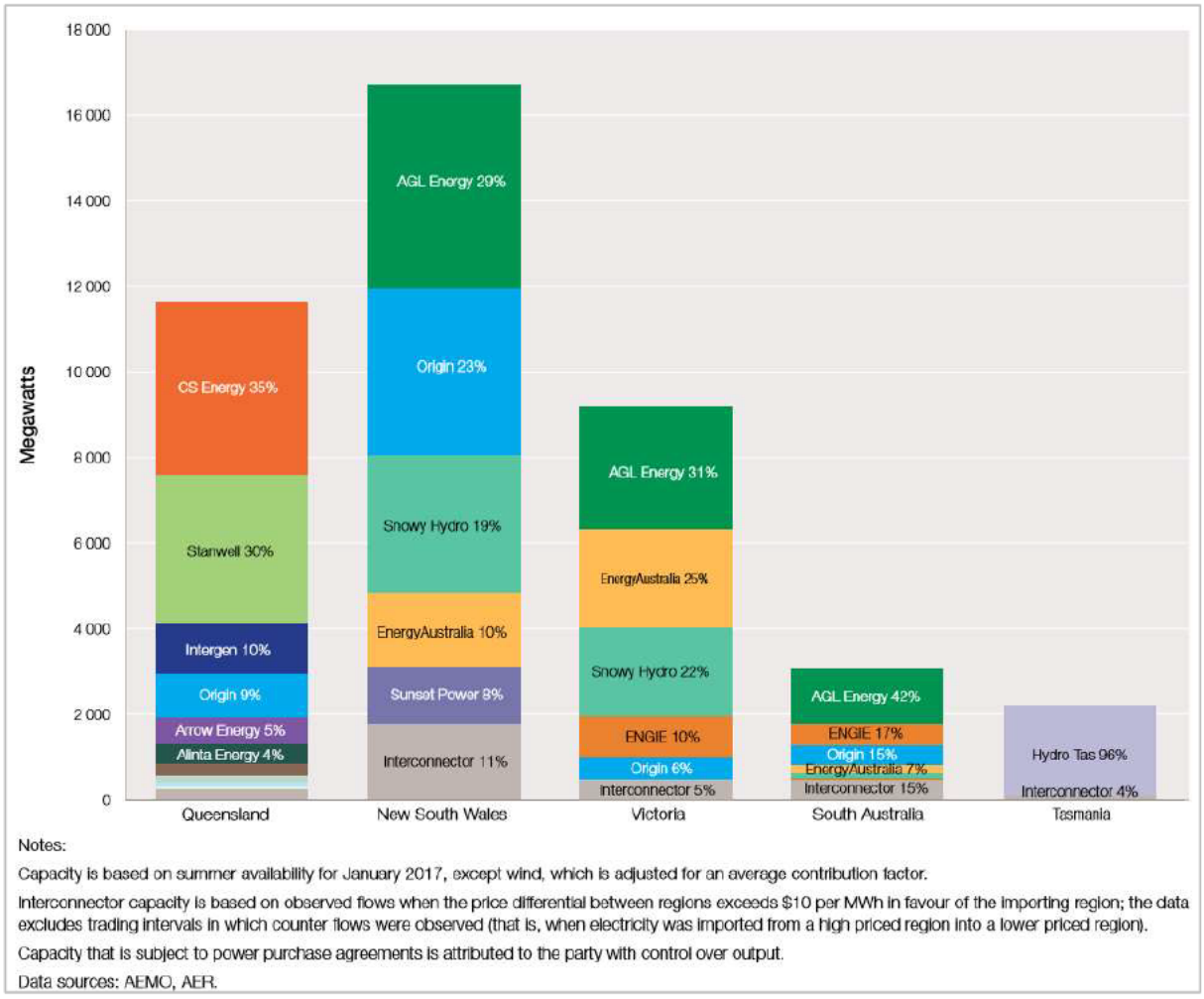
2.2.1 Tasmanian Electricity Generation

As the provider of capacity, generation plays a critical role in the performance of wholesale electricity markets. The need to consume an essential service like electricity and difficulties in storing it increases the potential market power of generators.

Electricity generation in Tasmania is highly concentrated in the hands of Hydro Tasmania, a government owned electricity generation business, which owns or through joint ventures (JVs) otherwise influences, 96 per cent of capacity (see Figure 3 below). This makes Tasmania by far and away the most concentrated generation sector in the NEM. Hydro Tasmania owns all of the hydro-electric capacity in Tasmania and either fully or jointly owns all of the wind capacity. Hydro Tasmania also has an agreement with Basslink covering its significant use of this facility, the sole link Tasmania has to the mainland. This limits the competitive influence that interconnectors provide in other parts of the NEM. It also limits the extent to which retailers can hedge their positions with parties other than Hydro Tasmania and therefore makes new entry less appealing to retailers.[11]

[11] The only on-island capacity not owned by Hydro Tasmania is 106 MW of unscheduled capacity (e.g., cogeneration plant, land fill generation, etc), which accounts for only 3.9 per cent of on-island generation capacity. As this plant is unscheduled, it does not participate in, or influence in any meaningful way, the Tasmanian wholesale electricity market.

Figure 3: Market Shares in NEM Generation Capacity by Region, 2017



Source: AER, *State of the Energy Market*, May 2017, Figure 1.20, p. 44

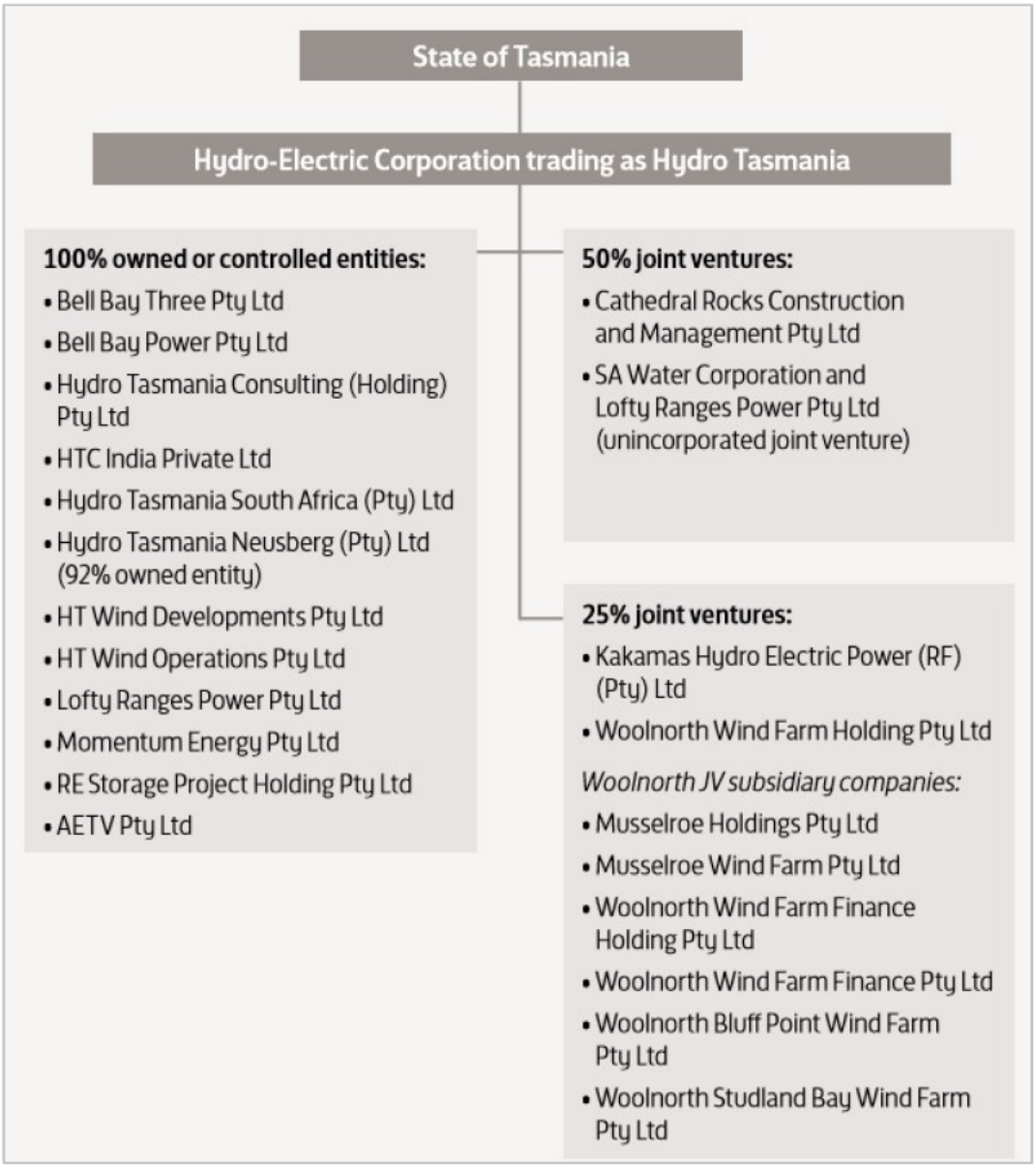
In terms of the competition metrics used by the AER, Hydro Tasmania's dominance is clearly evident. The *Herfindahl–Hirschman Index* (HHI) is around 9,200, which makes Tasmanian generation close to a monopoly (HHI = 10,000). The next most concentrated NEM region is South Australia with a HHI of 2,500, which is considered to possess substantial generator market power. Moreover, the HHI for Tasmania assumes that Basslink provides competition for Hydro Tasmania and does not take into account that Hydro Tasmania's agreement with Basslink restricts trade and access to inter-regional hedges in the wholesale market to Hydro Tasmania.

Other competition metrics used by the AER include the Residual Supply Index (RSI) and behavioural indicators[12]. The AER did not assess these indictors for Tasmania in its most recent *State of the Energy Market* report. *Prima facie*, it appears that both the RSI and behavioural indicators would confirm the extreme market power of Hydro Tasmania in the State's wholesale electricity market.

[12] A generator's *ability* to exercise market power is distinct from its *incentives* to exploit that power. A generator's incentives will link to its exposure to spot or contract prices, and to its strategies to deter competition. This behaviour may be explained by deliberate capacity withholding to tighten supply and thus influence prices, but could also relate to the inability of some generation plant to respond quickly to sudden price movements, network congestion or even maintenance and outages.

The ownership structure of the Hydro Electric Corporation (which trades as Hydro Tasmania) is shown below in Figure 4. As well as its considerable hydro-electric resources, Hydro Tasmania also owns the Tamar Valley Power Station (TVPS), has significant interests in Tasmanian and inter-state wind generation, overseas interests, owns a mainland retailer that sells its Tasmanian capacity in other parts of the NEM (but does not operate in Tasmania), a consulting arm and international interests.

Figure 4 Ownership Structure of the Hydro Electric Corporation



Source: Hydro Tasmania, *Annual Report*, 2016 p. 7

The Expert Panel on the Tasmanian Electricity Supply Industry (Expert Panel) undertook a detailed examination of Hydro Tasmania's market power and its main findings are in Box 4 below.

Box 4: Expert Panel's Findings on Hydro Tasmania's Market Power

- Hydro Tasmania's output is 'pivotal' in the spot market and it can control the spot price.
- As Hydro Tasmania is the only provider of hedge contracts, retailers are put in a position where they must choose between entering into hedge contract arrangements with Hydro Tasmania or be left exposed to a spot market price that Hydro Tasmania controls.
- Hydro Tasmania's discretion over its level of contracting, combined with its dominant spot market position, mean that has is a unique level of market power in the NEM.
- Hydro Tasmania can increase spot and contract prices on a sustained basis. This is because, notwithstanding the contribution of Basslink and the TVPS (owned by Aurora when the Expert Panel reported), Hydro Tasmania's output is required to meet Tasmanian demand under virtually all market conditions, giving it a unique ability to 'give less and take more'.
- Hydro Tasmania has an ability to profitably raise the spot price under a wide range of conditions and, in the past, has been particularly willing to exercise this ability at times when its contract position is relatively low and Aurora Energy is under-hedged.
- Moreover, given the absence of alternative counter-parties, the terms and conditions under which contracts are offered are also largely a matter of internal pricing policy, rather than being shaped by outside forces. Occasional demonstrations of Hydro Tasmania's capacity to bid spot prices to high levels in off-peak periods and the knowledge that it is a pivotal generator most of the time, serves as a signal to market participants that unhedged entry into the Tasmanian region involves risks over and above those elsewhere in the NEM. This is particularly so given the means of managing these risks, contracts, can only be sourced from the entity that creates them in the first place.
- Hydro Tasmania can determine a new entrant's retail margin through its unilateral pricing decisions, thus creating a squeeze between the cost of supply and regulated retail prices.
- Hydro Tasmania has generally not exercised its wholesale market power to the full extent.
- For the above reasons, the Panel described Hydro Tasmania as possessing a high degree of *latent market power* and found that its periodic signalling of that power through spot and contract market outcomes is a serious barrier to retail entry by efficient, large scale, mainland retailers.
- While the Expert Panel found that the threat of intervention may have been reasonably effective in deterring widespread exercises of market power to date, the effect and future dependability of such restraints is not predictable enough to give potential new entrants and their financier's confidence to invest in the Tasmanian market.
- Growth in on-island supply from Hydro Tasmania owned wind farms is adding to oversupply (though driven by Hydro Tasmania's commercial strategy to source renewable energy certificates required by its mainland retail business).
- Hydro Tasmania's efficiencies associated with low historical costs and economies of scale are desirable in themselves but have the additional effect of deterring new entry.
- Hydro Tasmania has an absolute cost advantage over any new entrant because any entrant would need to secure supplies of fuel, most likely for a gas-fired power station. Hence, Hydro Tasmania could, if it wished, sustainably set prices in excess of its own costs but below any new entrant's costs. This is likely to deter entry.

Source: Expert Panel, *An Independent Review of the Tasmanian Electricity Supply Industry*, Final Report, 29 March 2012 at http://www.electricity.dpac.tas.gov.au/final_report.

The above confirms the almost complete absence of competition in Tasmanian electricity generation, which translates into the wholesale electricity market. Having dismissed structural reform options, this is the main reason why the Tasmanian Government introduced the regulation of Hydro Tasmania's wholesale contracts mentioned earlier and explained in Section 2.2.6.

2.2.2 More Competitive Generation Options

For this situation to change there would need to be significant reform of the Tasmanian generation sector.

As a minimalist option, some competition could be introduced through separate ownership of the gas fired TVPS, which has a combined capacity of 356 MW, 13 per cent of total Tasmania capacity.[13] Such a move would reduce the HHI to 6,850, still the most concentrated generation sector in the NEM standards but would still represent a small step in a more competitive direction. The important role of the TVPS in helping to ensure energy security in Tasmania was recently confirmed by the Tasmanian Energy Security Task Force (TEST) (see Section 2.2.11).

If Hydro Tasmania's wind generation interests were divested in addition to the TVPS, it would provide some additional competitive stimulus with the HHI falling to around 5,000, still double the HHI in South Australia, a State with acknowledged market power issues. Moreover, the Expert Panel's finding that Hydro Tasmania is pivotal to supply under virtually all market conditions, even allowing for the output of the TVPS, Basslink and wind turbines, means that even divestment of all of Hydro Tasmania's non-hydro-electric assets is unlikely to deal with market power issues sufficiently to create a competitive wholesale market and encourage new entry.

The Expert Panel recommended that the TVPS be sold as part of its broader suite of structural reforms (see
Box 4) to help improve the attraction of Tasmania to new electricity retailers. As an alternative option, the Expert Panel proposed its allocation to one of the three separate trading entities it recommended, or as a last resort, its transfer to Hydro Tasmania, but only on the basis that its capacity would be allocated across these separate trading entities. In the event, the then Tasmanian Government transferred the TVPS to Hydro Tasmania but failed to establish separate trading entities.

The Expert Panel's recommendation to separate Hydro Tasmania's wholesale trading functions into three stand alone entities (termed 'gentraders'), who would trade its capacity into the market, would provide the pre-conditions for a more competitive approach. The Expert Panel saw this as being attractive to mainland retailers in terms of making their entry to the Tasmanian electricity market more likely.

Mainland retailers supported the option of not only the separation but also the sale of Hydro Tasmania's trading functions, or even the separation of Hydro Tasmania's capacity and trading

[13] It is worth noting that the TVPS was initially built as a privately owned generator, but prior to its completion it was sold to Aurora Energy, who operated it frequently as a hedge against the dominance of Hydro Tasmania in the contract market. Since acquiring the facility, Hydro Tasmania has made sparse use of it, with the TVPS spending a long period in mothballs and its combined cycle gas turbine (CCGT) base load generator being offered for sale at one point. Since then, the CCGT has been withdrawn from sale and returned to service following the threat to Tasmanian energy security in the first half of 2016 and it was initially used purely as a standby generator, although Hydro Tasmania has recently begun operating it more frequently so that it can store more water in anticipation of higher spot prices over the coming summer.

functions into (say) three generation entities prior to their sale as necessary for them to consider Tasmanian entry as this would remove Hydro Tasmania's market dominance and allow new entrant retailers to effectively hedge their Tasmanian positions. However, this option was not assessed by the Expert Panel.

Assuming for illustrative purposes, separation into three generation entities of about equal size, the HHI would fall to around 700, making Tasmania the most competitive generation market in the NEM. For electricity consumers, including small businesses, this offers improved prospects of wholesale and retail market competition with access to competitive pricing behaviour.

2.2.3 Tasmanian electricity retailers and the wholesale market

Retailers in Tasmania serving small business and residential customers have the option of either entering into market based wholesale contracts or using Hydro Tasmania's regulated contracts. Tasmanian retailers can also buy electricity from the NEM spot market and pay the prevailing Tasmanian spot price. Retailers will adopt contracting strategies using a mix of wholesale contracts and spot exposure depending on factors such as prices, supply-demand conditions, seasonal and weather patterns, their hedging position/risk appetite, and their view of future prices and demand.

In the residential customer market, Aurora Energy, a State Government owned retailer, enjoys a monopoly. In the small business segment, it enjoys a virtual monopoly. This has implications for Aurora's position in and strategies for the wholesale market. For example, in the small customer segment, Hydro Tasmania has very little choice other than to sell its power to Aurora (and in a small number of cases ERM), and this is underpinned by a requirement for it to provide this electricity via its regulated retail contracts (if necessary). Aurora on the other hand, is virtually captive to Hydro Tasmania in buying electricity for its small customer load.

As with other electricity markets, in Tasmania generators will often hold the whip hand as far as wholesale market contract outcomes are concerned, particularly as supply gets tighter. Retailers tend to be price takers, even ones like Aurora with a virtual monopoly over the entire small customer load.

2.2.4 Wholesale Market Barriers a Major Reason for Lack of Retail Competition

The presence of a virtual single retail buyer and (more importantly) a single seller of generation products in the Tasmanian wholesale market is a major reason for the lack of competition in the State's retail electricity market. Consequently, small businesses are unable to exercise choice of retailer (despite the Government's adoption of FRC), have no real access to competitive pricing and miss out on the fruits of competition enjoyed by their peers elsewhere in the NEM, such as price discounting.

The barrier to retail competition created by the Tasmanian wholesale market was confirmed in a study for the TSBC by Goanna Energy Consulting entitled, *The Final Step: Moving to full retail contestability in the Tasmanian electricity market.*[14] As part of this study, Goanna interviewed six retailers with potential to enter the Tasmanian market. Limited liquidity and competition in the wholesale market were the primary factors in reducing their interest in and appetite for entering the Tasmanian market, including supplying the small business sector.

Conversely, significant wholesale market reform and the breakup and sale of Hydro Tasmania were mentioned as important factors in increasing their interest in Tasmania.

[14] Copies of *The Final Step* Report are available by contacting Goanna Energy Consulting.

The lack of wholesale market reform as a significant impediment to retail competition in Tasmania is also apparent from the deliberations and final report of the Expert Panel[15], which concluded that:

> *"Simply put, the Panel considers that a failure to address the current wholesale energy market structure would effectively 'lock in' an absence of effective competition and customer choice indefinitely, denying Tasmanian small businesses and households the clear benefits of competition and choice that have been delivered to consumers elsewhere in Australia.*
>
> *Structural reform is necessary – and it is achievable."*[16]

The Expert Panel recommended a range of reforms aimed at increasing interest by mainland retailers, especially the larger ones, in the Tasmanian market (see Box 5 below).

Box 5: Expert Panel Recommended Reforms to Improve Wholesale and Retail Market Competition

The Expert Panel on the Tasmanian Electricity Supply Industry recommended the following reforms as necessary to increase wholesale and retail electricity market competition and improve the attractiveness of the Tasmanian market to the larger mainland retailers:

- Separating the financial trading functions of Hydro Tasmania from its physical operations and transferring these functions to three independent government-owned entities ('gentraders').
- The declaration of full-retail contestability, accompanied by the sale of Aurora Energy's retail customer book in three similar-sized parcels.
- Alternative options for the TVPS, preferably its sale to a private operator.

Source: Expert Panel, *An Independent Review of the Tasmanian Electricity Supply Industry*, Final Report, 29 March 2012 at http://www.electricity.dpac.tas.gov.au/final_report.

In the event, the then Tasmanian Government did not follow through with most of these recommendations. It opted instead to:

- Maintain Hydro Tasmania's trading and physical operations as a single entity but introduce regulation of its wholesale contracts. The Expert Panel had considered this option but more-or-less rejected it as a basis for wholesale market reform adequate to stimulate interest in Tasmania from larger mainland retailers.
- Introduce FRC from 1 July 2014.
- Whilst it attempted to sell Aurora's retail customer book as two separate parcels, it withdrew them from sale due to a lack of interest.
- Transfer ownership the TVPS from Aurora to Hydro Tasmania, an option that the Expert Panel had considered beneficial but only as part of the creation of gentraders.

[15] The TER also found that there was a need for wholesale market reform in a review of FRC in 2008.
[16] Expert Panel, *An Independent Review of the Tasmanian Electricity Supply Industry*, Final Report, vol 1, p. vii at http://www.electricity.dpac.tas.gov.au/final_report

This has essentially left the Tasmanian wholesale and retail electricity markets devoid of any interest from larger inter-state retailers and placed FRC in a strictly 'Clayton's choice' framework of no choice at all for smaller customers, including small business.

In the intervening years, apart from the pre-existing presence of ERM, no new retailers or generators have entered the Tasmanian electricity market, unfortunately making a reality of the Expert Panel's predictions – supported by the views of larger retailers – that wholesale market reform is essential for retail competition and that regulation of Hydro Tasmania's wholesale contracts would not be sufficient to stimulate new entry by the larger retailers.

It is also worth noting that the existing wholesale market framework has proved so unattractive to new retailers that only ERM (and one smaller niche retailer) has entered (and in the case of the latter apparently exited from) the Tasmanian market. The Expert Panel had contemplated 'hit-and-run' entry and exit might occur on an opportunistic, basis without its recommended wholesale market reforms.

The current Government has maintained the framework adopted by its predecessor and is yet to consider more meaningful wholesale or retail market reform.

2.2.5 Competitive Market Reform Options

It is difficult to disagree with the views of the Expert Panel that if Tasmanian small businesses are to benefit from real retail choice and competition, then meaningful reform of the wholesale market will be needed. It would also seem that proposals similar to the recommendations of the Expert Panel (see Box 5 above) are the minimum needed to stimulate retail entry.

We note that a number of mainland retailers expressed the view to the Expert Panel that they would find it more attractive enter the Tasmanian market if the creation of gentraders as privately-owned businesses, which they could bid for, was the approach taken to reform as this would give them greater control over their exposure to risks in the Tasmanian market. Some said that the creation of three government owned gentraders was not sufficient to allay their concerns about entry to the Tasmanian market as they would have insufficient control over their destiny and would not be convinced that separate government owned gentraders would compete fairly and head-to-head.

Moreover, the sale of Aurora's retail book would not stimulate mainland retailer interest in Tasmania (as shown by the previous aborted attempt at sale) unless it was accompanied by the sale of Hydro Tasmania's trading functions and/or its generation assets.

Deeper structural reform would also increase the currently low level of liquidity in the market and (from a consumers' perspective) would improve competition in both the generation and retail markets, and help provide smaller consumers with a meaningful choice of retailer.

2.2.6 Regulation of Hydro Tasmania's Wholesale Electricity Contracts

The current regulated wholesale market framework has been in place for three years and retail competition, including for small businesses, has demonstrably failed to materialise. As a result small business is excluded from retail choice and competitive prices. We note that the current approach to setting wholesale costs in regulated retail prices is being reviewed by the Government (see Section 3.9).

Box 6 below summarises the regulation of Hydro Tasmania's wholesale contracts.

Box 6: Key Aspects of the Regulation of Hydro Tasmania's Wholesale Electricity Contracts

- The TER regulates the electricity contracts that Hydro Tasmania must offer for sale to other electricity market participants. Hydro Tasmania can (and does) also offer unregulated contracts.
- Regulation includes the setting of maximum prices that Hydro Tasmania can charge.
- Hydro Tasmania is required to: offer retailers operating in Tasmania a number of contract products that are broadly consistent with standard products offered in the NEM; offer standard terms and conditions for each; offer these contract products at prices that are based on an approved pricing methodology; and make available sufficient volume of regulated contract products to enable Tasmanian retailers to adequately manage the wholesale spot price risk associated with their Tasmanian customers.
- The TER is responsible for regulating Hydro Tasmania's wholesale contracting activity and approves the types of regulated contracts offered, the prices at which the contracts are offered and monitors their sale.
- The TER is also responsible for: administering and monitoring the pricing of regulated wholesale derivative contracts; investigating and determining future wholesale contract pricing instruments; and collecting information from Hydro Tasmania to support the regulatory framework and development of FRC.
- A *Statement of Regulatory Intent* outlines how the TER will deal with: Hydro Tasmania failing to correctly apply the approved pricing methodology, or a supply disruption event, which can include investigating and substituting its own pricing methodology; and updating the input values in the Wholesale Pricing Model.

Source: Goanna Energy Consulting and TER, various documents.

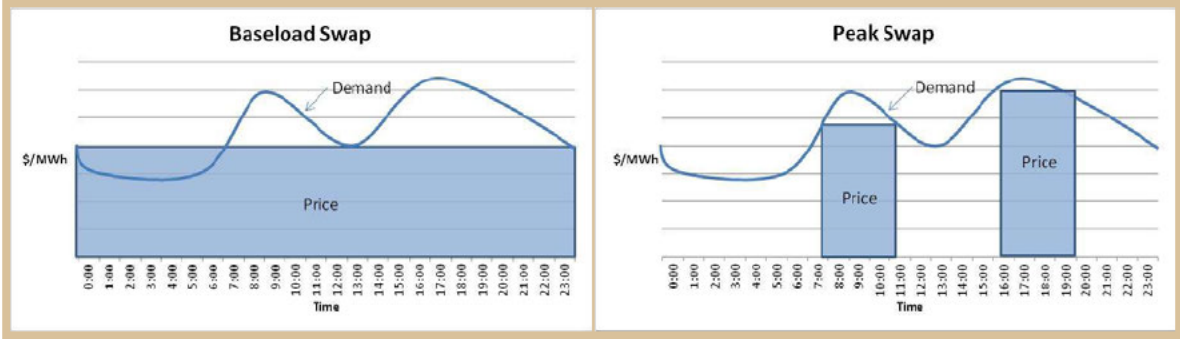
There are four types of regulated wholesale contracts offered by Hydro Tasmania. These are described in Box 7 below and they have remained unchanged since the commencement of the current approach to regulation of Hydro Tasmania's wholesale contracts in 2014.

Box 7: Types of Regulated Wholesale Contracts Offered by Hydro Tasmania

Baseload Swap Contract & Peak Period Swap Contract

Swap contracts (also known as 'contracts for differences') fix the cost of electricity for a purchaser (e.g., a retailer) and a seller (e.g., a generator) for a defined volume of energy. If the spot price is greater than the agreed regulated weekly offer contract price, the seller (generator) pays the difference between the spot and regulated weekly offer contract price to the purchaser (retailer) for a defined volume of energy. If the spot price is less than the agreed regulated weekly offer contract price, the purchaser pays the difference between the two prices for the defined volume of energy to the seller.

A Baseload Swap Contract covers a set volume of electricity for every half hour of each 24 hour period, seven days a week for a calendar Quarter. A Peak Period Swap Contract covers a set volume of electricity for every half hour between 7am and 10pm Monday to Friday for a calendar Quarter. These are shown in the Figure below.



Baseload $300 Cap Contract

This cap contract (also known as an options contract) specifies two prices:

- An agreed strike price: the spot price at which the cap applies, i.e., $300/MWh; and
- An option fee: the premium or price payable to the seller for the contract itself.

The cap contract only comes into effect if the spot price, for a specified volume of electricity, reaches or exceeds $300/MWh. If the spot price exceeds $300/MWh, the seller of the cap (the generator) must pay the buyer of the cap (the retailer) the difference between $300/MWh and the spot price for a specified volume of electricity. Cap contracts help protect a retailer from high spot prices.

Load Following Swap Contract

Load Following Swap (LFS) contracts are generally structured to meet an individual retailer's load profile and tend to be more expensive, but allow the purchaser to manage 'volume risk' (the risk that the retailer's customers' demand is higher than the retailer expected, requiring the retailer to pay spot prices for the additional electricity required to meet that demand), as well as 'price risk' (the risk that the spot price is higher than the retailer expected).

In Tasmania, the regulated LFS contract is a contract that is based on the Tasmanian Net System Load Profile (NSLP) as determined AEMO. The NSLP is an approximation of Tasmanian load after subtracting the load from all customers with half hour meters (i.e., customers on market contracts, typically larger ones). It therefore represents the load profile for all small (regulated tariff) customers in Tasmania. Retailers may still be exposed to volume risk if their customers' actual usage is greater than that allowed for in the regulated LFS contract.

The LFS contract was included as a regulated contract to counter the perception that Hydro Tasmania had both the incentive and means to spike spot prices, thereby exposing retailers to potentially significant price risk.

Source: Goanna Energy Consulting and TER, *Review of the Wholesale Contract Regulatory Instrument*, Final Report, December 2016, p. 8.

Given the volatility of wholesale prices, the then Government decided it was not feasible to regulate wholesale electricity prices directly and opted instead to regulate Hydro Tasmania's wholesale contracts.

The types of regulated contracts Hydro Tasmania is required to offer to counterparties (see Box 7

above) are modelled on equivalent contract products used by retailers across the NEM. The then Government considered it important to ensure consistency with current wholesale contract practices elsewhere NEM as it was attempting to encourage new retailers to enter Tasmania by ensuring that the risks to retailers of operating in Tasmania were no greater than those in other jurisdictions in the NEM. It was also mindful that Hydro Tasmania's dominant position as a generator and wholesale market participant in Tasmania was seen as a barrier to entry by mainland retailers and it attempted to counteract this by giving potential new entrants access to a 'safety net' of regulated wholesale contracts which they could fall back on, if necessary.

However, as outlined in Section 2.2.7, the availability of regulated wholesale contracts has failed to encourage any new retailers to enter the Tasmanian market. This is most likely due to the continued existence of structural impediments in the Tasmanian wholesale market as manifested by Hydro Tasmania's absolute dominance, Aurora Energy's dominance of smaller load customers, the continued regulation of retail prices for smaller customers and the fact that both Hydro Tasmania and Aurora remain in Government ownership.

The combined impact of these factors, along with others such as the small size of the market, creates 'a bridge too far' for mainland retailers to enter the Tasmanian market. The failure to deal with the structural flaws in the Tasmanian wholesale market is the main contributor and provides the single largest barrier to entry.

The Expert Panel considered the option of wholesale market regulation through an auction of derivative hedges by Hydro Tasmania as part of its deliberations. This has similarities to the approach to wholesale market regulation currently applied but with the addition of a competitive auction for hedging products. However, the Expert Panel did not recommend the regulatory approach.

Larger national retailers indicated to the Expert Panel that:

> *"They are not prepared to make the material level of capital investment required to enter the market with the level of sovereign and regulatory risk they would be exposed to from potential gaming of, changes to, or reversal of the regulatory arrangements."*[17]

The Expert Panel considered that, under the regulatory approach, some retail competition in the form of 'hit and run' entry by niche retailers could emerge, but that the sale of Aurora's retail customer book would be futile as there would simply not be enough incentive to make the sale attractive to potential bidders. In the event, there has been almost no new entry, even on 'hit and run' terms, under the current regulatory approach and the former Government, after attempting to sell Aurora's retail book on the basis of wholesale market regulation, had to abandon the sale due to a lack of interest. The Expert Panel's expected outcome from wholesale market regulation has largely proven to be correct.

2.2.7 Assessment of Tasmanian Wholesale Market Regulation

The positive aspects of wholesale market regulation in Tasmania include that:

[17] Expert Panel, *An Independent Review of the Tasmanian Electricity Supply Industry*, Final Report, vol. 1, p. 133.

- It requires Hydro Tasmania to offer to any authorised and complying market participant a limited number of types of wholesale market derivative contracts that closely resemble contracts commonly used in the NEM. This provides for a degree of wholesale contract predictability, standardisation and familiarity to any retailer seeking to enter the Tasmanian market.
- It provides some discipline on Hydro Tasmania regarding the exercise of its unbridled market power in generation and contracting, and a form of safe haven for counterparties exposed to Hydro Tasmania's market power.
- The current arrangements have been in place for three years and over this period they have remained more-or-less unchanged and (based on a recent review by the TER) will stay that way until 2024. It is possible that this may have dissipated the sovereign or regulatory risk issues for potential new entrants, although not sufficient for any actual new entry to occur. Moreover, the recent intervention of the Tasmanian Government in capping wholesale prices in the determination of 2017/18 regulated tariffs, whilst beneficial to small business electricity prices for 2017/18, would have increased the risks of entry and the fears of potential new entrant retailers about being exposed to regulatory change (see Section 3.9).
- The TER has independent oversight of the arrangements, which may also impact regulatory uncertainty and risk, although again not sufficient for any actual new entry. Again, the recent intervention of the Government would have increased retailer concerns about the independence of regulation.

Based on 2015 TER analysis[18], by and large, price outcomes for Hydro Tasmania's regulated products also seem to be as anticipated, with prices for both baseload and peak period swaps tracking Victorian prices, albeit at a significant premium. However, baseload $300 caps were at a very high premium to Victorian contracts (as were unregulated contracts).

The TER also reported that there was a significantly greater use of unregulated contracts, with little use of cap and LFS contracts across both regulated and unregulated products.

The TER concluded that:

> *"In summary, it appears that the pricing and trading outcomes of wholesale regulation are currently meeting the objectives of the Instrument, in that:*
>
> - *prices are largely reflective of the pricing patterns experienced in an established derivatives market (the Victorian market) associated with the NEM; and*
> - *regulated contracts are not being relied upon by market participants."*[19]

However, as the arrangements have failed in their key objective of encouraging new entry into the Tasmanian retail market and did not attract sufficient buyers for Aurora's retail business, they must be judged to have failed to deliver their key objective.[20] Moreover, there are no indications that any new retailers will enter the Tasmanian market in the foreseeable future. The chief lesson from

[18] TER, *Review of the Wholesale Contract Regulatory Instrument*, Issues Paper, December 2015.
[19] TER, *Review of the Wholesale Contract Regulatory Instrument*, Issues Paper, December 2015, p. 18.
[20] ERM Business Retail, a pre-existing retailer focused mainly on larger business customers and with some interest in market contracts for small businesses has continued its presence but with a small and declining customer base.

wholesale market regulation is that, if retail competition is to become a reality in Tasmania, including for small business, then wholesale contract regulation is insufficient – and structural change in the wholesale market is necessary – for competition to emerge.

2.2.8 Tasmanian Wholesale Electricity Market Different from the NEM

There are a number of important ways in which the Tasmanian wholesale electricity market differs from the NEM wholesale market. These can be summarised as:

- The Tasmanian wholesale market is dominated by Hydro Tasmania on the seller side and Aurora Energy on the buyer side, whereas most other parts of the NEM are characterised by competition between several generators and retailers, albeit imperfect competition.
- Both the Tasmanian entities belong to the same owner, the Tasmanian Government, which heightens concerns about the market structure, whereas private ownership is more common elsewhere, albeit in concentrated and vertically integrated markets.
- Hydro Tasmania has the ability to control both the spot price (which is the source of retailers' principal commercial risk) and the contract price (which is how they insure against that risk). Unlike other NEM regions, the option of managing basis risk between NEM jurisdictions with the aid of Inter Regional Settlement Residue (IRSR) units is unavailable, as all IRSRs from the Basslink interconnector are allocated to Hydro Tasmania. Similarly, with the current excess of generation capacity, and the continued investment in wind generation on the basis of the RET subsidy, a new entrant retailer is likely to be deterred from building its own costly and unnecessary generation in Tasmania. This locks out generation ownership risk management options available to competing retailers elsewhere in the NEM.
- Spot price volatility in the Tasmanian market can be 'unpredictable' compared to other NEM jurisdictions. This is because Hydro Tasmania can utilise its ability to control spot price outcomes to influence Basslink flows and Baseline Renewable Energy Certificate generation to maximise arbitrage opportunities. This is sound commercial behaviour but gives rise to unpredictability in Tasmanian spot market prices.
- This situation has resulted in the Tasmanian Government introducing a framework that regulates Hydro Tasmania's wholesale contracts and intended to allay the fears of potential new entrant retailers about the market power of Hydro Tasmania and provide them with a safety net of regulated contracts modelled on the NEM derivates market. However, this has failed to stimulate any new entry.

2.2.9 Impacts of Tasmania's Wholesale Electricity Market on Small Business

A key implication of Tasmania's unique wholesale electricity market for consumers, including small business, is that potential new entrant retailers perceive that their entry to the Tasmanian electricity market carries too many risks and is not worthwhile. As a consequence, electricity consumers, including small business, have been denied access to retailer choice and the benefits of a competitive retail market, including competitive prices and price discounting. On the other hand, wholesale market and retail price regulation have helped to keep electricity prices for small consumers in Tasmania under regulated control and mitigated against exposure to unbridled market power.

2.2.10 Second Bass Strait Interconnector and Hydro Tasmania Expansion Proposals

Two prospective projects that could impact on the Tasmanian wholesale market and small business are a second Bass Strait interconnector (sometimes referred to as 'Basslink 2') and major expansion of Hydro Tasmania's system (sometimes called 'Hydro Tasmania 2.0'), including pumped storage[21].

A major independent assessment of the potential costs and benefits of a second Bass Strait interconnector has recently been completed.[22] This found that such an interconnector only had positive net material benefits under certain restrictive scenarios, namely, if a second interconnector between Victoria and South Australia was built, or if there was a substantial reduction in Tasmanian demand (e.g., the departure of one or more of the Major Industrial users).

If the second interconnector was regulated, Tasmanian consumers would bear transmission costs in proportion to imports across the link but would also benefit from reduced inter-regional constraints, resulting in a convergence of wholesale energy prices. For a merchant (unregulated) interconnector, the impact on consumers would depend on the owner's bidding strategy. Cost impacts would also depend on spot price differences between the regions, the volume of the flows between them, the ancillary services market and competitive conditions in wholesale and retail markets. The lack of competition in the Tasmanian wholesale and retail markets could limit any consumer benefits.

The possible expansion of Hydro Tasmania's hydro-electric capacity involves a combination of enhancements to the Tarraleah hydropower scheme and the Gordon Power Station, and new pumped hydro energy storage schemes that could deliver up to 2,500MW of pumped hydro capacity.[23] The Australian Renewable Energy Agency (ARENA) is in the process of assessing applications from Hydro Tasmania to support feasibility work. Such expansions appear to be based more on electricity exports from Tasmania, especially if a second interconnector were constructed, than aimed at benefitting Tasmanian electricity consumers, although it is possible Tasmanian consumers could derive some price and energy security benefits. As with all such projects, net impacts also depend on the costs involved, which remain to be determined and could be considerable.

Whilst Tasmanian consumers could also benefit from the additional capacity, e.g., when exports to the NEM were not profitable, the additional electricity supply would be in the hands of Hydro Tasmania with its substantial market power. Moreover, Tasmania already has significant excess electricity capacity, which is already posing a barrier to new entry (as discussed in Section 2.2).

Of particular concern is the number of small or medium sized businesses which rely heavily on cheap 'off peak' energy as the main energy input into their business operations. These include independent supermarkets, aged care facilities, irrigators and dairies, where more than 60 per cent of the energy consumed is 'off peak' energy and significant capital investment has been sunk in response to this price signal.

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[21] Pumped hydro storage makes use of two vertically separated water reservoirs, using low cost electricity to pump water from the lower to the higher reservoir and running as a conventional hydro power plant during high electricity cost periods.

[22] Dr John Tamblyn, *Feasibility of a Second Tasmanian Interconnector, Final Report*, April 2017 at https://www.environment.gov.au/system/files/energy/files/preliminary-report-feasibility-of-a-second-tasmanian-interconnector.pdf.

[23] Hydro Tasmania, *Supporting Australia's energy transition, Media Release*, 20 April 2017 at https://www.hydro.com.au/about-us/news/2017-04/supporting-australia%E2%80%99s-energy-transition.

Pumped hydro energy storage schemes that could deliver up to 2,500MW of pumped hydro capacity, means Hydro Tasmania pumps competing with such businesses for access to low priced 'off peak' energy which will inevitably drive up 'off peak' rates. In essence, pumped hydro reduces peak prices, at the expense of increasing 'off peak' prices, with an inbuilt energy loss of 20 per cent in the process of pumping.[24] However, the extent to which this happens may be impacted by the considerable over-supply that often characterises off peak periods.

2.2.11 Energy Security and the Wholesale Market

Energy security is important to Tasmanian small businesses. This point was clearly enunciated in the TSBC's submissions to the Tasmanian Energy Security Taskforce (TEST).[25] Simply put, small business needs a secure and reliable supply of electricity to maintain its operations and also needs it to be priced competitively.

Energy security also has an important relationship with the wholesale electricity market. There will be costs associated with any given level of energy security and a need to balance energy security with preparedness of the community to pay for energy security. To the extent that energy security involves wholesale market measures, these costs will be reflected in wholesale market costs (and prices). An efficiently operating and competitive wholesale market is also likely to deliver energy security more efficiently.

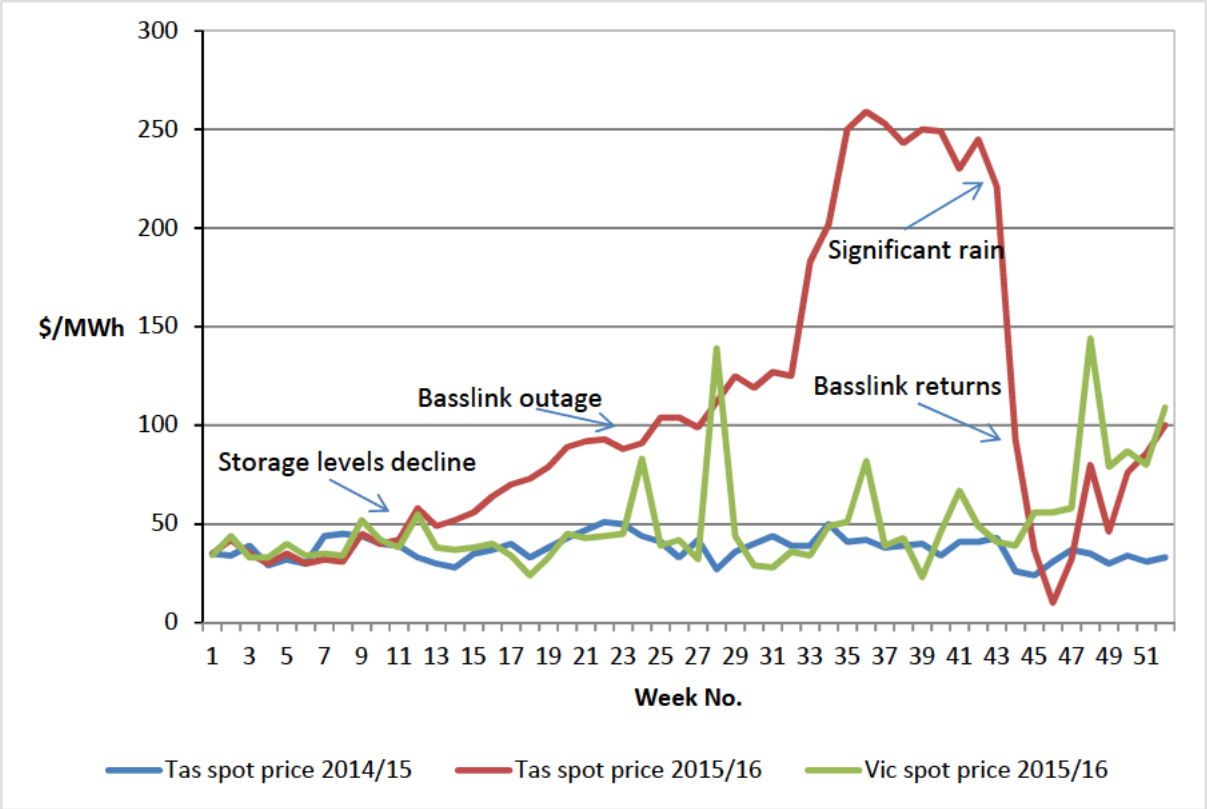
Moreover, if electricity supply is secure and well managed and seen as such by the market, this will be reflected in wholesale prices being lower than they would otherwise be. Alternatively, if electricity security is compromised, is poorly managed or if decision making is not transparent, the market will price in the associated higher risks.

This situation was observed in Tasmania from December 2015 until May 2016 when the combined impact of low storage levels due to drought conditions and a prolonged outage of Basslink resulted in a threat to Tasmania's energy security requiring an emergency response (the *Energy Supply Plan*) comprising more careful storage management, bringing the TVPS CCGT back into operation (after it was decommissioned and being prepared for sale by Hydro Tasmania), securing significant demand-side response from some of Tasmania's major electricity users and temporary installation of around 220 MW of portable diesel and dual fuel generators. During this period spot prices increased significantly, as can be seen from Figure 5, and then fell abruptly as significant rain replenished storages and Basslink returned to service. Tasmanian spot prices for 2014/15 and Victorian spot prices for 2015/16 are also shown to help demonstrate the significant impact of the Tasmanian energy security threat on wholesale prices. The divergence of Tasmanian spot prices for 2015/16 from both the other series is clearly evident. These spot price increases were, in fact, even more significant than those seen in 2016/17 in response to NEM wholesale market pressures (see Figure 6).

Although these wholesale price increases did not pass through into regulated retail prices, as the Tasmanian Government committed that electricity prices would not increase due to the emergency, Hydro Tasmania had to absorb price increases and the costs of the *Energy Supply Plan* in its bottom line. The Government accepted lower dividends and taxation payments by Hydro Tasmania. Moreover, there was an associated cost in terms of damage to Tasmania's business reputation and community confidence in the electricity industry.

[24] Mercury Newspaper, *Can Tasmania be the battery of the nation*?, Chris Gwynne, Hydro Tasmania, 8 September, 2017.
[25] TSBC, *Tasmanian Energy Security Taskforce Response to Consultation Paper*, 16 September, 2016.

Figure 5: Tasmanian Weekly Average Electricity Spot Prices During the 2015/16 Electricity Security Threats



Source: AER website at https://www.aer.gov.au/wholesale-markets/wholesale-statistics/weekly-volume-weighted-average-spot-prices.

The threats to Tasmania's energy security that emerged in this period were due to a combination of:

- Questionable risk management and energy security practices by Hydro Tasmania prior to drought conditions (2015 produced the lowest spring inflows ever recorded) and the extended Basslink failure beginning in December 2015 when Hydro Tasmania appeared to generate particularly aggressively so that it could export heavily into Victoria in pursuit of additional revenue from Large Generation Certificates (LGCs) under the RET;[26]
- A relatively low starting point for dam levels on 1 January 2015 as Hydro Tasmania had used the Carbon Tax period to expand its generation and revenue, but (it can be argued) at the expense of prudent risk management and without due weight being given to Tasmania's energy security;
- The non availability of the 208 MW TVPS CCGT, which had been decommissioned by Hydro Tasmania and was being prepared for sale, notwithstanding its importance to Tasmania's energy security (as later confirmed by the TEST).

These threats served to highlight energy security as a serious issue for Tasmania.

[26] Goanna Energy Consulting Pty Ltd, *Tasmanian Energy Security Taskforce, Energy Crisis Market Impact Study, Energy Crisis, or Risk Management Crisis?*, 16 September, 2016.

They also served to shine a light on the important role that on-island generation (hydro-electric, thermal and renewable), interconnection to the NEM, Hydro Tasmania's interregional trading opportunities and the wholesale market play in shaping Tasmania's energy security.

The current wholesale market structure in Tasmania could pose some threat to energy security. The recent threat to energy security highlighted possible deficiencies in present arrangements, including conflicts or tensions in Hydro Tasmania's energy security (water management) and commercial roles.

There were suggestions that Hydro Tasmania had placed a desire to maximise its revenues during the carbon price period and thereafter a desire to generate LGC's from above "Baseline" dispatch of Hydro generation, on top of the need for prudent water management.

Its approach to the TVPS, which can play an important role in energy security, was also called into question, especially in its attempted sale of the CCGT communicated in its media release of 12th August 2015,[27] just seven weeks before "hitting the brakes" and going to zero export to Victoria on 8th October 2015. This required a reversal of its decision to sell as the unit was restored to operations to assist with energy security (having been partially dismantled).

In response to the energy security threats of 2015/16, the Tasmanian Government formed the TEST, the final report of which was released in September 2017.[28] The TEST made important recommendations aimed at improving Tasmania's energy security arrangements so that (hopefully) a repeat of the threats of 2015/16 can be either avoided or better managed (should they occur). This includes some separation of energy security from Hydro Tasmania's commercial operations, where there was clear potential for conflicts of interest to emerge. The TEST clearly recognised the important role that a competitive electricity market can play in ensuring secure supplies of energy and recognised Tasmania's gaps in this area, but did not recommend any remedial actions. Their recommendations also make clear the important role of more prudent storage management, Basslink's availability, the continued presence of the TVPS and need to negotiate new gas supply and transportation arrangements for the TVPS in a timely way in ensuring that Tasmania's electricity supplies remain secure in future. It also pointed to the desirability of having more on-island generation available especially through new entrant renewable generation.

However, the TEST has not presented any estimates of what its recommendations will cost, including their impact on electricity prices, although it did recognise that its recommendations would have a cost and canvassed the need for industry to pay for some of them (which could be passed on to consumers). The Tasmanian Government has either supported or provided in-principle support for all 36 of the TEST's recommendations, with a number of the recommendations having either been implemented or close to being implemented.[29]

2.3 KEY POINTS

Key points to emerge from this Chapter include:

[27] Hydro Tasmania, "*Changes to operation of Tamar Valley Power Station*", Media Release, 12 August 2015.
[28] See https://www.stategrowth.tas.gov.au/energy_and_resources/tasmanian_energy_security_taskforce/final_report.
[29] The Hon. Matthew Groom, Minister for Energy, 'The Tasmanian Energy Security Taskforce Report', *Media Release*, 16 August 2017.

- The Tasmanian wholesale electricity market is different to the rest of the NEM. It is a far more concentrated and regulated market with competition all but absent.
- Electricity generation in Tasmania is highly concentrated in the hands of Hydro Tasmania, which owns or controls 96 per cent of capacity, making it by far-and-away the most concentrated wholesale market in the NEM.
- The Expert Panel looking into the Tasmanian electricity industry described Hydro Tasmania as having a high degree of latent market power, and found that this was sufficient to deter new entry into Tasmania, especially by the larger mainland retailers, who are critical to introducing retail competition into Tasmania.
- Wholesale electricity market shortcomings have essentially left the Tasmanian wholesale and retail electricity markets devoid of both competition and any prospects of competition emerging due to a lack of any interest from larger inter-state retailers. This has placed FRC in a strictly 'Clayton's choice' framework of no material choice for small business.
- Consequently, small businesses have no access to competitive pricing and miss out on the benefits of competition enjoyed by their peers elsewhere in the NEM, including price discounting, albeit in an imperfect setting which is restricting some of the benefits.
- There are some positive aspects to wholesale market regulation in Tasmania, however, it has failed to deliver its main objective for small business of encouraging retail competition and therefore must be judged a failure.
- Moving beyond the current regulatory approach to the Tasmanian wholesale market is critical to improving the opportunities for competition in the Tasmanian electricity market (wholesale and retail).
- The option of either selling the 'gentraders' to potential new entrants or of going a step further and separating and selling Hydro Tasmania's physical and trading functions as three separate businesses is the approach most likely to stimulate new entry. However, as discussed in the following Chapter, current wholesale price pressures in the NEM (including Tasmania) and their damaging impact on retail prices make the immediate environment for competitive reform more challenging.
- In the longer term, structural reform of Tasmania's wholesale electricity market is still likely to bring the biggest and most sustainable gains to small business.
- Tasmanian small businesses could derive some wholesale price benefits from proposals such as a second Bass Strait interconnector and expansion of Hydro Tasmania's hydro-electric capacity, but these seem aimed more at exporting electricity from Tasmania and may also pose some price risks for small business due to their uncertain costs and market impacts.
- Energy security is important to Tasmanian small businesses given their heavy reliance on electricity. Energy security also has important impacts on the wholesale market and *vice versa*. A poor approach to energy security imposes costs and risks on the wholesale market which can impact prices. An illustration of this was the energy security threats to Tasmania in 2015/16 resulting from the combined impacts of drought conditions that left storages low, a prolonged outage of Basslink, the need to restore the TVPS to full operations and less than prudent management of energy security by Hydro Tasmania. Spot prices increased very significantly as a result, although the Government committed to no price increases and some of the costs of the response were absorbed by Hydro Tasmania. This has resulted in 36 recommended changes to Tasmania's energy security arrangements which the Government has either supported or provided in-principle support for.

3

Tasmanian Wholesale Electricity Prices

- Description of Wholesale Electricity Prices
- Historical Wholesale Electricity Prices – Tasmania & the NEM
- Recent Wholesale Prices
- Forward Market Prices
- Causes of 2017 Record Spot Prices
- Wholesale Price Outlook
- Regulation of Tasmanian Wholesale Prices
- Impact of Tasmanian Wholesale Prices on Retail Prices for Small Business
- Recent Changes in Tasmanian Wholesale Price Regulation
- Key Points

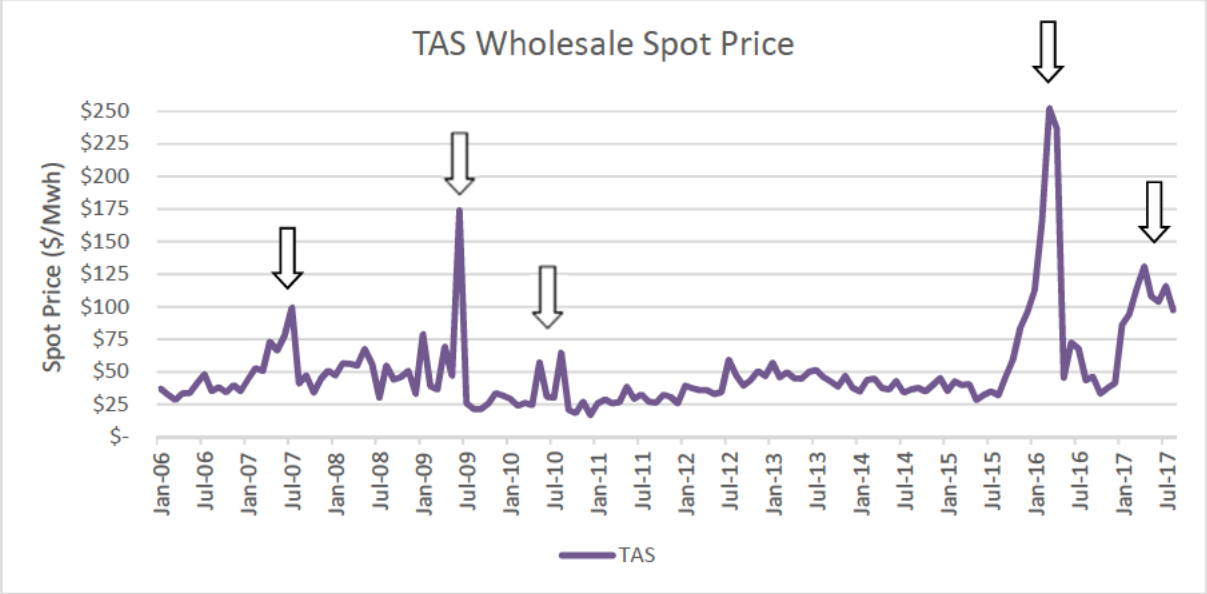
3 Tasmanian Wholesale Electricity Prices

This Chapter examines Tasmanian wholesale electricity prices. It begins with a description of Tasmanian wholesale prices and their historical volatility, examines their proximity to Victorian prices, considers current and future prices and the wholesale price outlook (including the main influences on these prices) before discussing the regulation of Tasmanian wholesale prices and recent changes in Government policy on wholesale prices.

3.1 Description of Wholesale Electricity Prices

The Tasmania wholesale electricity price is characterised by the numerous influences detailed in the previous chapter. The principal influence being Hydro Tasmania's latent market power, which has historically allowed them to heavily impact spot prices and influence Basslink flows to maximise arbitrage opportunities. The resultant unpredictable and volatile behaviour of the Tasmanian wholesale electricity market can be seen in Figure 6 below where, repeatedly over the past decade, there have been dramatic and short-term price fluctuations.

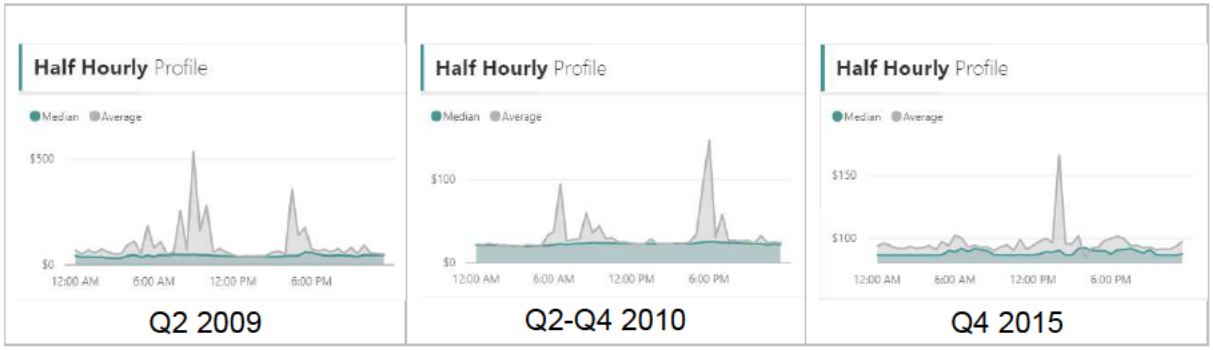
Figure 6: Tasmanian Wholesale Spot Price 2006-2017



Source: SavvyPlus Consulting BI

This unpredictable nature of the Tasmanian wholesale market was evident in instances of particularly volatile periods during 2001, 2009, 2010, 2015/16 and 2017 (shown by the arrows in Figure 6), where very sudden surges in the wholesale spot price were observed. The particularly volatile and singular nature of these events can be seen in the deviation of the average half hourly spot price from the median price for that period. Figure 7 shows examples of the significant volatility for a few of the quarters in the history of Tasmanian spot prices.

Figure 7: Tasmania Half Hourly Wholesale Price Profile: 2009, 2010 and 2015.



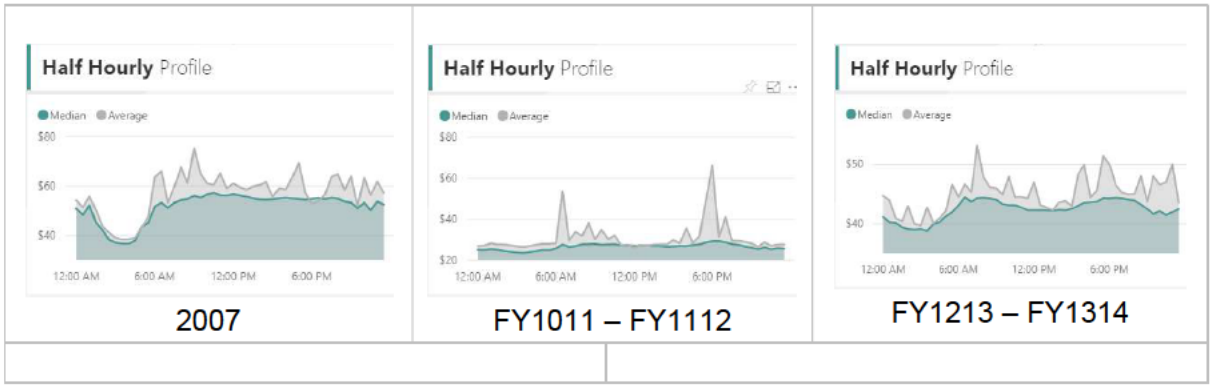
Source: SavvyPlus Consulting BI

As shown in Figure 8, more sustained price increases can be seen during periods of uncertainty surrounding future supply and pricing, as was the case in 2007/08 where drought conditions brought Hydro Tasmania's water storages to low levels. In the first half of 2007, drought conditions were experienced across the NEM, so there was a sustained price elevation to the underlying price, caused by the closure of water-cooled base load generators in Queensland, and the fear of lack of water for other water-cooled coal-fired plants, plus Snowy Hydro being concerned about water reserves. After 1 July 2007, strategic behaviour of key generation players changed and the drought conditions eased, leading to a softening of the spot price by year end.

In July 2012, the Carbon Tax was introduced and remained in place until it was repealed in July 2014. During this Carbon Tax period, the spot price experienced an upward shift in the underlying price which remained in place for the carbon impacted period (see Figure 8).

More recently over the past year, we have seen a similar steady rise in the spot price (see Figure 8) following the announcement of recent closures, including significantly the Hazelwood plant, the substantial reduction in energy imports across the Basslink, increased utilisation of more expensive gas-fired generation, a revaluation of the gas price and other factors that are looked at more closely in Section 3.5.

Figure 8: Tasmania Half Hourly Wholesale Price Profile: 2007, 2010-2012, 2012-14, 2016/17.

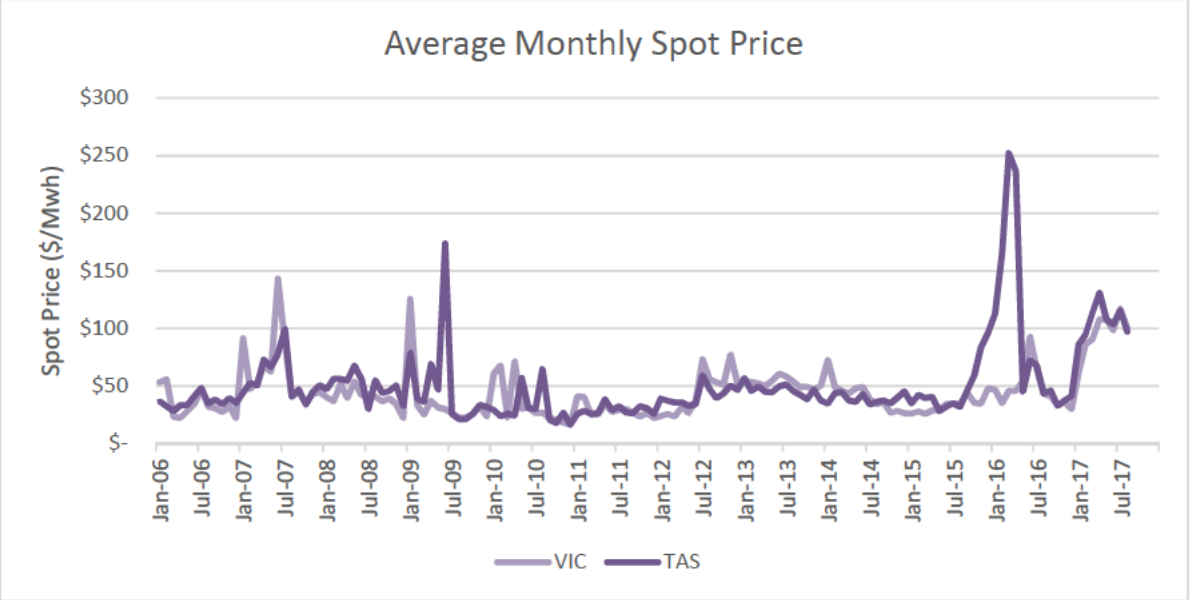


Source: SavvyPlus Consulting BI

3.2 Historical Prices and Trends - Tasmania and the NEM

Typically, the general trend of the Tasmania wholesale spot price follows that of the rest of the NEM and in particular its closest neighbour, Victoria. The spot prices differ between the two regions either due to line losses across Basslink, or when Basslink flow is constrained in either direction, and the local generation sets the spot price unfettered by competition from the constrained region. The trace of the spot price of Tasmania and Victoria from the time Tasmania entered the NEM is shown below in Figure 9.

Figure 9: Tasmanian and Victorian Average Monthly Spot Prices



Source: SavvyPlus Consulting BI

As shown in Table 2, since 2006 when Tasmania entered the NEM, the statistical correlation between Tasmanian and Victorian spot prices when the two regions are connected is 63 per cent (excluding the period of the Basslink failure). This correlation is lower than the correlation between other neighbouring regions in the NEM but is still strong. Looking at the other regions, as expected, they all show a stronger correlation with regions with a shared interconnector.

For 2017 the panorama has changed, with the spot price in the southern States of South Australia, Victoria and Tasmania breaking away from the northern states, which can be seen by the stronger

correlation between Tasmania and Victoria, and negative correlation between both Tasmania and Victoria with the two most northern states (see Table 3).

Table 2: Statistical Correlation of NEM Regions, January 2006 to July 2017

	TAS	VIC	SA	NSW	QLD
TAS	100%	63%	43%	47%	43%
VIC	63%	100%	65%	71%	53%
SA	43%	65%	100%	51%	44%
NSW	47%	71%	51%	100%	72%
QLD	43%	53%	44%	72%	100%

Source: SavvyPlus Consulting BI

Table 3: Statistical Correlation of NEM Regions, Jan-17 to Jul-17

	TAS	VIC	SA	NSW	QLD
TAS	100%	73%	11%	-15%	-55%
VIC	73%	100%	12%	-11%	-71%
SA	11%	12%	100%	90%	49%
NSW	-15%	-11%	90%	100%	69%
QLD	-55%	-71%	49%	69%	100%

Source: SavvyPlus Consulting BI

The pie charts in Figure 10 below represent the percentage of time that interconnectors were constrained. The significant increase in times the Vic-NSW interconnector was constrained in 2017 supports the evidence above that the southern States are breaking away from the northern States more often due to the market changes, including Hazelwood's closure. At the same time, the interconnectors linking Victoria with South Australia, and Tasmania and Victoria have been constrained less. In a similar fashion, the NSW-Qld interconnector has been constrained less in 2017 than in previous years.

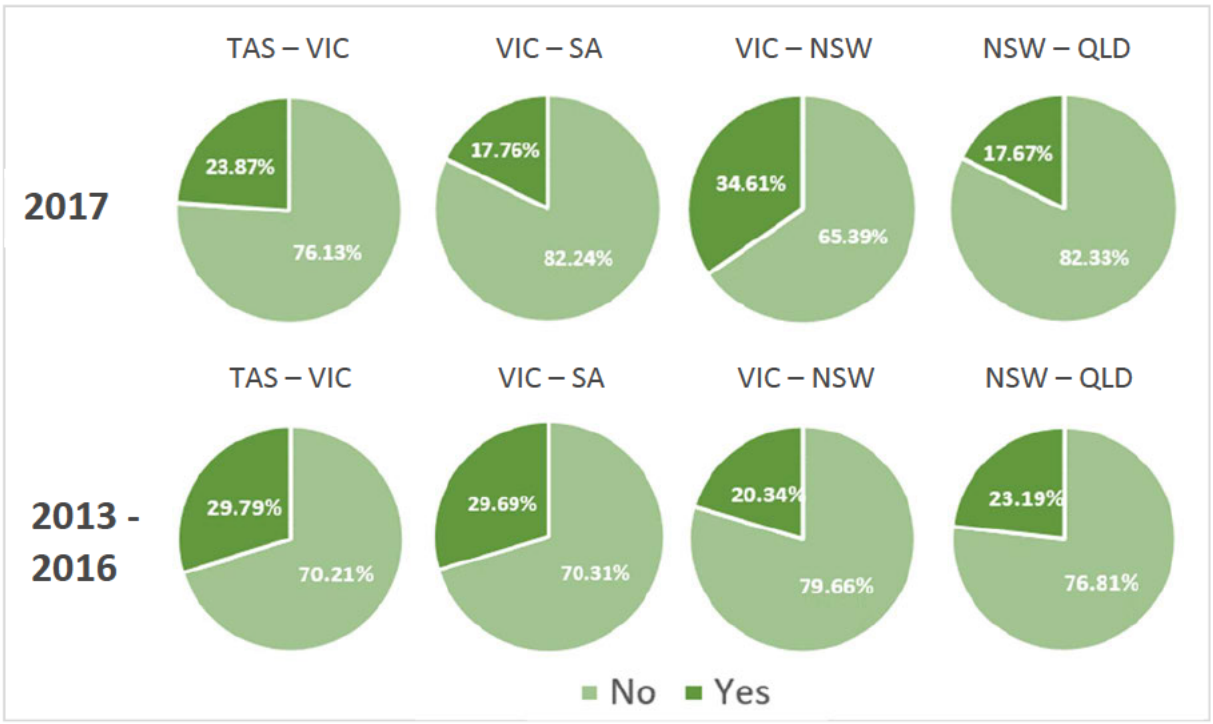
Instances where the Tasmanian spot price has deviated sharply from the Victorian Spot Price can be seen in Figure 11 below displaying the deviation between the two Regional spot prices (with prices shown from a Tasmanian perspective).

The factors affecting price variation are numerous, but as the AER acknowledges in its response to the Expert Panel's Issues Paper reviewing the Tasmanian electricity sector[30], Hydro Tasmania's reduction in non-scheduled generation during periods of high demand, with a cutback in the amount of low-priced generation capacity offered and an ensuing dispatch of high-priced generation, has

[30] AER, *Response to Electricity Supply Industry Expert Panel's Issues Paper*, 15 August 2011.

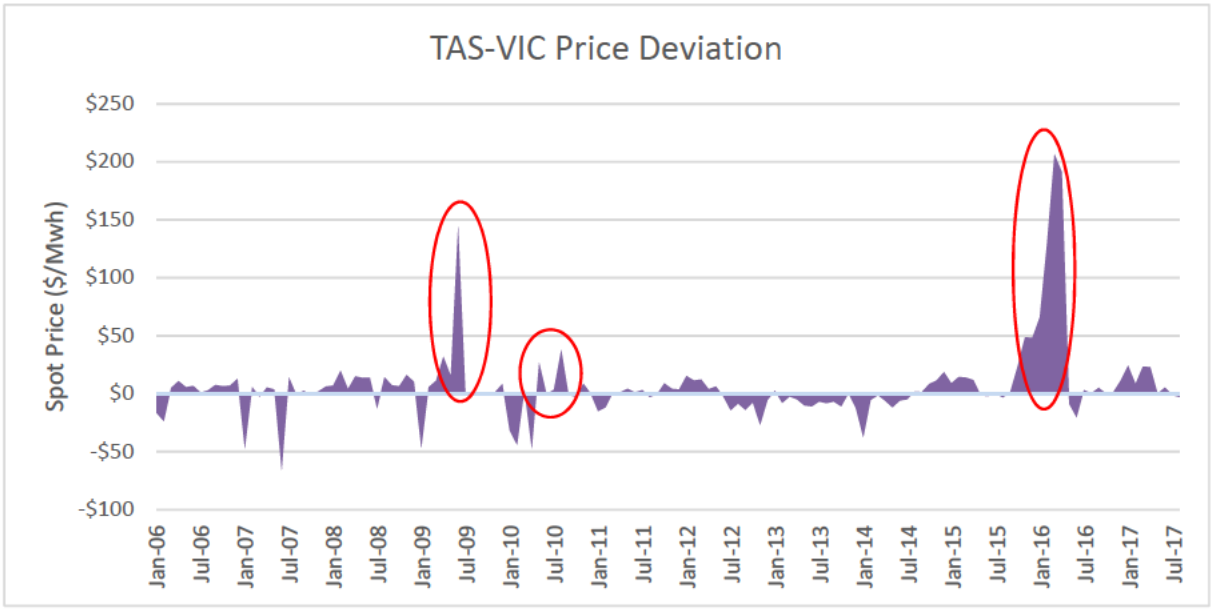
contributed to such periods of high spot prices. In the same paper, the AER points out that there are numerous examples of where Hydro Tasmania has offered higher prices during the outages experienced by its competitors, as was the case in the TVPS outages of May 2010.[31]

Figure 10: Time the Interconnectors were Constrained



Source: SavvyPlus Consulting BI

Figure 11: Relative Difference between TAS and VIC Spot Prices



[31] The TVPS was managed by Aurora Energy at this time through a fully owned subsidiary company "AETV Power". On 1 June 2013, the State Government transferred the ownership of the power station from Aurora Energy to Hydro Tasmania.

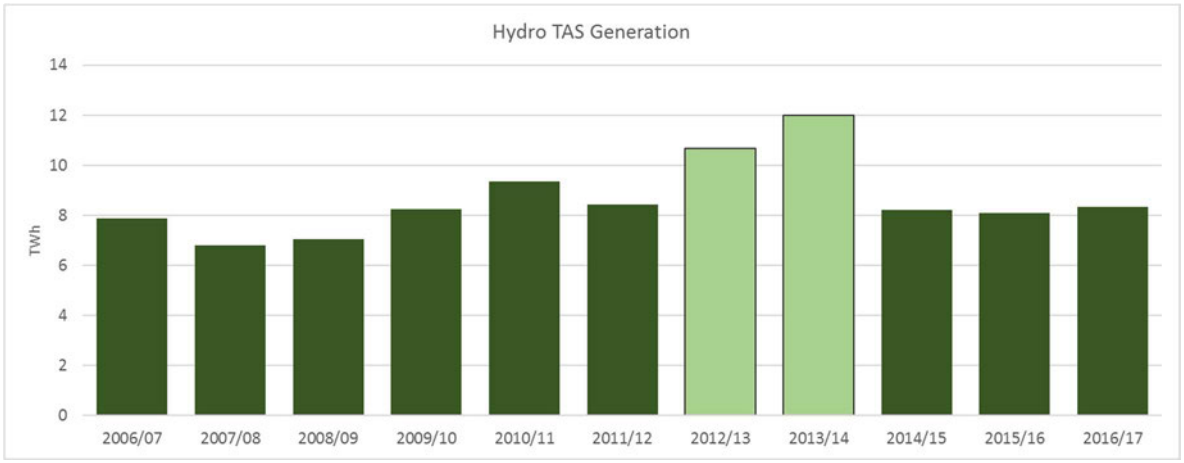
Source: SavvyPlus Consulting BI

The most recent and significant of these events was prior to Basslink failing in late December 2015, and then during the interconnector outage which ended in June 2016. In the case of the period before the Basslink failure, Hydro Tasmania water storage levels had been depleted significantly to barely above the lower revised minimum target storage level of 25 per cent. The low storage level at December 2015 was the result of:

1. Two years of exporting a record amount of energy across Basslink to the higher priced Victorian region during the Carbon Tax years without sufficient storage recovery time; and
2. In our view, poor water storage management in the period late April 2015 to September 2015, which was subject to a separate study undertaken by Goanna Energy in September 2016[32], which concluded that the risk management practices of Hydro Tasmania were questionable.

Figure 12 below shows the annual generation of Hydro Tasmania grouped by financial year, with the Carbon Tax years marked (by the lighter bars), which demonstrates the increased energy generated by Hydro Tasmania from its hydro stations.

Figure 12: Hydro Tasmania Annual Generation 2006/07 to 2016/17



Source: SavvyPlus Consulting BI

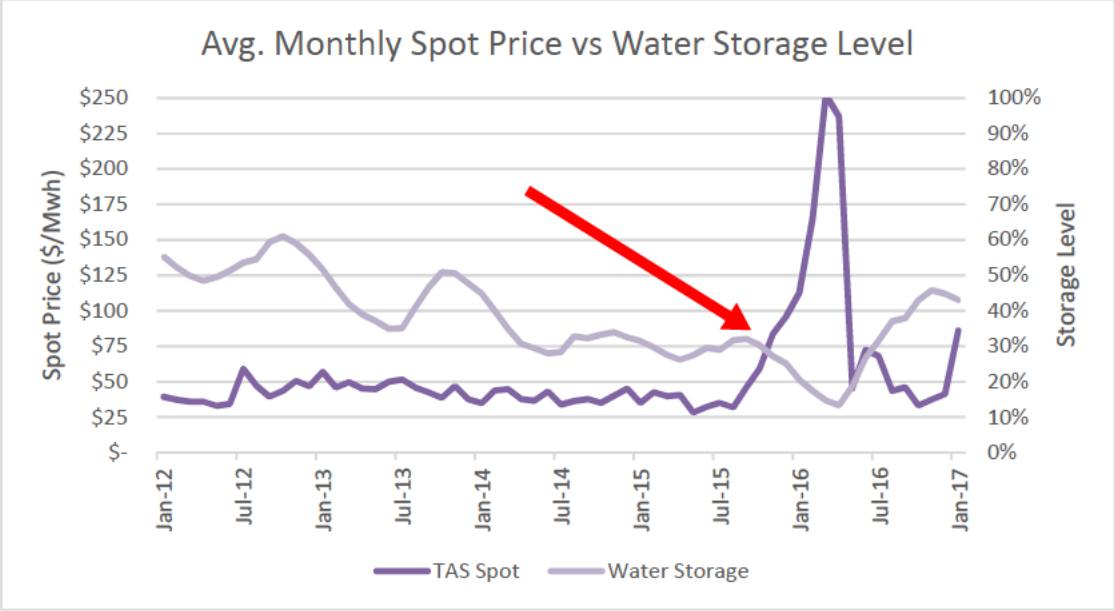
Figure 13 shows the monthly spot prices and the corresponding water storage levels. The impact of declines in storage levels on rising spot prices is particularly evident for 2015/16 (see arrow in chart). The increase in spot prices in 2017 has been mainly driven by non-hydrological factors (see Section 3.5).

Leading up to the failure of the Basslink connector, Hydro Tasmania was already relying heavily on energy imported from Victoria (see Figure 14 especially the circled area) because of the record low spring inflows.[33] By the time Basslink was restored in June 2016, water storage had reached a low of 12.8 per cent in April 2016 with spot prices reaching a record high the month before.

[32] See Goanna Energy, *TEST Energy Crisis Market Impact Study*, 16 September 2016.

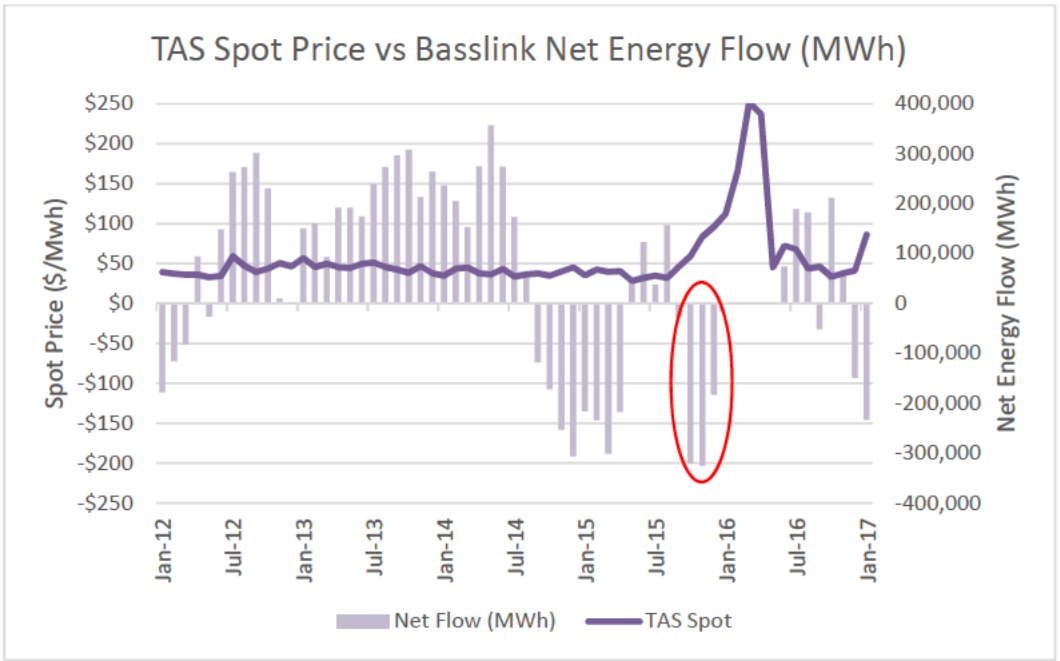
[33] "In Spring last year [2015] Tasmania experienced the lowest rainfall in over 100 years of recorded history. History proves that the spring dry was worse than a one in 100 year event. The inflows to the Hydro Dams

Figure 13: Tasmanian Average Monthly Spot Price vs Hydro Tasmania Water Storage Levels



Source: SavvyPlus Consulting BI

Figure 14: Tasmanian Spot Price versus Basslink Net Flow from Tasmania to Victoria.



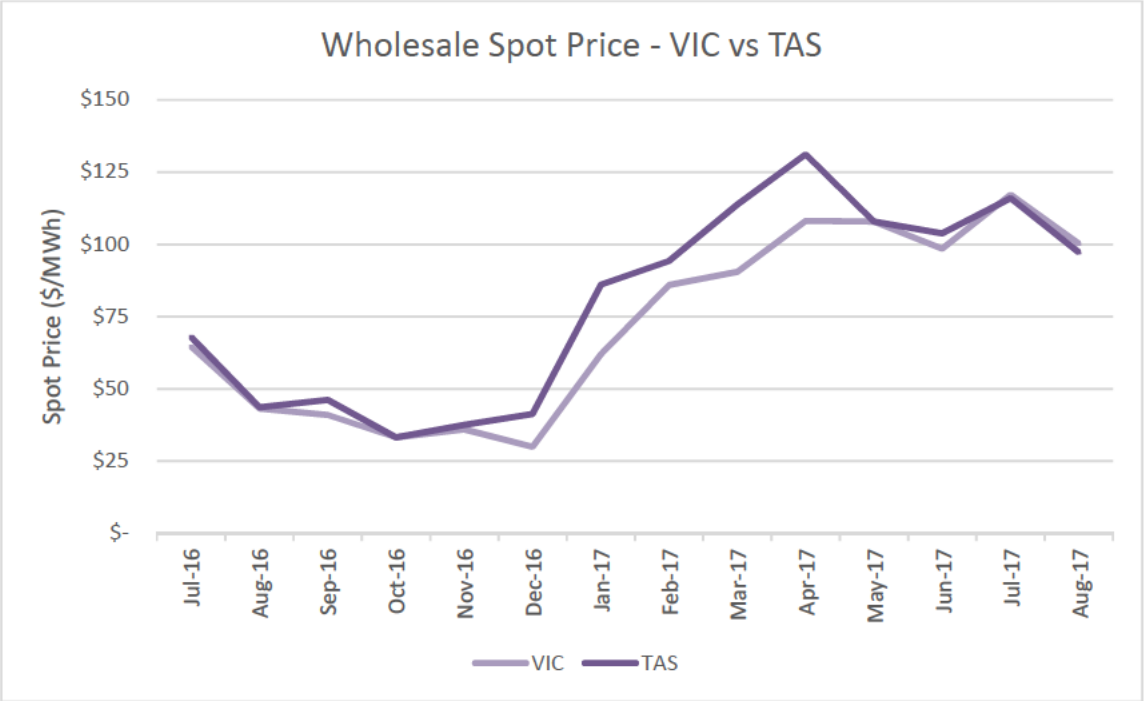
Source: SavvyPlus Consulting BI

during spring were also the lowest in Hydro's records. In fact, the inflows were not just the lowest on record, they were less than half the previous record low in the last 30 years of Hydro records", The Hon. Matthew Groom, Minister for Energy, *Ministerial Statement on Energy Security*, 8 March 2016 (our parenthesis).

3.3 Recent Prices

Since early this year, wholesale spot prices have risen sharply throughout the NEM due to a range of factors explored in Section 3.5. Figure 15 below traces the monthly average spot prices for Tasmania and Victoria since Basslink's restoration.

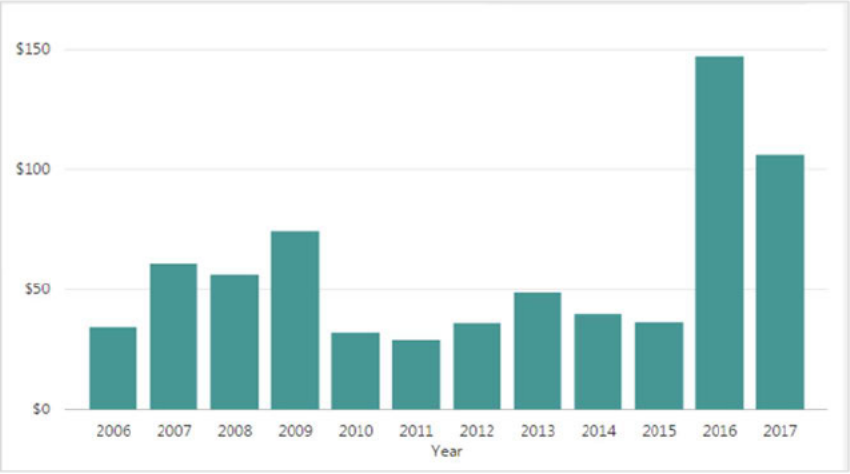
Figure 15: Recent Tasmanian and Victorian Electricity Spot Prices



Source: SavvyPlus Consulting BI

Average calendar year spot prices since Tasmania joined the NEM are shown in Figure 16. Except for when Basslink was out-of-service from late December 2015 to May 2016, the average price in 2017 has been the highest on record in Tasmania.

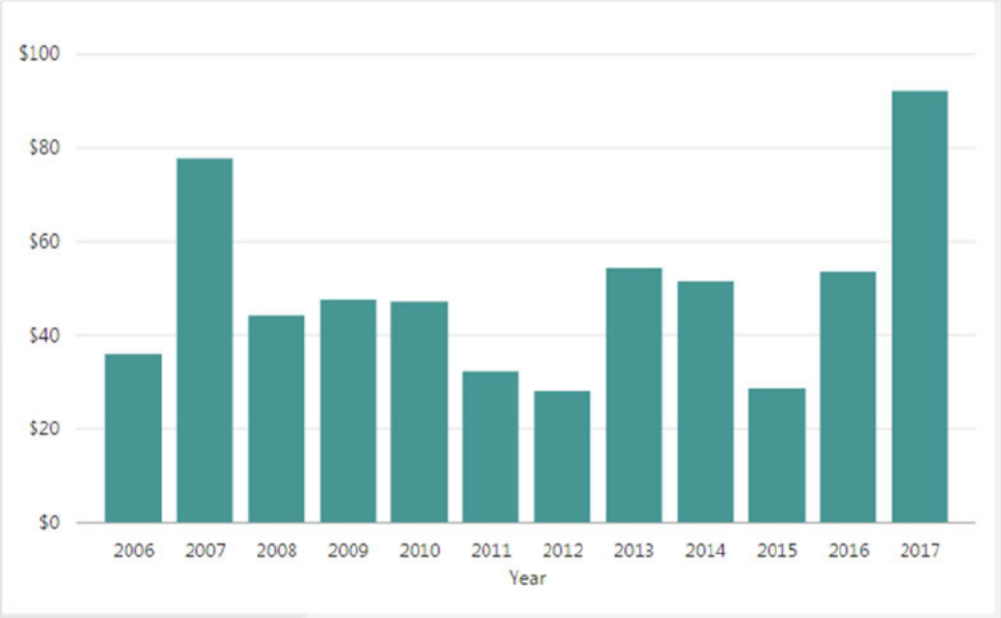
Figure 16: Tasmanian Average Annual Spot Price for Q1 and Q2 Since 2006



Source: SavvyPlus Consulting BI

Repeating the analysis for Victoria (see Figure 17), 2017 has been the highest average calendar year spot price since Tasmania joined the NEM; and indeed, was the highest on record since the commencement of the NEM.

Figure 17: Victorian Spot Price Q1 and Q2 Since 2006

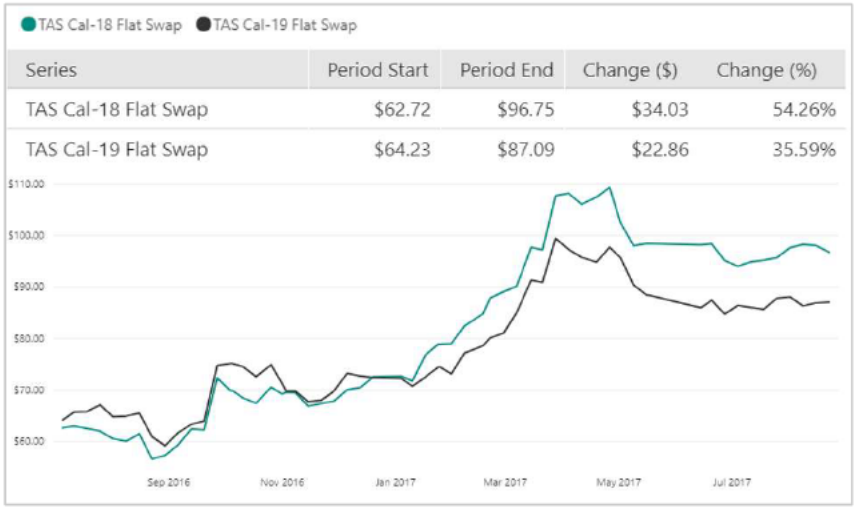


Source: SavvyPlus Consulting BI

3.4 Forward Market Prices

Wholesale forward prices in Tasmania for the calendar year 2018 (Cal-18) increased significantly from 2016 levels and reached a high of around $109/MWh in April 2017 (see Figure 18). Whilst they have fallen somewhat since then, they remain historically high at around $96/MWh. The forward price for Cal-19 Flat Swaps remains similarly at a high level, albeit slightly lower at $87/MWh.

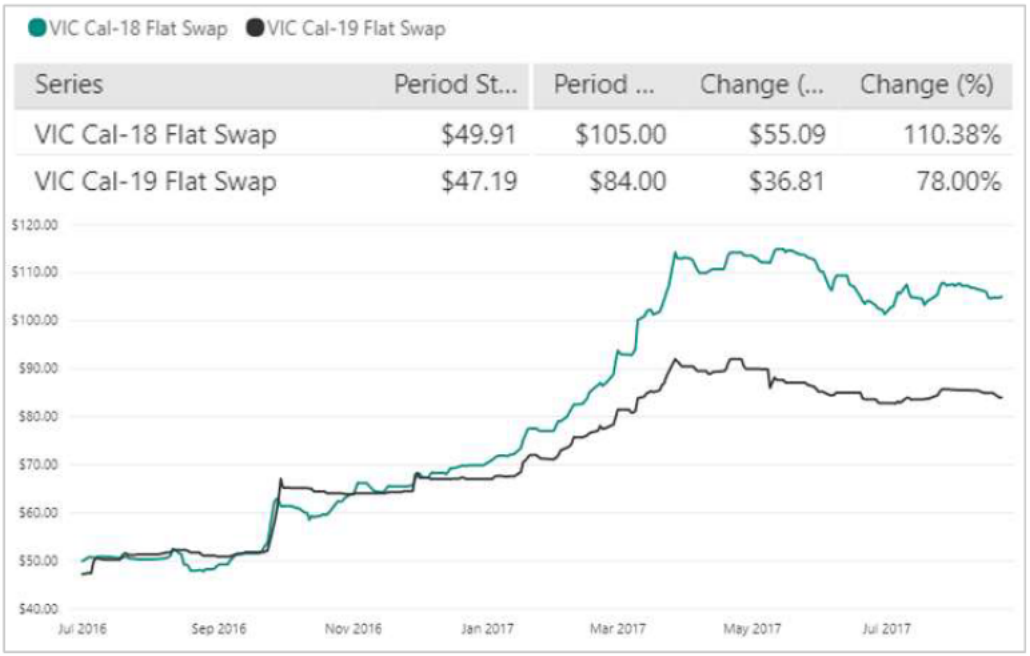
Figure 18: Wholesale Forward Prices – Tasmania



Source: SavvyPlus Consulting BI

Wholesale forward prices in Victoria are comparable, although higher for Cal-18 (see Figure 19). However, Victorian forward prices for Cal-19 did not peak as high as Tasmania and have a slightly softer outlook at $84/MWh.

Figure 19: Wholesale Forward Prices – Victoria



Source: SavvyPlus Consulting BI

3.5 Causes of the Record 2017 Spot Prices

In our view, the main causes for the elevation of spot prices has been a range of factors which are discussed in the following sections. Some of these factors are common across the NEM, which reflects that Tasmanian prices are a function of national factors, as well as local ones.

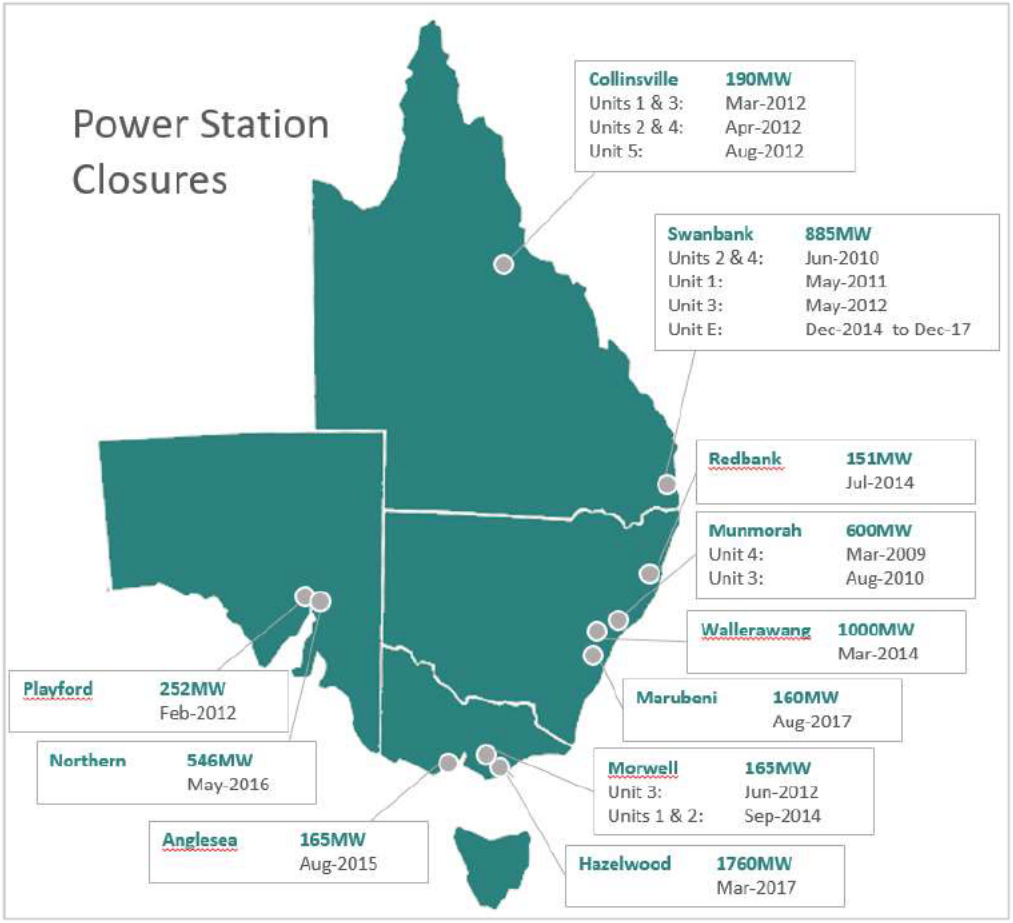
3.5.1 Baseload Closures

One of the principal contributors to the rise in wholesale electricity prices across the NEM has been the many coal and gas-fired plant closures, with almost 6,000 MW closed down in the last decade. The associated price rises were particularly felt by Victoria and Tasmania following the announcement of the closure of the Hazelwood power station during the last week of March 2017, but which was speculated on back as early as late September 2016.

A map of NEM power station closures is shown in Figure 20.

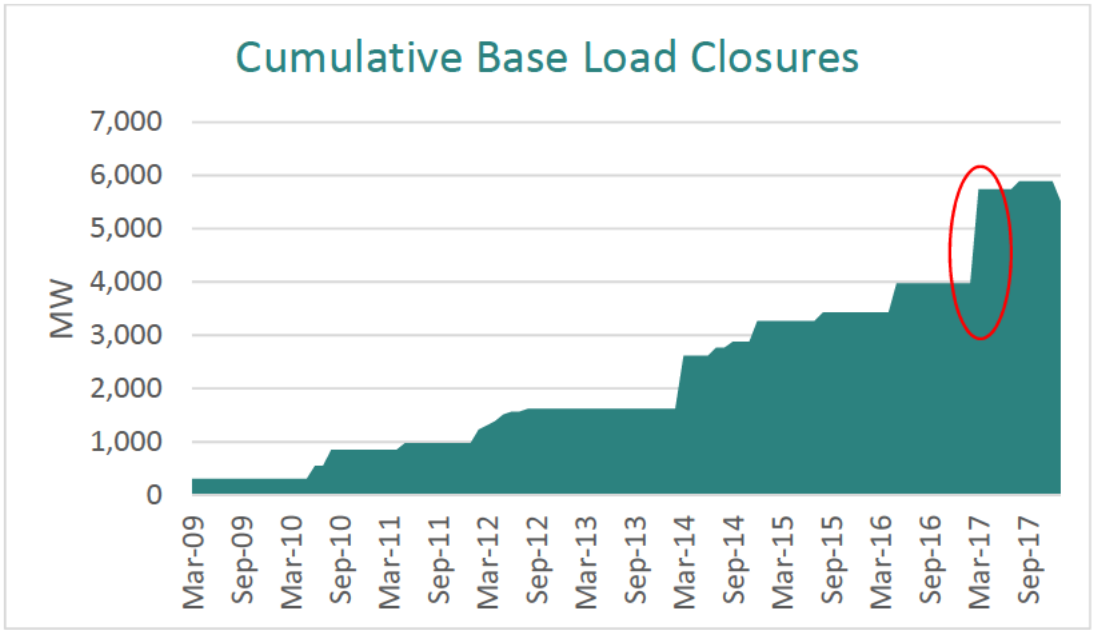
The significance of the Hazelwood power station closure can be appreciated in the graph below showing the accumulated base load closures across the NEM (see area circled in Figure 21).

Figure 20: Map of NEM Power Station Closures



Source: SavvyPlus Consulting BI

Figure 21: Cumulative Base Load Closures Across the NEM

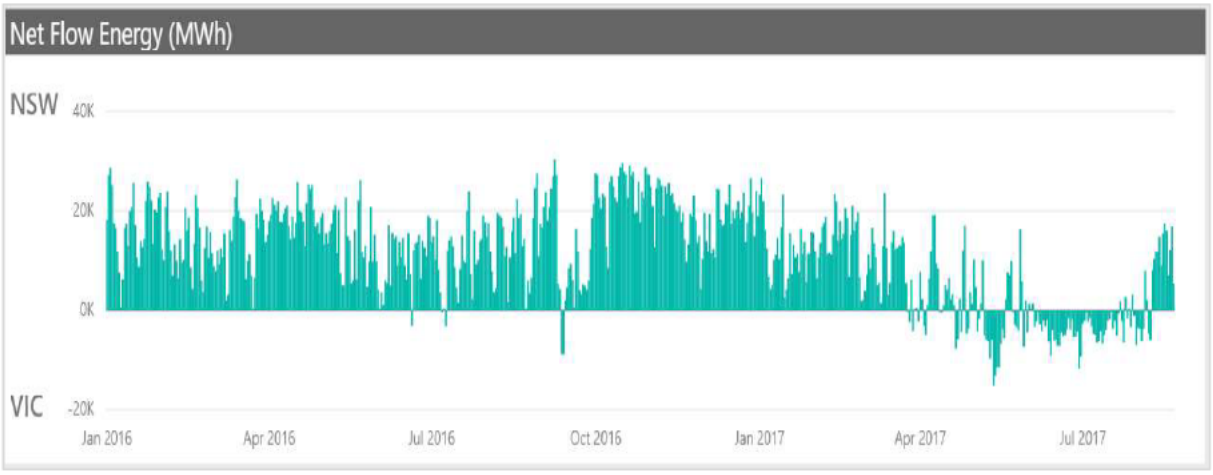


Source: SavvyPlus Consulting BI

3.5.2 Interconnectors Flows

With the closure of Hazelwood Power Station, the energy flows between the regions have been impacted. Up until the closure of Hazelwood in March 2017, Victoria has been a net exporter of energy to NSW, but from that point forward the VIC-NSW interconnector has imported energy into Victoria far more frequently (see Figure 22).

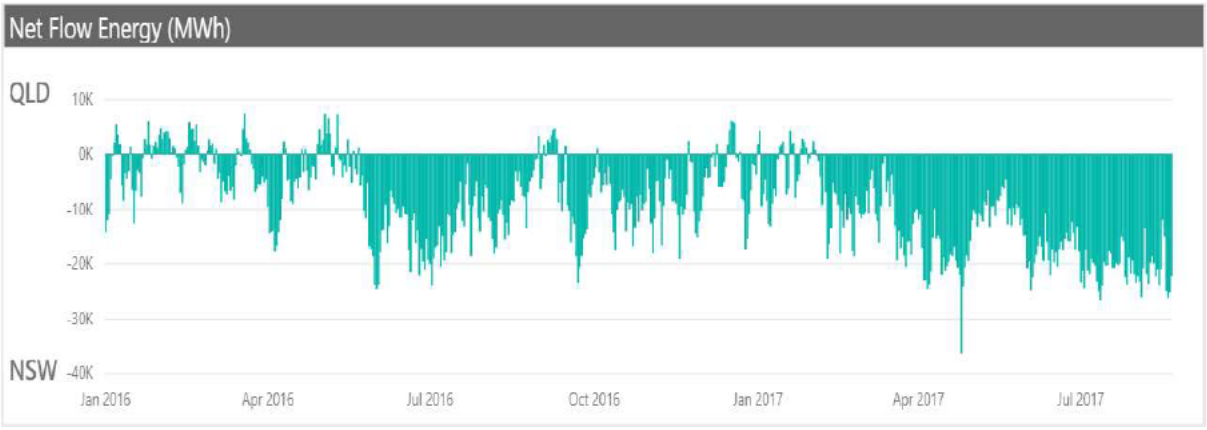
Figure 22: VIC-NSW Interconnector Net Energy Flow



Source: SavvyPlus Consulting BI

Consequentially, the net flow from Queensland to NSW has increased to compensate for the reduction in energy imported to NSW from Victoria (see Figure 23). It is likely that the situation might be exacerbated by 2022 when the Liddell power station in NSW shuts down, losing a further 2,000MW of capacity.

Figure 23: NSW-QLD Interconnector Net Energy Flow

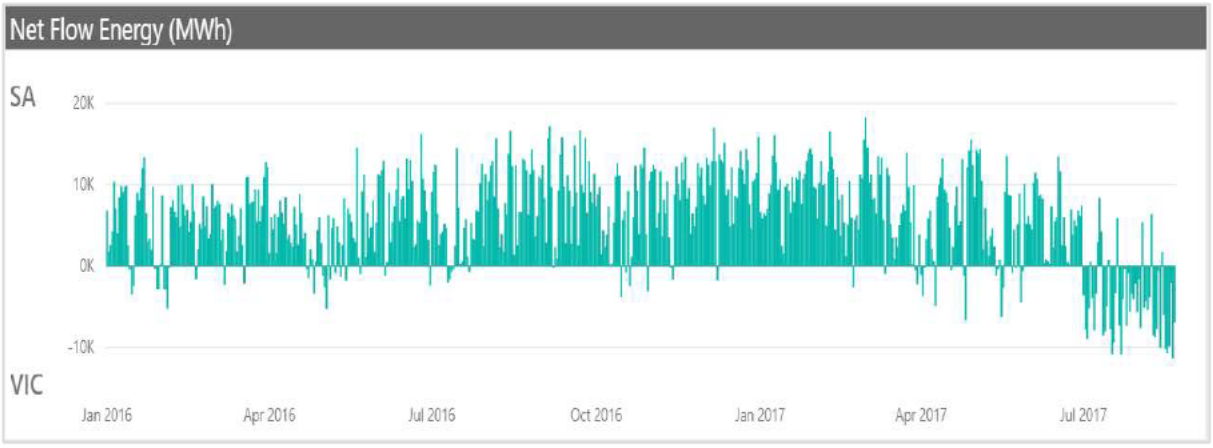


Source: SavvyPlus Consulting BI

From Figure 24 and Figure 25 below it can be seen that there was a reduction in the net energy flow from Victoria to South Australia following the closure of the Hazelwood power station. More recently, since July 2017, Victoria has been a net importer of energy from South Australia, as a result

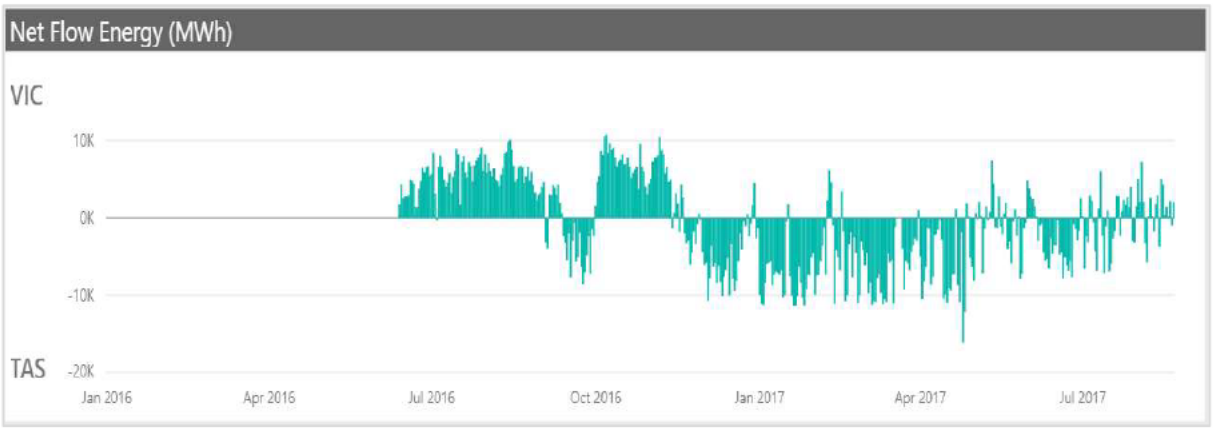
of the constraining of the VIC-NSW and VIC-TAS interconnectors, and significant wind generation in South Australia.

Figure 24: VIC-SA Interconnector Net Energy Flow



Source: SavvyPlus Consulting BI

Figure 25: TAS-VIC Interconnector Net Energy Flow

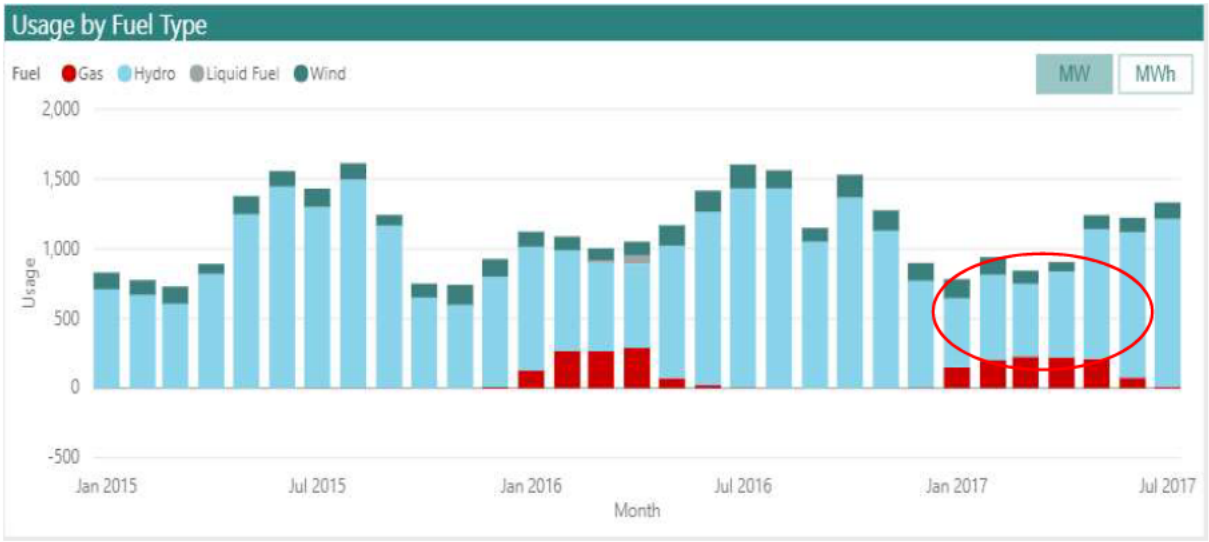


Source: SavvyPlus Consulting BI

3.5.3 Strategic Behaviour of Generators

From January 2017, Hydro Tasmania has re-priced their hydro generation which was substituted by more expensive gas generation (see Figure 26). This trend turned around in May, which has contributed to a softening of the relative electricity spot prices.

Figure 26: Tasmanian Energy Generation by Fuel Type



Source: SavvyPlus Consulting BI

Snowy Hydro's Victorian generation followed a similar profile with a reduction in generation and the firing-up of gas generation over the January to April period (see circled areas in Figure 27). The 'tap' was turned back on at Snowy Hydro in May this year.

We are of the belief that during the second half of 2016, both Hydro Tasmania and Snowy Hydro ran hard in order to generate above the baseline energy levels required to earn LGCs under the RET. The sudden change in behaviour effective on 1 January 2017 reflects the commencement of a new LGC year when it is unlikely that both parties would have sufficient water reserves to run two consecutive LGC earning years.

Figure 27: Snowy Hydro Energy Generation by Fuel Type

Source: SavvyPlus Consulting BI

Recently, generators in Victoria and Tasmania have reduced low-priced capacity and replaced it with more expensive offers, making a significant impact on the spot price. Since the closure of the Hazelwood power station, Victoria has seen a substantial reduction in offers below $35/MWh and a corresponding increase in offers between $35-$350/MWh (see circled area in Figure 28).

Figure 28: Distribution of Generation Offers, Victoria

Source: SavvyPlus Consulting BI

From Figure 29 it can be seen that Tasmania saw an even more notable reduction in offers below $35/MWh, and corresponding increase in offers, particularly over $500/MWh.

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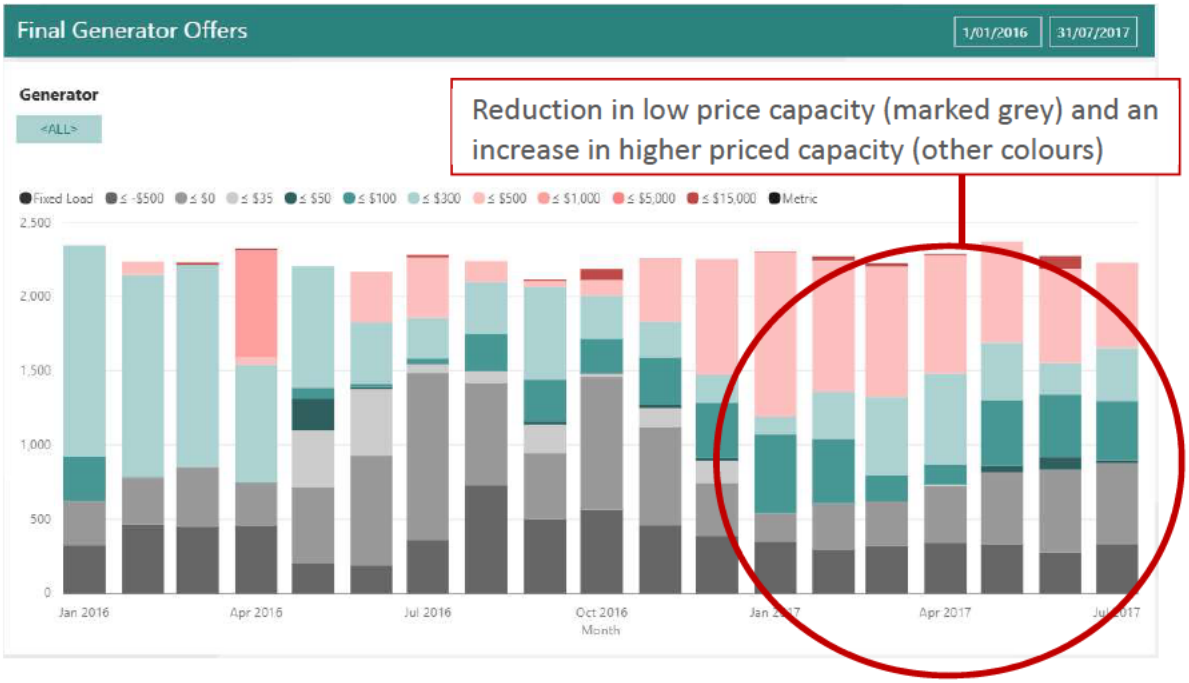
Figure 29: Distribution of Generation Offers for Tasmania



Source: SavvyPlus Consulting BI

3.5.4 Re-Valuation of Natural Gas Prices

The greater reliance on gas generation has aligned with a revaluation of the gas market on the east coast of Australia due to the connectivity with the global gas market via the LNG processing facilities at Gladstone in Queensland. In Victoria spot gas prices have risen from $3.22/GJ in January 2017 to $9.31/GJ in July 2017 (see Figure 30). The change in value has led to gas-fired generation making offers at higher prices than in previous years.

Queensland gas prices peaked at over $12/GJ in February 2017, after Origin increased the output from its APLNG project at Gladstone after announcing late last year that it plans to sell its LNG operation. Gas prices experienced an 8 per cent rise on the previous quarter and a 47 per cent increase on the same quarter last year.

Figure 30: Victorian Gas Spot Price

Source: SavvyPlus Consulting BI

Since then, Queensland gas prices have continued to soften to just below $7/GJ (see Figure 31) and look to continue the downward trend as reports emerge of coal seam gas being detected in the NSW and Victorian markets for the first time in years, following completion of LNG Plant Proving and other means of increasing domestic gas supply, such as the Federal Government's threatened use of export controls to divert gas to the domestic market.

More recently, the ACCC has issued a new report on the gas market that confirms a softening in domestic gas prices but also that they remain at the upper end of or above the ACCC's estimates of competitive gas prices. Box 8 below summarises its main points.

Figure 31: Brisbane Gas Spot Prices

Source: SavvyPlus Consulting BI

Box 8: ACCC Interim Report on Wholesale Gas Market - Main Findings

- Prices offered to large commercial and industrial (C&I) users have come down from a peak of $16/GJ in early 2017 to within an $8-12/GJ range since July 2017.
- Queensland's three LNG producers have delivered more gas into the domestic market, and prices have come down.
- Despite increased supply providing important short-term improvements in conditions, the market is still not operating as well as it could.
- Prices remain higher than they would in a well functioning and competitive market. The estimated benchmark prices for 2018 range between $5.87/GJ to $7.85/GJ (Queensland) and for the southern states, they range between $6.55/GJ (South Australia) and $9.93/GJ (Victoria).
- The picture for smaller C&I users remains bleak; generally facing higher prices than larger users with fewer competing offers.
- Some suppliers may be finding it difficult to obtain access on the key pipelines used to send gas south.
- Gas users in the southern states already face higher gas costs due to declining local production and significant limits on new exploration, with moratoria in place contributing to the shortages.

Source: ACCC, Gas Inquiry, 2017-2020, Interim Report, December 2017.

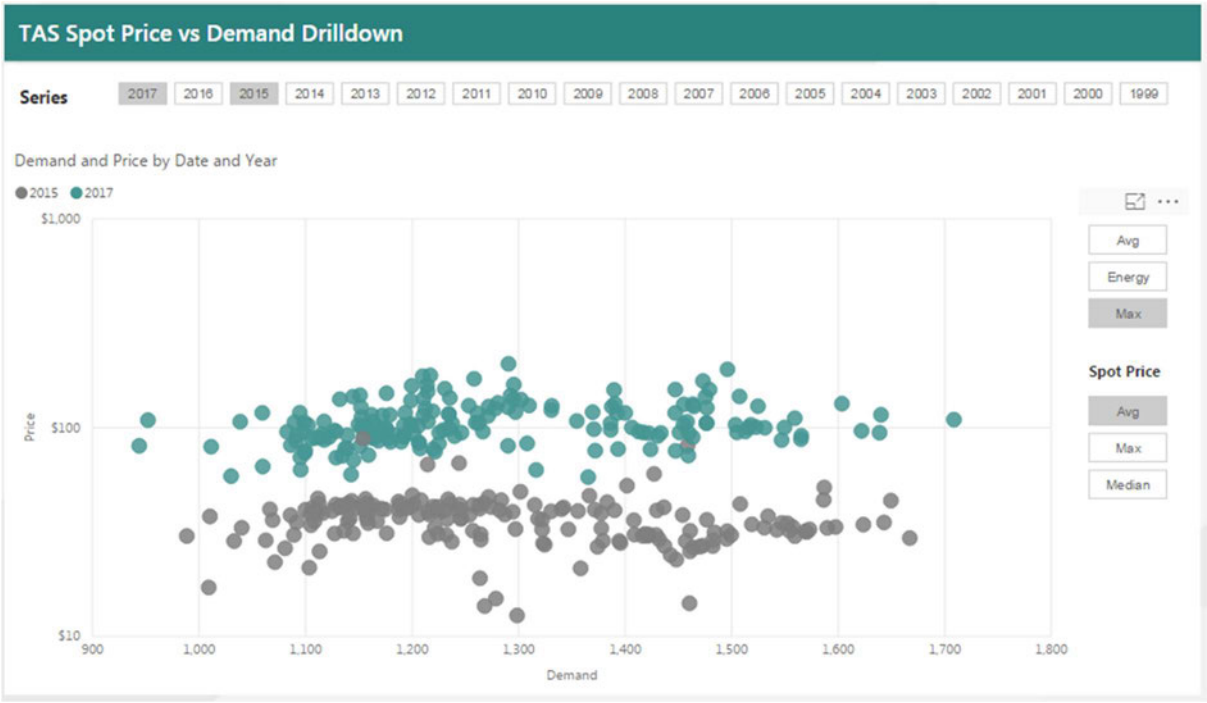
3.5.5 Demand

Demand increases in Qld, NSW and SA during January and February 2017 were a contributor to high spot prices, although this trend has not continued.

For Tasmania, the daily maximum demand for 2017 and 2015 were compared by plotting the daily maximum demand and daily energy against the log of the spot price to determine trends more easily. Basslink was not operational during the first half of 2016, hence this period was omitted from the analysis.

As shown in Figure 32, there was a single day (27 June 2017) when the maximum demand exceeded other days, but otherwise no notable maximum demand growth was evident to explain an elevation of spot prices. For the same demand, much higher prices were evident in 2017.

Figure 32: Tasmanian Daily Maximum Demand (2017 versus 2015)



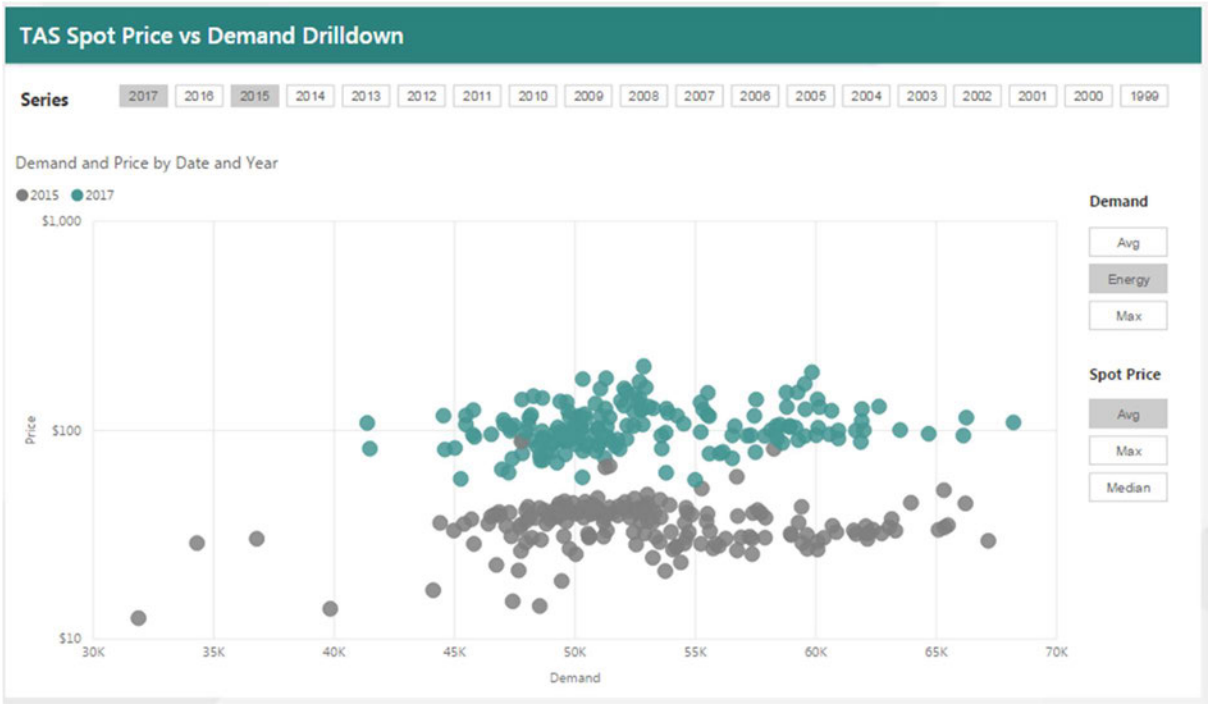
Source: SavvyPlus Consulting BI

The daily energy is compared in Figure 33 and shows that the very low usage levels in 2015 are not matched in 2017. Otherwise there does not appear to be a shift in daily energy notwithstanding a sustained elevation of prices.

Performing the same analysis of the daily energy for the other States (not shown graphically), the conclusions are:

1. Victorian daily energy has reduced over the last three years.
2. South Australia daily energy increased on three extreme days in February, but otherwise was very similar to previous years
3. NSW daily energy was much higher in 2017 than previous years on seven occasions in January and February
4. Queensland had a systematic increase in energy consumed in Q1 2017, but less than other years in Q2. It is believed the record Q1 prices have had an impact on the demand for electricity.

Figure 33: Tasmania Daily Energy (2017 versus 2015)



Source: SavvyPlus Consulting BI

3.6 Wholesale Price Outlook

In this section we consider the wholesale price outlook for the NEM with a focus on Tasmania. Tasmanian small businesses will be impacted to the extent that wholesale price trends find their way into retail electricity prices.

3.6.1 Introduction

Our approach for forecasting is to use a probabilistic approach, as this recognises that the future is uncertain and that there are many factors that can influence the outcome. It is better to develop outlooks that recognise the potential distribution of the resultant uncertainty. Probabilistic modelling provides an expected distribution, which then provides an insight into the most likely, as well as the upper and lower but still plausible outcomes.

3.6.2 Methodology

Historical spot prices from the period 1 January 2002 to 15 August 2017 were normalised to account for the increase in the Market Price Cap (MPC) through the years and also to adjust for the impact of carbon pricing from 1 July 2012 to 17 July 2014. This adjusted spot price trace was then used to derive the statistics needed to develop the Monte Carlo simulations for forecasting spot prices.

Ten thousand simulations were performed at a daily resolution with stochastic variables of flat and peak spot prices, as well as $300/MWh cap payouts. Days were grouped into three different day types; working weekdays, Saturdays and Sundays/Public Holidays. The correlations between the variables were based on the historical data set; both for different variables in the same simulation for the same day types, and for the same variable in the same simulation between day types (serial correlation).

The spot price simulations are projected forward and replicated and scaled three times so that the average quarter simulated price equals the target average price for each quarter. The targets consisted of the normalised historical quarterly average price outcome, the average spot price for each quarter over the last 12 months, and finally the forward price for each quarter going forward. The forward price is most useful for dealing with unprecedented changes, such as the Hazelwood closure and the Tasmania Government's recent intervention in wholesale price regulation.

A forward market captures the collective perceived future value which would consider all the potential market changes. A significant factor affecting perceptions is the natural demand-supply balance, which will undergo significant change in the next few years. Listed below in Table 4 are those generation projects which are under construction or have financial commitment.

Table 4: List of Committed Renewable Projects

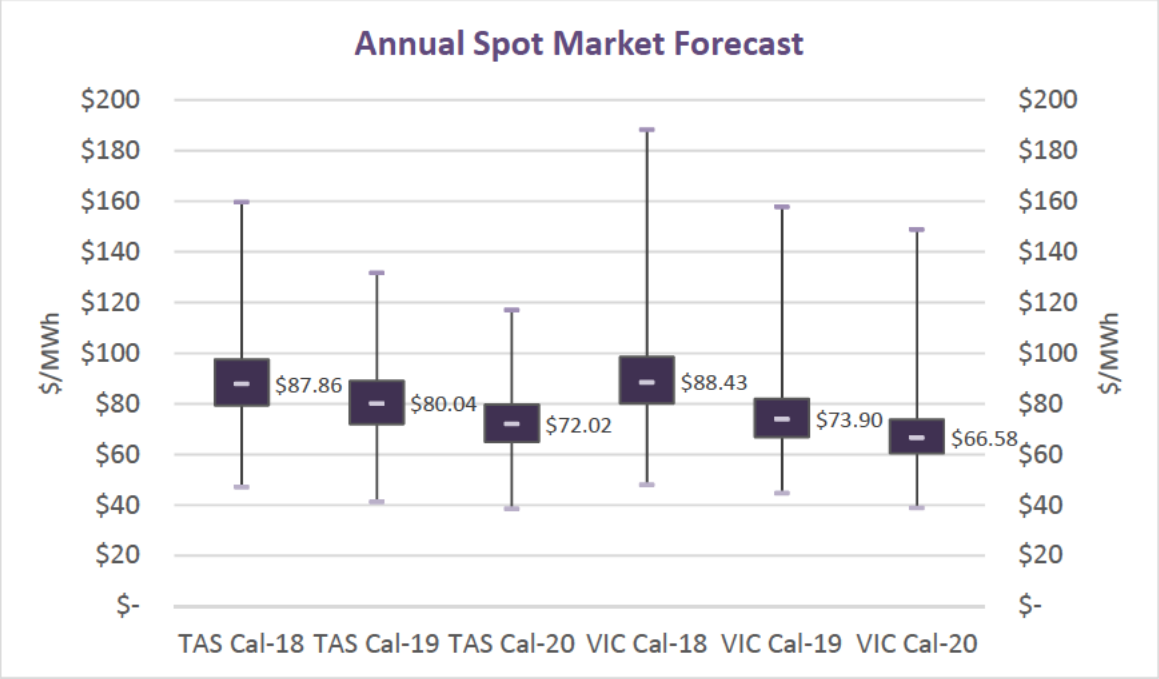
Status	Location	Capacity (MW)	Cost (million $)
Commissioned	Ararat Wind Farm, VIC	240	$ 450
Total Commissioned		**240**	**$450**
Under Construction	Sapphire Wind Farm, SA	270	$588
	Hornsdale Stage 2 Wind, SA	100	$800
	Hornsdale Stage 3 Wind, SA	109	
	White Rock - Stage 1 Wind, QLD	175	$400
	Mt Emerald Wind Farm, NSW	180	$380
	Townsville Sun Metals Solar, QLD	125	$155
Total Constructing		**959**	**$2,323**
Financial Commitment	Coopers Gap Wind Farm, QLD	453	$850
	Riverland Solar, SA	330	$950
	Stockyard Hill Wind Farm, VIC	530	$900
	Silverton Wind Farm, NSW	200	$460
	Yatpool, Iraak, Wemen Solar, VIC	320	$500
	Wild Cattle Hill Wind Farm, TAS	144	$300
	Granville Harbour Wind Farm, TAS	112	$200
	Torrens Island Gas Plant, SA[34]	210	$295
	Port Augusta Solar Thermal Plant, SA	150	$650
Total Committed		**2,449**	**$5,105**
TOTAL		**3,648**	**$7,878**

Source: SavvyPlus Consulting BI

The future spot prices obtained from the simulation are represented in the Box-Plot graph below (Figure 34). The graph displays the different series of data in quartiles. The box represents the range between the 25th and 75th percentiles with the median represented by the line in the box. The box therefore represents 50 per cent of the results. The lines extending from the box ('whiskers') indicate the upper and lower quartiles.

[34] Partially replaces Torrens Island A.

Figure 34: Tasmanian and Victorian Spot Price Forecast 2018-20



Source: SavvyPlus Consulting BI

The forecast for the 2018 Tasmania spot price is for softer prices than 2017 of around $88/MWh, just slightly below the Victorian price, although the Victorian forecast has a much larger tail extending towards $190/MWh. The outlook for Calendar 2019 and Calendar 2020 is to soften further due to the increase in generation supply with Victoria to soften at a faster rate than Tasmanian spot prices. By Calendar 2019 and Calendar 2020, Victoria is expected to have a lower average price than Tasmania.

Typically, the 75th percentile of the forecast spot price is a good indicator for the respective forward price. From Figure 35 below we can see significant correlation between the 75th percentile of the forecast prices and the current forward prices. Based on our current view, we would expect Victorian Calendar 2018 forward prices to more than likely soften further, and for Tasmanian Calendar 2020 to more than likely strengthen.

Figure 35: Comparison of Current Forward Market Prices with 75th Percentile of Forecasted Spot Prices.

	TAS			VIC		
	Cal-18	Cal-19	Cal-20	Cal-18	Cal-19	Cal-20
Flat Swap	$ 96.75	$ 89.09	$ 74.64	$ 105.00	$ 84.00	$ 74.01
75%	$ 97.49	$ 89.04	$ 79.73	$ 98.55	$ 81.97	$ 73.70
50%	$ 87.86	$ 80.04	$ 72.02	$ 88.43	$ 73.90	$ 66.58

Source: SavvyPlus Consulting BI

3.6.3 AEMC Wholesale Price Outlook

The AEMC has recently released its outlook for wholesale prices in the NEM, including for Tasmania.[35] Broadly consistent with the above, they find that wholesale prices in Tasmania should reduce in the 2018/19 and 2019/20 years, but that the reductions are more pronounced (21 and 31 per cent respectively) with flow on falls in retail prices. The reductions are primarily due to a large injection of new renewable capacity, with flow on wholesale price reductions from Victoria to Tasmania. However, the AEMC also make the point that this injection is likely to result in excess generation capacity in the NEM, which will result in some thermal generation being forced to exit the market, putting upward pressure on wholesale prices again beyond 2019/20.

3.6.4 Potential Impacts of National Energy Guarantee

The Federal Government is pursuing the introduction of a National Energy Guarantee (NEG), which would place legislative reliability and emission reduction obligations on NEM retailers to deliver a certain amount of dispatchable power, as well as emission reductions that contribute to Australia's international commitment to reduce its carbon emissions by 26-28 per cent on 2005 levels by 2030.[36] The Government has said that the NGC will reduce electricity bills principally through removing investment uncertainty. Details are yet to be fully worked out and much uncertainly still surrounds the NEG.

The NEG has also been subject to scepticism, including that it will reduce the incentives to invest in renewables, will increase the market power of incumbent retailers and generators, including Hydro Tasmania, and will end up increasing, not reducing, electricity bills.

As alluded to above, substantial work and consultation needs to be undertaken before the NEG is implemented and the TSBC should take a close interest in this process advocating on behalf of Tasmania's small businesses.

3.6.5 Business Response to High Wholesale Prices

With rising electricity costs for businesses in the NEM, some businesses have also sought out more innovative ways to combat the price increases.

Finding ways to save on energy use has become more common, with the Tasmanian Government assisting this through its Tasmanian Energy Efficiency Loan Scheme.

Some NEM businesses have also begun to contract for at least some of their electricity directly with renewable generators or with them through intermediaries using devices such as Power Purchase Agreements (PPAs). Origin Energy is known to have recently secured electricity in Victoria for $50/MWh through a PPA with the Stockyard Hill wind farm, although smaller contracts for business users would likely be at a premium on this. Others have formed buying groups to leverage off purchasing larger blocks of electricity. To date this has mostly been confined to larger electricity users, though there are reports of some smaller users now also getting involved. The usefulness of these approaches often relies on the presence of a competitive market and the ability of electricity

[35] AEMC, *2017 Residential Electricity Price Trends*, 18 December 2017, http://www.aemc.gov.au/Markets-Reviews-Advice/2017-Residential-Electricity-Price-Trends/Final/AEMC-Documents/2017-Residential-Electricity-Price-Trends-Report.aspx.

[36] See http://www.coagenergycouncil.gov.au/publications/energy-security-board-update.

users to manage the associated risks, which differ from more traditional approaches to purchasing electricity.

3.7 Regulation of Tasmanian Wholesale and Retail Prices

The regulation of wholesale prices in Tasmania is via the requirement that Hydro Tasmania must offer a range of wholesale contract products on standard terms and conditions. This was discussed in Section 2.2.6.

Retail prices for smaller customers (consumption below 150 GWh pa) are set as standing offer prices for Aurora Energy (the regulated offer retailer). Regulated wholesale contract and retail standing offer prices are both regulated by the TER.

Wholesale prices are an important component of retail standing offer prices. The TER determines the Wholesale Electricity Price (WEP) as a key input to this process and then uses this as a key input to determine the Wholesale Electricity Cost (WEC) as part of Aurora's Notional Maximum Revenue (NMR) for its annual standing offer prices. Until this year, the WEP has been set with reference to Hydro Tasmania's regulated LFS contract (using a weighted average formula), which is then used along with a load forecast and (distribution and marginal) loss factors to determine the WEC.

3.8 Impact of Tasmanian Wholesale Prices on Retail Prices for Small Business

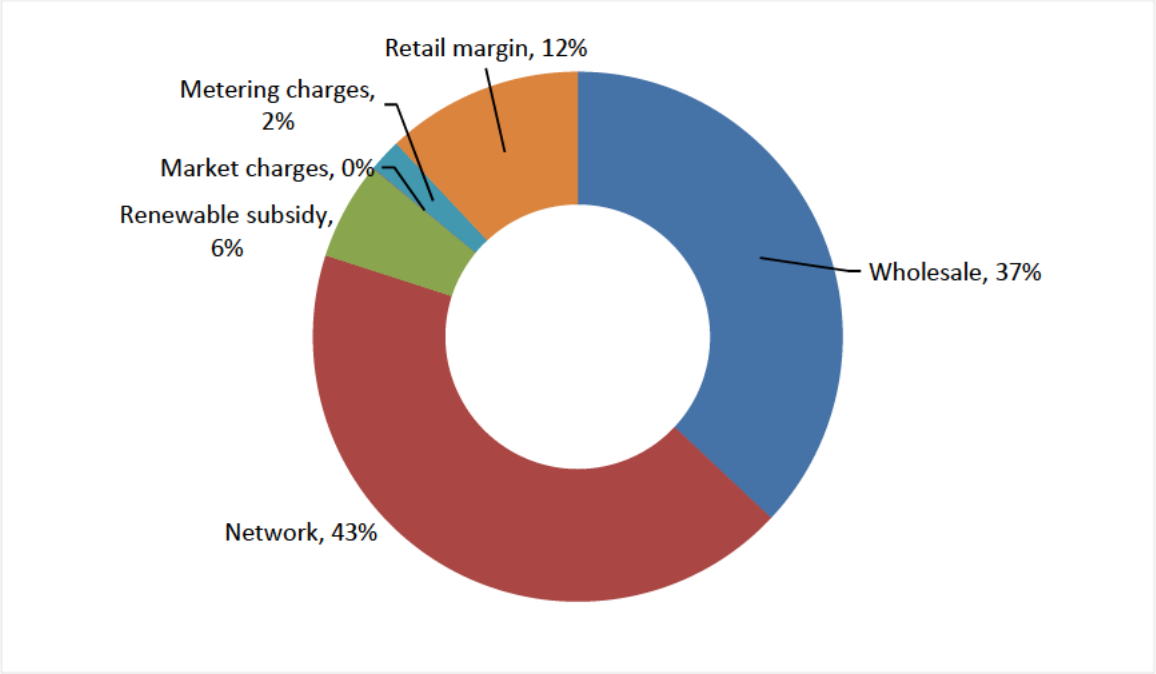
Tasmanian wholesale prices have a significant impact on the retail electricity prices of small businesses.

Wholesale costs make up around 37 per cent of the delivered cost of electricity to smaller Tasmanian consumers who are on regulated standing offer tariffs (see Figure 36). This includes the vast majority of small businesses.

Moreover, wholesale costs have increased significantly in recent years right across the NEM, including in Tasmania. The reasons for this are principally:

- The retirement or mothballing of thermal (coal and gas) generation plant (some of it premature), which has seen 6,000 MW of capacity exit the market since 2011/12.
- The dash for renewable energy created by the RET subsidy, which has flooded the market with new renewable investment and contributed to the exit of thermal plant referred to above. Over the five years to 2017, around 1,800 MW of new wind and solar generation has been added to the market, well below the generation retired.
- The price and supply pressures in the Eastern Australian gas market, which have impacted the economics of building and operating gas-fired generation. As a consequence, no new gas generation has been built since 2011/12, little is presently committed, and 865 MW has been withdrawn and another 238 MW has been announced as to be withdrawn.
- The uncertainties around the direction of energy and climate policies, which have made it difficult for any potential new thermal projects to secure finance, with none currently committed.

Figure 36: Components of a Tasmanian Electricity Bill for Smaller Customers



Source: Aurora Energy, *Pricing Proposal for Period 2 of the 2016 Standing Offer Price Determination, 1 July 2017 to 30 June 2018*, Figure 1, p. 2.

The reasons for the large increases in wholesale prices were discussed in more detail in Section 3.5.

Tasmania has not been immune from these impacts. It is linked to the Victorian wholesale market via the Basslink interconnector and has been impacted by the closure, in March 2017, of the large (1,600 MW) brown coal-fired Hazelwood Power Station in Victoria. Wholesale contract and spot prices had spiked in anticipation of the closure. Moreover, reductions in capacity, especially in Victoria, along with the growth in LGCs have also created commercial opportunities for Hydro Tasmania to benefit from higher prices by exporting across Basslink and within Tasmania through its hydro-electric and wind generation plant. These factors were discussed in more detail in Section 3.5

Regarding regulated standing offers, including those for small business, increases in wholesale electricity prices would flow through using the method of retail price regulation described in Section 3.7, that is, through the use of the regulated LFS Contract to establish the WEP used to calculate Aurora's WEC. Given the large increases in wholesale prices experienced in 2016/17, including in Victoria, this would have resulted in large increases in Tasmanian regulated retail tariffs for 2017/18, including for small business, absent the other components of a retail bill used in Aurora's NMR (see Figure 36). According to the Tasmanian Treasurer:

> *"The Government has been advised that price increases of up to 15 per cent are likely to occur for residential and small business customers on regulated tariffs from 1 July [2017] unless action is taken."*[37]

[37] The Hon. Peter Gutwein, MP, Treasurer, *Electricity Supply Amendment Pricing Bill 2017, Second Reading Speech*, 4 May 2017, p. 2 at http://www.parliament.tas.gov.au/bills/Bills2017/26_of_2017.htm, our parenthesis.

It should be noted, however, that in the past flat wholesale prices in Victoria have helped to keep electricity price increases in Tasmania lower than they otherwise might have been. Indeed, the use of the regulated LFS contract in setting the WEP in Aurora's annual NMR has ensured that a sustained period of flat wholesale prices flowed through to small business customers and this helped to dampen the impact of some other areas where components of the bill had increased (e.g. network and retail charges).

It should also be noted that the 15 per cent price increase referred to by the Treasurer is similar to retail price increases elsewhere in the NEM in 2017/18, which have ranged up to 20 percent. Nevertheless, increases of this magnitude (had they been passed on) would have been difficult for Tasmanian small businesses to absorb and may well have placed some of them under financial pressure with flow on economic consequences.

Given recent steep wholesale price increases, their flow through into retail prices, the outlook for continued high future wholesale prices, a series of reports highlighting shortcomings in the NEM retail market and uncertainties around future electricity supply and policy, it is not surprising that high and rising electricity prices are front-of-mind for electricity consumers. Hence, Governments are starting to respond to this situation, with the threat of re-regulation one possibility.

In Victoria, a State Government commissioned review of retail prices has recently reported. Responding to recent price increases and concerns about shortcomings in retail competition, it has recommended action to place retail electricity pricing under a higher level of regulation and scrutiny than has hitherto existed in that State, including through a Basic Service Offer, a kind of 'no-frills' standard offer.[38]

However, re-regulation is not without its critics. According to one analysis, deregulation is not the cause of high retail prices in Victoria but rather increasing network prices and sustained pressures in more recent years in the wholesale market. The assessment went on to say that:

> *The Basic Service Offer would kill competition in the energy market and shut down retail businesses. It will likely result in a 'one size fits all' retail offer for customers which is completely at odds with the energy market of the future. It will also act as a disincentive to potential investment in Victoria's wholesale market, which is critical to bring downward pressure on prices.*[39]

3.9 Recent Developments in Tasmanian Wholesale Price Regulation

In response to the significant wholesale price pressures facing Tasmania, the State Government moved in May 2017 to protect small business and residential electricity consumers in Tasmania from the expected retail price increases referred to above.[40] Accordingly, the Government amended the legislation that determines how the TER sets standing offer prices. The amendments allow "the Treasurer to determine an alternative wholesale electricity price if it is deemed that current

[38] Independent Review into Retail Electricity and Gas Markets in Victoria, *Final Report*, August 2017 at https://www.energy.vic.gov.au/about-energy/policy-and-strategy.

[39] Sarah McNamara, Australian Energy Council, *Thwaites Review of Retail Markets in Victoria – the good, the bad and the ugly*, p. 3 at https://www.energycouncil.com.au/analysis/thwaites-review-of-retail-markets-in-victoria-the-good-the-bad-and-the-ugly/.

[40] At the same time, Hydro Tasmania announced in May 2017 that it had capped wholesale contracts for 2017/18 at the 2018/19 Victorian price, a reduction of about $20/MWh, with potential benefits to market customers who had not yet renegotiated contracts, but not those who had. The Government later announced that it would be providing rebates to those on market contracts who had already renegotiated their deals.

market based processes will deliver unsustainable increases to regulated tariffs."[41] Henceforth, Hydro Tasmania and Aurora will enter into wholesale contracts at the determined price for the regulated load when this provision is activated. The Treasurer made clear that the Government "will be targeting an average price increase for 2017-18 of around 2 per cent, consistent with the current Consumer Price Index."[42] He also made clear that these arrangements could continue if future Victorian wholesale price outcomes warrant.

The Treasurer referred to questions that still remain "as to the appropriateness and effectiveness of the current Tasmanian Wholesale Regulatory Framework that seeks to mirror the market movements of the wholesale electricity contract market in the NEM" and announced that the Department of Treasury and Finance would conduct a review of the framework in 2017/18, including consultations with all key stakeholders.

The Terms of Reference for the Review (and the Guide to Submissions) provide for consideration of wholesale market issues and (importantly) refer explicitly to the Government's vision, as outlined in its *Tasmanian Energy Strategy*, to restore energy as a competitive advantage by delivering affordable energy at competitive and predictable prices that are amongst the lowest in Australia, empowering consumer choice, ensuring an efficient energy sector that is customer focussed and utilising energy to facilitate State growth.[43]

It should be noted that the Ministerially determined WEP in this year's standing offer pricing proposal lodged by Aurora with the TER was $83.79/MWh (8.379 cents/kWh). This compares to $61.901/MWh (6.1901 cents/kWh) for 2016/17 in the 2016 Standing Offer Pricing Proposal lodged by Aurora Energy, an increase of 35 per cent. However, significant reductions in distribution charges following an AER review ensured that the annual bills of small businesses on the most common tariff still fell by between 4.1% and 5.7%, depending on their usage profile.[44] Moreover, small business network charges in 2018/19 are forecast to remain relatively flat. If wholesale prices were to increase further, then the Government could need to intervene again if changes in regulated retail prices are to be kept at what the Government would deem to be sustainable.[45]

Small business should welcome the Tasmanian Government's actions to ensure that the full impact of the large increase in wholesale electricity prices is not passed on to them for 2017/18. In taking this step, the Government is acknowledging that it places a significant priority on keeping electricity prices affordable and competitive and is responding in a timely way to community angst about rising electricity prices. This could be seen as an appropriate and legitimate immediate response to the prevailing circumstances facing Tasmanian electricity consumers, many of which emanate in Victoria and the broader NEM and are matters over which Tasmania has no control but still experiences the impacts of.

Nevertheless, there are broader and longer term implications from the Government's actions that should also be considered by the TSBC. These include that:

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[41] The Hon. Peter Gutwein, MP, Treasurer, *Electricity Supply Amendment Pricing Bill 2017, Second Reading Speech*, 4 May 2017, p. 3 at http://www.parliament.tas.gov.au/bills/Bills2017/26_of_2017.htm.

[42] Ibid.

[43] See http://www.treasury.tas.gov.au/government-businesses/strategic-reviews/review-of-the-tasmanian-wholesale-electricity-market-regulatory-pricing-framework.

[44] Aurora Energy, *Pricing Proposal for Period 2 of the 2016 Standing Offer Price Determination, 1 July 2017 to 30 June 2018*, p. 19.

[45] Present indications regarding 2018/19 Victorian and Tasmanian wholesale contract prices are for a level about the same as the current Ministerially determined WEP (see Figure 18 and Figure 19).

- The Government intervening in a method of determining the WEP that was based on market fundamentals and approaches to retail price regulation adopted in New South Wales, Queensland and the ACT. This method ensured that the benefits of a sustained period of flat wholesale prices flowed through into retail tariffs (at a time when network prices were increasing rapidly). In the volatile wholesale market it was inevitable that higher wholesale prices would prevail when market conditions changed. It is also quite possible that flat or lower prices could emerge again in future and the current outlook for wholesale prices suggests some price softening is likely (see Section 3.6). Appropriate policy and regulatory responses to the problems being experienced by the NEM retail and wholesale markets could also allow future prices to soften further, with issues under consideration by the COAG Energy Council, ACCC, AEMC and several other reviews.
- A close relationship exists between Tasmanian and Victorian wholesale prices by virtue of interconnection and trade in electricity. Intervention is contrary to this, will not change it and may be unsustainable.
- A risk of prolonged use of Ministerial Order beyond 2017/18, or the threat of it, if increases in wholesale prices persist or return. Indeed, the Treasurer has alluded to this as a possibility if the Government believes that wholesale price increases are unacceptably high. This would act as a significant deterrent to potential new entrants and competition in both the Tasmanian generation and retail markets.
- It requires a level of detailed involvement by the Government in retail price regulation beyond the establishment of broad principles and objectives that had hitherto applied. The Expert Panel warned that this "raises potential concerns about the actual or perceived level of 'functional' independence that the TER is afforded in making pricing decisions."[46] The Expert Panel went on to stress the importance of complete regulatory independence to the entry of private capital into the Tasmanian market.
- If the Tasmanian Government was to 'switch' Ministerial Orders on and off as the circumstances suit, it could be perceived as a form of 'forum shopping' based on price outcomes that do not appeal to the Government, further raising the regulatory risks of retailer entry into Tasmania.
- Ministerial wholesale price setting could create a squeeze between wholesale costs and retail prices, which could impact Aurora's financial situation, or alternatively it could squeeze wholesale prices and impact Hydro Tasmania's commercial position, notwithstanding that the Government says that it has set the wholesale price with reference to Hydro Tasmania's costs (but has not outlined how this was done).
- It can be perceived as interference in Hydro Tasmania's and Aurora's commercial and financial decisions, which raises further market risk issues.
- The approach is contrary to the full pass through of higher wholesale prices thus far adopted in other parts of the NEM in the face of similar, or even higher, price increases.
- A future Government may seek to claw back some past 'losses' with small consumers being asked to pay higher prices as a result.
- Setting a lower wholesale contract price for the regulated load could open up unintended arbitrage opportunities for other retailers to leverage off and benefit from outside of Tasmania.
- Such interference in the regulatory process raises the risk of a perceived increase in sovereign and regulatory risks by retailers considering entry to the Tasmanian market, which could further delay retail competition.

[46] Expert Panel, *An Independent Review of the Tasmanian Electricity Supply Industry*, Final Report, vol. 1, p. 64, December 2012.

The now underway Department of Treasury and Finance review of wholesale regulation will be important in the consideration of all matters to do with future wholesale market regulation in Tasmania, including the Governments price intervention and should consider the costs and benefits, the short and longer term implications and the unintended consequences of intervention.

3.10 Summary of Key Points

Key points to emerge from this Chapter are:

- The Tasmanian wholesale electricity market is characterised by repeated dramatic and short-term price spikes with prices heavily influenced by water storage levels and Hydro Tasmania's high degree of latent market power. Opportunistic or unexpected events can also have a major bearing on Tasmanian wholesale prices, for example, the carbon tax drove prices up as did the extended six-month Basslink outage from December 2015.
- Under normal conditions wholesale prices closely approximate those in Victoria due to interconnection via the Basslink cable, but if the link is constrained, local generation sets the spot price unfettered by competition from Victoria.
- There have been numerous examples in the past where Hydro Tasmania has reduced non-scheduled generation during periods of high demand, with a cutback in the amount of low-priced generation capacity offered and an ensuing dispatch of high-priced generation or where it has used outages in the TVPS (when owned by Aurora) to offer high prices.
- The most recent and significant of these high price events was prior to Basslink failing and then during the interconnector's outage which ended in June 2016. Prior to this, Hydro Tasmania had run down storages during the carbon tax period illustrating its conflicting commercial and energy security priorities and poor water storage management.
- Except for 2016 (when Basslink was out-of-service), the average annual spot price in 2017 has been the highest on record in Tasmania. Victoria has also experienced its highest ever spot prices.
- Tasmanian forward wholesale prices for 2018 and 2019 remain historically high but have declined somewhat from their 2017 levels. The outlook for Victorian prices is somewhat softer.
- The cause of the 2017 record wholesale prices (and outlook for these prices remaining high) reflects multiple local and national factors. First, there have been many coal and gas plant closures since 2009, amounting to a total of 6,000 MW, with replacement capacity around one-third of this, insufficient to maintain low prices. The impact of the closure of the large baseload Hazelwood Power Station in Victoria has been especially pronounced.
- Secondly, interconnector flows have changed as a consequence of generation closures. Especially since Hazelwood closed, Victoria has been a net importer of (higher cost) generation from NSW and SA and this has impacted wholesale prices. At the same time NSW has imported more electricity from Queensland and the former's supply situation could worsen early next decade when the 2,000 MW Liddell power station closes.
- Thirdly, there is evidence of strategic bidding of capacity in both Tasmania and Victoria impacting Tasmanian wholesale prices. From January 2017, Hydro Tasmania re-priced its hydro generation and substituted more expensive gas generation. This turned around in May, which has contributed to a softening in electricity spot prices. Related to the closure of Hazelwood, generators in Victoria and Tasmania have reduced low-priced capacity and replaced it with more expensive offers, making a significant impact on the spot price. Furthermore, during the second half of 2016, Hydro Tasmania ran hydro hard in order to generate above the baseline to earn LGCs under the RET.
- Fourthly, high gas prices have led to gas-fired generation making offers at higher prices than in previous years. Gas prices in Victoria spiked in the first half of 2017 and they remain high

in Queensland, albeit having softened somewhat. Gas prices look to continue a downward trend, albeit still at high levels, as reports emerge of new coal seam gas being detected in NSW and Victoria and measures to increase domestic supply begin to have an impact.

- Finally, we also analysed demand to see if it has had any impact on the high wholesale prices seen in Tasmania and elsewhere in the NEM during 2017. The results showed that there was no discernible impact of demand on high spot prices in Tasmania and Victoria.
- Based on forecasts undertaken for this report, the outlook for Calendar 2019 and 2020 is for spot prices to soften further from 2018 levels due to an increase in generation supply, with Victorian spot prices to soften at a faster rate than in Tasmania. By 2019 and 2020, Victoria is expected to have a lower average spot price than Tasmania.
- A recent wholesale price outlook published by the AEMC confirms these broad trends but suggests that Tasmanian wholesale prices could fall even further based on an anticipated large influx of renewable energy capacity in the NEM. However, the AEMC also warn that this will result in thermal generation exiting the market putting upward pressure on prices.
- The Federal Government expects that the successful negotiation of the NEG will reduce electricity prices further, but this policy has been criticised as being a disincentive to renewable energy and putting more market power in the hands of large incumbent retailers and generators, including Hydro Tasmania.
- Some businesses have responded to electricity price increases by searching for new ways to save energy or contract for electricity. Energy efficiency drives have become more commonplace and some businesses, especially larger ones, have contracted to purchase renewable energy capacity either directly or indirectly.
- Wholesale prices are an important component of small business electricity bills as they account for 37 per cent of the regulated small business standing offer price.
- Wholesale prices (2017/18 Flat Swaps) in Tasmania increased significantly from around $40/MWh in mid 2016 to reach a high of around $125/MWh in May 2017. They have abated somewhat since (as have 2018/19 prices) but remain very high.
- Faced with a 15 per cent increase in regulated electricity prices for 2017/18, the Tasmanian Government has recently intervened in the regulatory process to allow it to set the regulated wholesale price by Ministerial Order with the aim of keeping regulated retail price increases for 2017/18 to about the CPI.
- Despite this, the wholesale price in regulated tariffs for 2017/18 still increased by 35 per cent.
- Small business electricity prices for 2017/18 fell but mainly due to a significant reduction in network charges. If wholesale prices increase again in 2018/19 or beyond, there may be no scope for a reduction in network or other charges to offset these.
- Small business should welcome the immediate impact of the Ministerial intervention in keeping wholesale prices used to set small business tariffs below their extreme levels of early 2016.
- Notwithstanding this, there are broader implications from the intervention. These should also be considered by the TSBC in developing its position on Tasmanian retail and wholesale electricity prices, including that intervening may have added to the already considerable barriers to retail competition in the Tasmanian electricity market by increasing sovereign and regulatory risks, and may have other unintended consequences.
- The current Department of Treasury and Finance review of wholesale price regulation is an opportunity for the TSBC to advocate further on wholesale price issues. The outcome of this review would be especially meaningful to small business if it included not only consideration of wholesale contract and retail price regulation, but also the costs and benefits of such regulation, and alternative approaches.
- The competitiveness and performance of the NEM wholesale and retail markets is under intense scrutiny due to extraordinary electricity price pressures, and revealed shortcomings

and uncertainties in the operation of these markets. Significant reform is required to overcome these shortcomings and it would be in Tasmania's interests (given its important links to the Victorian market in particular) to support such reform. This would also improve the prospects of reform in Tasmania.

- Reliance on a well functioning competitive market rather than Government regulation and intervention is likely to be most beneficial to Tasmania's small business sector in the longer term. This provides the best path to the delivery of sustained price and other market benefits to electricity consumers. However, to achieve this and for Tasmania to advance towards a competitive market requires the NEM to deliver more competitive wholesale and retail electricity markets than exist at present that Tasmania can leverage off.

4

Conclusions & Findings

- Tasmania is the most regulated and least competitive wholesale market in the NEM
- It is also the only NEM State with near total Government ownership of electricity
- But the current arrangements have still benefitted small businesses to some extent
- However, small businesses have missed out on competitive offers and discounting because of them
- The wholesale market needs to change for small business is to get these benefits; whilst this is challenging, there are major benefits in prospect
- This report is an important basis for information, advocacy and capacity for the TSBC

4 Conclusions and Findings

Tasmania has the most regulated and least competitive wholesale electricity market in the NEM. It is also the only NEM State with its main electricity assets still entirely in Government ownership and, other than Queensland, the only one with generation assets still government owned. Tight regulation has been necessary – a consequence of almost no competition, the extreme market power of Hydro Tasmania and near total State ownership.

It must be said that regulation has provided some benefits to small business as wholesale prices used in determining regulated retail tariffs for small business have been explicitly linked to those in Victoria, which has only comparatively recently emerged from an extended period of subdued wholesale prices. However, a competitive market in Tasmania would also have a strong link to Victorian prices and would additionally offer the prospect of benefits such as discounting and innovation (both largely absent in Tasmania at present).

With large increases in wholesale electricity prices throughout the NEM in 2017, the Tasmanian Government's intervention in the retail price setting process has avoided excessive retail electricity price increases for small business consumers. The Government has also indicated a willingness to intervene again if wholesale price increases warrant.

Nevertheless, the absence of competition in the Tasmanian wholesale electricity market and its continued dominance by Hydro Tasmania has not been all good for Tasmania's small businesses. One important drawback is that the uncompetitive structure of the wholesale market has been a major obstacle to new electricity retailers entering Tasmania. As a result, small business has access to FRC but no means of exercising the choice that is fundamental to benefitting from FRC. They have also had very limited access to the price discounting that has accompanied retail competition in most other parts of the NEM. Discounting has benefitted their peers in other parts of the NEM, notwithstanding some shortcomings in current market arrangements and energy policy settings. This will not change unless there is reform of the Tasmanian wholesale electricity market that will allow competition to take hold.

Relying on the regulation of wholesale electricity prices is unlikely to provide a sound long term substitute for a competitive wholesale market and will not encourage new retailers into Tasmania.

The available evidence suggests that wholesale market reform would need to go beyond the measures recommended by the Expert Panel in 2012. Larger mainland retailers have expressed the view that their gaining direct access to some of Hydro Tasmania's trading capacity would be a necessary pre-condition for their entry to the Tasmanian electricity market. Mainland retailers have essentially 'voted with their feet' on the current market arrangements as none have entered the market under these arrangements. For small business and other consumers to benefit, a competitive wholesale market structure would need to accompany structural change.

It is also likely that retail price regulation would have to be either removed or 'head room' created in retail standing offers to give new retailers room to compete and offer discounts, which is likely to push regulated standing offers beyond present levels but with the prospect of access to discounted prices. Small business and households would then need to rely on retail and wholesale competition to deliver lower overall prices to them. Creating sufficient 'head room' in Tasmanian regulated standing offers has proved difficult to implement even though regulated prices are inflated by the

artificial inclusion of retail margins and costs to serve that reflect (non-existent) competitive market conditions. In any case, the uncompetitive structure of the wholesale market is a formidable barrier to new retailers making 'head room' a moot point.

A reliance on regulation creates difficult to manage risks for small businesses. It places wholesale charges – which make up around one-third of what small business pays for electricity – in the hands of governments (present and future). One such risk is that the benevolence of government seeking to protect small business from increases in electricity prices can quickly come to an end because circumstances have changed (e.g., because of the financial needs of government-owned businesses or of the State budget). The desire of Government's to always intervene so that small business enjoys lower electricity prices is problematic and not guaranteed. Government involvement in electricity markets also brings with it the risks that the costs of inefficiencies, poor risk management and poor regulation will find their way into electricity prices. These costs will not be obvious to consumers – perhaps only once they become extreme and are subject to public scrutiny.

Reliance on regulation and government intervention also raises risks that responses to changes in market conditions – which can emerge quickly and unexpectedly – will not be timely enough. For example, Tasmanian small businesses on market contracts who had already negotiated new deals before the Government intervened to peg 2017/18 prices, had to wait for many months before the Government worked out a system of rebates to compensate them for the higher wholesale prices that were part of their new deals. Meanwhile, their operating costs and cash flows were impacted by the uncompensated high electricity prices they paid in the first half of 2017.

As another example, the outlook for wholesale prices presented in this report suggests that Victorian prices will soften more rapidly than Tasmanian prices and that by 2019 they will be below Tasmanian prices. This would make the approach to determining wholesale prices based on current Victorian prices more attractive again. However, a 'pick and choose' approach based on what suits best at any particular point in time would be a significant deterrent to new retailer entry and therefore electricity competition in Tasmania.

In a competitive market, small businesses manage electricity price risks through access to competitive price offers, which is more within their own control, and not so subject to the changing priorities of governments. In other parts of the NEM, higher electricity prices have provided an incentive for businesses to seek out greater energy efficiency, to form buying groups and to contract for renewable capacity (mostly confined to larger users). However, buying groups tend to rely on a common purpose, an ability to avoid sudden exits and on members having similar load profiles. Contracting for capacity is unconventional in the NEM, carries unique risks for businesses and relies on the presence of a competitive market. The TSBC could inform itself in more detail about such developments and monitor their potential for application to Tasmanian small businesses, noting that a softening in wholesale prices may reduce their attractiveness and the lack of electricity market competition in Tasmania may well limit their use.

We have not made specific recommendations on reform in this report but have set out a path of desirable directions. This allows the TSBC to remain flexible in its advocacy. It recognises that circumstances can change and that significant uncertainty surrounds the NEM at present, which is leading to a considerable body of work on how the NEM needs to change in response to its various market shortcomings and changing circumstances. Many view it as a market in transition. The TSBC should monitor these developments, their impacts on Tasmania's wholesale electricity market and how small business can take advantage of new realities.

It should also be recognised that the general community and (hence) political appetite to move Hydro Tasmania away from public hands appears to be low, though there may well be greater

acceptance of selling Aurora Energy and TasNetworks. This is a formidable obstacle to reform and necessary precondition for more retailers entering Tasmania. The presence of regulated tariffs is a further disincentive to new entrant retailers. This makes the structural change necessary to encourage entry by new retailers into Tasmania challenging. Nevertheless, this should not prevent the TSBC from both advocating for increased competition and supporting the types of wholesale market reform that appear to be a necessary precursor to new retail entry.

We have little doubt that, with an appropriate wholesale market structure and related reforms outlined in this report, there would be new retail entry into Tasmania and small business would gain access to competitive electricity prices, including discounts. However, this would appear to require the inclusion of 'headroom' in regulated retail prices (assuming price regulation remains). Action on the shortcomings that have recently been found in the NEM wholesale and retail markets and to reduce investment uncertainty in the NEM would also be beneficial to small business in Tasmania. The TSBC should advocate on these matters to ensure that Tasmanian and small business interests are fully considered.

Should reform be forthcoming, small business consumers not accustomed to a competitive electricity market would benefit from education to accelerate their knowledge of competitive electricity markets. Again, TSBC advocacy in this area would be beneficial.

We expect that the TSBC will be able to use this report to advocate for wholesale market reform that will benefit Tasmanian small businesses.

We also expect that the TSBC will be able to use this report as a source of information on the Tasmanian wholesale market that can help to build its advocacy capacity and that of its members.

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Uniting Small Business

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TasNetworks Transmission Revenue & Distribution Regulatory Proposal, 2019-20 to 2023-24

Submission

May 2018

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Submission Highlights & Key Messages

Themes	TasNetworks has adopted a generally positive approach in compiling its Regulatory Proposal including, placing a stated focus on easing network price pressures and undertaking detailed consumer consultations. Tasmanian small businesses, along with electricity consumers Australia wide, have suffered a significant increase in electricity prices since 2000, due especially to increases in network charges. That increase has caused significant stress to a number of TSBC members, reducing profitability and in some instances, contributing to businesses ceasing to operate, despite a recent levelling out. The TSBC believes that every opportunity to reduce electricity prices to small business must be taken, and this review is one such opportunity. There are several areas where the TSBC considers that AER and consumer scrutiny of TasNetworks' Proposal needs to be particularly strong.
Value of TasNetworks' combined regulatory asset base (RAB)	The value of TasNetworks' RAB increased dramatically over the period 2006 to 2014, from $2.1 billion to $3.1 billion in 2017 dollar terms, or by 48%, when actual demand was flat. The return earned on its assets and its allowance for asset depreciation has contributed significantly to Tasmanian electricity price increases. It is estimated that TasNetworks' assets are overvalued by $750 million and that this adds $150 per annum to consumer electricity bills. An asset write down would put an end to the overcharging. Any proposal for capital expenditure over the 2019-24 regulatory period should be considered against this background.
Capital expenditure (capex) – transmission	The TSBC wishes to see clear evidence that TasNetworks is seeking to increase the utilization of its existing transmission assets and deferring capex which would reduce transmission charges. The opportunity to do so is reflected in the current average remaining life of transmission assets, at 76%, well above what we would expect in a mature electricity network business. There is little evidence of this in the Proposal.
Contingent projects – second Bass Strait interconnector	The TSBC notes the very large expenditure associated with contingent transmission projects – $935 million compared to a transmission RAB of $1.42 billion as at July 2017 – and is particularly concerned that decisions about the second Bass Strait interconnector, involving an estimated capital cost of $550 million, will find their way into the transmission RAB. Development of a business case for this is currently occurring without consumers being involved or made aware of the implications for prices.
Capital expenditure (capex) – distribution	TasNetworks' bid for distribution capex over the 2019-24 period would see a significant increase from the 2012-2019 levels, rising from an average of $112 million per year to $148 million per year (2019 dollars). The utilization rate of distribution assets has, however, fallen from a peak of 56 per cent in 2007 to 34 per cent in 2017. Demand is projected to be flat from 2019 to 2024; therefore asset utilization will continue to fall towards unsustainable levels.

	Against this background, the TSBC questions the need for a further round of increased capex and expects the AER to significantly reduce the allowed expenditure. The TSBC does not accept that there is justification for significant IT expenditure and contends that major transformational expenditure, such as investments made by TasNetworks or its predecessor Aurora Energy in vegetation management and IT, should not be a recurring theme, funded by consumers more than once.
Operating expenditure – transmission and distribution	The TSBC contends that the year upon which to base future transmission opex should be 2016/17 and 2014-15 for distribution opex expenditure. This would lower the combined base year opex in 2019-20 by $16.6 million and by $83 million over the next regulatory period. Benchmarking of TasNetworks' efficiency reveals a mixed picture – transmission is a generally good performer, except in the efficiency of capex, but distribution is a laggard with recent welcome improvements having reversed. Overall, TasNetworks needs to improve but its Proposal on opex falls short even allowing for its welcome self-imposed efficiency factor and it has already conceded that its benchmark ranking will fall.
Rate of return (WACC) – transmission and distribution	We submit that a WACC of 4.76 per cent should be applied to both transmission and distribution assets, based on an assessment of the appropriate input parameters to the WACC calculation, on the basis that the systematic (or non-diversifiable) risks borne by investment in either group of assets is the same. TasNetworks has proposed 5.89 per cent, which would result in much higher prices.
Price impacts and cross-subsidies	While there are useful reductions in transmission prices in the Proposal, these are less important to small businesses. The main game is distribution prices, which account for three quarters of network charges and will increase by 4.5 per cent per annum (nominal) under TasNetworks' Proposal. This is unacceptable to the TSBC, especially at a time of concern about rising electricity prices. Moreover, it appears that the welcome reduction in distribution price cross-subsidies – a penalty on small business – seen in recent years will stall over the next five years, a matter of major concern to the TSBC.
Change, transformation and transition, and tariff reform	We consider there is a very real threat to the value of Tasmania's electricity network. A combination of continuing reductions in the cost of local generation and storage, and a lack of response to the desire of electricity consumers, including small business, to manage their electricity costs after a period of substantial price rises, is cause for concern. Developing the necessary Smartgrid infrastructure and appropriate tariffs should not be delayed and the relevant strategies should be in place and being implemented by the end of the 2023-24.

Executive Summary

The Tasmanian Small Business Council (TSBC) welcomes the opportunity to participate in the Australian Energy Regulator's (AER) reset of TasNetworks' transmission revenue and distribution regulatory determination for the period 2019-20 to 2023-24. We also welcome the opportunity to provide this submission on TasNetworks' Regulatory Proposal as an important step in the Determinations.

The TSBC wishes to acknowledge TasNetworks' positive approach in compiling its Tasmanian Transmission Revenue and Distribution Regulatory Proposal, including:

- application of an efficiency factor to opex;
- voluntarily reducing the transmission WACC by 0.25%;
- continuing to apply the AER WACC parameters when most other NSPs have sought higher ones;
- placing more of a focus on affordable network charges than other NSPs have been prepared to do;
- actively engaging with their customers; and
- responding to the feedback on their Directions & Priorities Paper with a number of modifications to revenue requirements.

The TSBC maintains, however, that there has been excessive asset investment in the past which, combined with what the TSBC sees as a higher than necessary allowed rate of return and ongoing business inefficiencies, leads to consumers paying electricity prices which are higher than they should be.

That situation can, and should be, addressed in the next regulatory period.

The TSBC believes that includes steps that lead further towards reducing prices to consumers than what TasNetworks has proposed, including measures such as working the existing grid assets harder, rather than investing more in new assets, thereby increasing utilization rates; limiting investment in new IT systems; and setting the baseline for operating expenditure (opex) at the 2014-15 level, rather than the 2017-18 level proposed and finding further efficiencies in opex, especially for the distribution network but not excluding transmission.

BACKGROUND

Tasmanian small businesses, along with electricity consumers Australia wide, have experienced a significant increase in electricity prices since 2000, due to increases in a range of supply chain costs, including network charges (see **Figure ES 1**).

That increase has caused significant stress to a number of TSBC members, reducing profitability and in some instances, contributing to businesses ceasing to operate, despite the recent limitation on wholesale price increases imposed by the Tasmanian Government and welcome reductions in network charges.

The TSBC therefore believes that every opportunity to reduce electricity prices to small business must be pursued with vigour, and this review of TasNetworks' Regulatory and Revenue Proposal 2019-24 is one such opportunity.

Figure ES 1: NEM electricity retail prices by State

Source: AEMO, *Retail electricity price history and projected trends*, September 2017

The TSBC sets that expectation against a background of a lack of competition at the wholesale and retail levels of the Tasmanian electricity market, which also contribute to electricity prices being higher than they would otherwise be.[1]

There are five areas where the TSBC considers that TasNetworks' claims are excessive and should be reduced, as follows:

- The value of the combined regulatory asset base (RAB)
- Capital expenditure – transmission
- Capital expenditure – distribution
- Operating expenditure – distribution
- Rate of return (WACC) – transmission and distribution

CONSUMER CONSULTATION AND ENGAGEMENT

TasNetworks efforts in consumer engagement have been recognized by the AER's Consumer Challenge Panel representatives (CCP 13) as "overall, one of the best in the NEM, but need continuous improvement, as others are innovating and improving"[2].

[1] For example, Goanna Energy Consulting, *Tasmanian Wholesale Electricity Market Study*, A Report for the TSBC, January 2018 available at https://www.tsbc.org.au/wp-content/uploads/2018/02/Tasmanian-Wholesale-Electricity-Market-Study-Final-Report-March-2018.pdf.

[2] Consumer Challenge Panel, TasNetworks Public Forum presentation, www.aer.gov.au/system/files/TasNetworks%20-%20TasNetworks%20Public%20Forum%20Presentation%20-%2010%20April%202018.PDF

The TSBC notes the CCP13 comments and TasNetworks' efforts on customer engagement, as reflected in chapters 3 (Customer Engagement), 7 (customer feedback, revenue capped services) and 17 (customer feedback, alternative controlled services) in its Transmission Revenue and Distribution Regulatory Proposal, and in its Tariff Structure Statement.

The TSBC has been included in TasNetworks' engagement, and acknowledges and welcomes its efforts.

In pursuit of continuous improvement, the TSBC suggests that TasNetworks efforts towards consumer engagement are currently in the "consult" stage, and to a lesser degree the "involve" stage, but not yet progressed to the collaborative stage, and the TSBC proposes that there are a number of steps which could be taken towards that objective.

The TSBC would like to see specific actions arising from consumer feedback, that is, references in the proposal to specific items demonstrating how customer feedback has translated to specific action, including reduced prices and/or better service.

CHANGE, TRANSFORMATION AND TRANSITION

The nature of the changes occurring in electricity consumer choices around generating and storing electricity at or near their homes and businesses will have a major (adverse) impact on the electricity costs of those consumers who are not willing or able to implement the related technologies. On the other hand, consumers who do adapt will benefit but networks will be challenged by the leakage of customers and lower network utilisation.

The TSBC acknowledges TasNetworks' adoption of Energy Networks Australia (ENA) and CSIRO's Electricity Networks Transformation Roadmap in developing TasNetworks' 2025 vision.

As we noted in our response to the Directions and Priorities Consultation Paper[3], the TSBC is concerned at the pace of change at which TasNetworks is progressing towards its 2025 Vision. Unless the pace is quickened there is a risk that the rate at which customers adopt energy technologies which do not rely on the grid will outstrip TasNetworks' efforts to develop the cost effective grid technologies.

Should that occur, the rate of defection from the grid will accelerate , as will the rate of economic bypass identified by the head of the Australian Energy Market Operator[4], which would be a "lose lose" situation, for customers, TasNetworks (and its shareholder the Tasmanian Government), and lead to higher prices for those customers who remain grid connected.

CAPITAL EXPENDITURE – TRANSMISSION

The TSBC notes that the value of the transmission RAB is projected to increase by $160 million from $1.467 billion to $1.627 billion over the forthcoming regulatory period 2019-24[5], in line with inflation, whilst demand is projected to continue to be flat.

[3] https://www.tasnetworks.com.au/TasNetworks/media/pdf/customer-engagement/Direction%20and%20Priorities%20submissions%202015/TSBC-Submission-TN-Directions-and-Priorities-Consultation-Paper.pdf

[4] www.smh.com.au/business/the-economy/i-m-truly-concerned-aemo-chief-warns-on-rooftop-solar-20180424-p4zbg0.html.

[5] TasNetworks Post Tax Revenue Model (PTRM)

The TSBC wishes to see clear evidence that TasNetworks is seeking to increase the utilization of its existing assets and defer capital expenditure which would, in itself, reduce transmission charges. The opportunity to do so is reflected in the current average remaining life of transmission assets, at 76%, well above what the TSBC would expect in a mature electricity network business.

CAPITAL EXPENDITURE – DISTRIBUTION

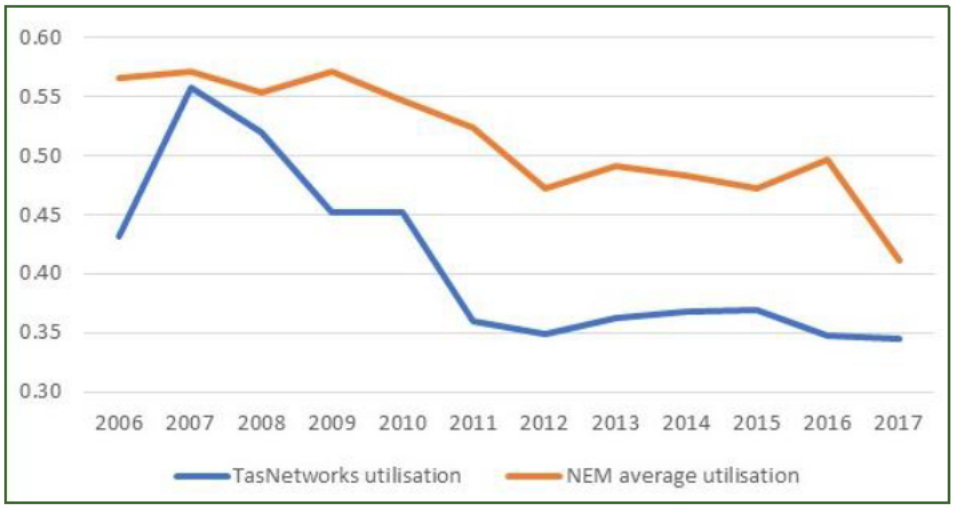
TasNetworks bid for distribution capital expenditure over the next regulatory period 2019-24 would see a significant increase from the previous levels (2012-2019) as can be seen from **Figure ES 2**.

Figure ES 2: Average distribution capex ($m, 2019)

Source: Goanna Energy Consulting from TasNetworks Regulatory Proposal – 2019-2024

That increased expenditure is proposed against a background of a continuing decline in the utilization rate of distribution assets as shown in **Error! Reference source not found.**.

Figure ES 3: Distribution assets utilisation - TasNetworks and NEM



Source: Goanna Energy Consulting from AER RIN data

TasNetworks indicate that the increased expenditure is driven largely by the need to manage safety risks, including expenditure directed to pole staking and vegetation management, and Information Technology (IT).

The TSBC does not accept that there is justification for such increases., and contends that major transformational expenditure, such as investments made by TasNetworks (or its predecessor Aurora Energy) in the areas of vegetation management and IT, should not be a recurring theme, funded by consumers more than once.

The need for increased expenditure to support two way flows in the distribution network is acknowledged, however, that expenditure should be matched by demonstrable benefits, including reduced operating costs. In the absence of such benefits, there should be a re-examination of tariff structures to ensure the 'user pays' principle applies, to avoid burdening those consumers who do not benefit from new technologies with the associated costs.

CONTINGENT PROJECTS

In addition to the five issues discussed above, the TSBC is concerned that discussions related to contingent projects, in particular the second Bass Strait interconnector, are occurring without consumers being made aware of the implications for network, and thus retail, electricity prices.

ABC news reported on 24th November 2017 that a $20 million business case study into a second Bass Strait electricity cable is to be jointly funded by the Federal and State governments and is to look at the route, capacity, cost and timeframe to build a second cable connecting Tasmania to the mainland. The TSBC understands that considerable resources, including those provided by TasNetworks, have been allocated to the task.

The expenditure included in TasNetworks' Regulatory and Revenue proposal is $550 million, which would result in a 17% increase in TasNetworks' Regulatory Asset Base, with resulting flow on implications for return on and return of capital, plus annual operating costs. The resulting increase in network revenue would translate to an annual cost burden in the order of $45 million per year.

The benefits would be largely invisible to consumers, but the impact on electricity prices would not be. The TSBC therefore requests that information concerning the impact on prices should be made public and become part of the public discussion around the merits or otherwise of a second interconnector.

OPERATING EXPENDITURE – TRANSMISSION & DISTRIBUTION

Viewed from the perspective of average expenditure over the period 2012-13 to 2017-18 ($82.1 million), proposed average distribution operating expenditure (opex) per year for the 2019-24 period of $85 million appears to be reasonable, and factoring in efficiency gains (as yet unidentified) is welcome.

The change in operating expenditure (opex) from the current regulatory period represents a modest real reduction of $2.6 million (-0.4 per cent) for TasNetworks' combined network, made up of $1.4 million (-0.7 per cent) for transmission and $1.2 million (-0.3 per cent) for distribution. TasNetworks has now entered a phase of being satisfied with quite modest future reductions and its hunger for further efficiencies seems to have abated.

The TSBC contends that the year upon which to base transmission opex should be 2016-17 as providing the most efficient level of opex. This would lower the base year opex by some $4.4 million compared to TasNetworks' proposed year (2017-18) and lower opex over the next regulatory period by $22 million (other things being equal).

For distribution opex, we support the use of 2014-15 as the base year as this provides the lowest level of opex available. This is $12.2 million lower than for 2017-18, the year proposed by TasNetworks and would lower opex over the next regulatory period by $61 million (other things being equal). Alternatively, we would suggest that 2015-16 be used. This would still lower distribution opex by $6.9 million, totalling $34.5 million over the 2019-24 period.

We do not accept TasNetworks' argument that 2017-18 provides an efficient base year for opex, or that it is desirable to choose a common base year for both transmission and distribution. The choice of 2017-18 will result in unnecessary increases in opex that will outweigh any advantages of a common base year in terms of the likely impact on network charges.

The major contributors to category increases in opex are vegetation management and business services.

The TSBC does not believe that an increase in business services costs from those incurred over the 2014-15 year is warranted, given the efficiency gains which the merger of Aurora Energy (Distribution) and Transend to form TasNetworks in 2014 was intended to deliver.

The TSBC is similarly unconvinced that a large increase in vegetation management costs is warranted, given the significant investment which occurred during the 2004 to 2017 regulatory period involving capital and operating expenditure, in order to implement an enduring vegetation management strategy.

The TSBC expects that the AER will closely scrutinize the level of operating expenditure which TasNetworks seeks in those categories, as well as its choice of base year and the robustness of its proposed efficiencies.

RATE OF RETURN (WEIGHTED AVERAGE COST OF CAPITAL)

In July 2017, the Australian Energy Regulator (AER) initiated a review of the Rate of Return Guideline and introduced new process elements for the conduct of the review; one being the formation of a Consumer Reference Group (CRG), on which the TSBC is represented.

In February 2018, the COAG Energy Council agreed to make a number of changes to the National Electricity Law (NEL) and the National Gas Law (NGL) relating to the calculation of the rate of return on capital and the value of imputation credits used in economic regulatory decisions and released draft legislation to replace the Rate of Return Guideline with a Binding Instrument. The legislation foreshadows the repeal of the current Rules that guide the AER in making the Guideline, however, the TSBC expects that the Binding Rate of Return Instrument will closely reflect the revised Rate of Return Guideline.

The TSBC is of the view that it is likely that application of the revised Guideline or the Binding Rate of Return Instrument would result in a lower Rate of Return (WACC) than that calculated by TasNetworks (5.89% for both transmission and distribution).

Five years after the adoption of the current ROR guideline, the existence of historically high returns for network companies on the one hand, alongside excess capacity, substantial decreases in consumption of network services and falling industry wide productivity, on the other, is clearly problematic. It is accepted that TasNetworks has performed somewhat better on some of these metrics but our concerns remain.

The TSBC contends that returns earned by network companies exceed efficient risk-adjusted returns by a substantial margin. Regulated entities as an asset class are therefore generating material excess returns, which means that regulated prices, including those paid by Tasmanian small business, are substantially in excess of efficient prices.

The TSBC submits that a WACC of 4.76% should be applied for both transmission and distribution assets, on the basis that the systematic (or non-diversifiable) risks borne by investment in either group of assets is the same. The calculation of that outcome, using the parameter values suggested in this submission, compared to TasNetworks calculation for distribution assets, is shown in **Table ES 1**.

Table ES 1: Weighted Average Cost of Capital

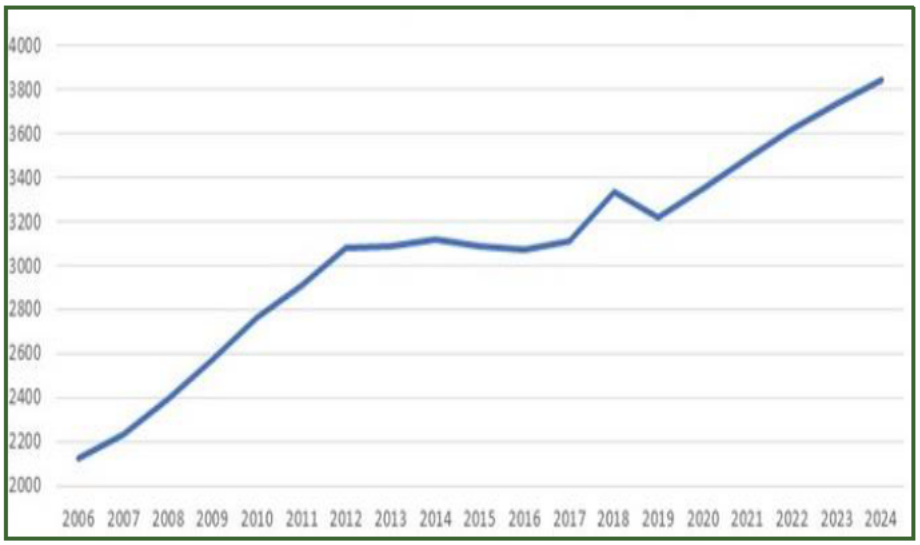
Component	Debt	Equity
Proportion of capital	60%	40%
	x	x
Cost	5.00	4.40
	=	=
Contribution	3.0	1.76
WACC	**4.76**	

Source: Goanna Energy Consulting

REGULATORY ASSET BASE (RAB)

The growth in TasNetworks' combined business RAB from 2006 to 2024, the end of the next regulatory period, is evident from

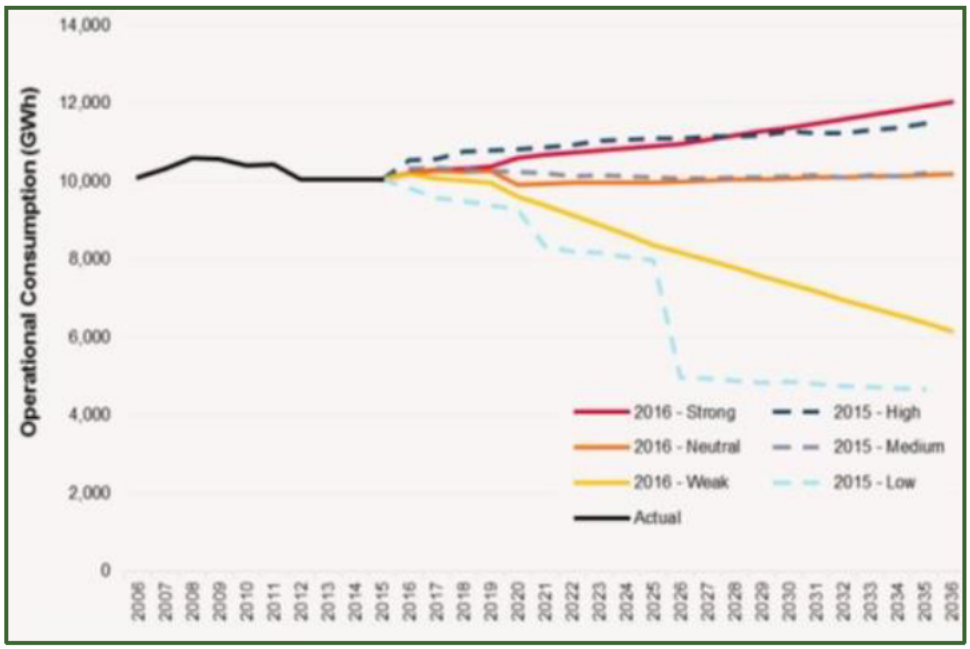
Figure ES 4: RAB value - transmission & distribution ($m, 2017 & $ nominal)



Note: TasNetworks Regulatory Proposal – 2019-2024 values discounted from $2019 to $2017.
Source: AER RIN data to 2017, TasNetworks Regulatory Proposal, 2018-2024.

But demand over that period has been and is projected to be flat (**Figure ES 5**).

Figure ES 5: NEM demand actual and forecasts



Source: TasNetworks, *TransmissionRegulatory and Distribution Regulatory Proposal, 2019-2024*, p. 71.

The period from 2006 to 2014 was one which involved massive capital expenditure, averaging $127.5 million per year on the basis of demand forecasts which proved to be grossly inflated (a situation not unique to TasNetworks).

The resulting over-investment translates to consumers paying more than they should for the transmission services they receive, given that around 50% of network charges are derived from the value of the RAB multiplied by the allowed WACC (rate of return) and depreciation. The over investment can be expected to be corrected over time, however, the combination of a revenue cap and the roll forward (asset) model means consumers, including small business, pay "up front" for any over-investment and will be doing so for a long time.

Tasmanian electricity consumers, including small business, are paying for the over-investment and will continue to do so for the remaining life of the relevant assets, at around 40 years.

We note the recent report from the Grattan Institute, which found that TasNetworks' RAB was overvalued by $750 million due mainly to poor demand forecasts leading to excessive capex in the past. This has resulted in smaller Tasmanian consumers paying $150 per annum more for their electricity (on average). The Institute recommended that assets be written down by this amount and network charges reduced accordingly. It further recommended that TasNetworks be privatised subsequent to this. Alternatively, the Tasmanian Government should provide an annual rebate to Tasmanian consumers equal to the write down. We support the Grattan Institute's approach in principle and urge the AER and Tasmanian Government to fully consider it.

Meanwhile, the TSBC contends that all bids for capital expenditure by TasNetworks should be scrutinized against the overinvestment which occurred from 2006 to 2014, with a view to not simply holding capex, but reducing it.

ECONOMIC BENCHMARKING

TasNetworks' benchmarks first among NEM transmission networks, which is pleasing, although its performance deteriorated by 3 per cent in 2016.[6] Capex has made a negative trend contribution over the past eleven years, whilst opex made a positive contribution, which has recently turned negative. TasNetworks has work to do over the next regulatory period but their Proposal falls short.

TasNetworks' distribution network has consistently benchmarked at, or near, the bottom of DNSPs'. This is partly, but not completely, explained by certain factors peculiar to its network. For capex, TasNetworks also ranks bottom of the pack and its performance has declined markedly over the period covered. For opex, TasNetworks distribution performs better but remains in upper mid-pack, with an improving trend overall, although there was a significant 7 per cent decline in 2016. TasNetworks has warned that its benchmark performance may deteriorate in future.

TasNetworks has undertaken its own benchmarking study, which we welcome, and focused more on Tasmanian issues. However, we are disappointed that its study contains few supporting metrics, shows a lack of ambition and is generally negative about the value of benchmarking as a regulatory tool. We would prefer that it adopted a more aggressive approach.

Overall, the benchmarking results suggest that TasNetworks' performance is reasonable in some areas but that it has work to do in others. Its Proposal does not seem up to this task.

[6] Measured in terms of Multilateral Total Factor Productivity (MTFP), a measure of outputs relative to inputs.

REGULATED REVENUE

There are factors pulling forecast transmission revenue down but, on the other hand, there are factors pushing distribution revenue up resulting in only a slight decline for the business. Given that TasNetworks operates in a more-or-less stagnant market this is a concern.

The expenditure cuts of the previous regulatory period that fuelled revenue outcomes have been replaced by a real increase in average annual revenues for distribution of 7 per cent from its previous determination. This turnaround is of concern. Meanwhile, past and future capex programs in both networks are feeding into an increasing RAB, which is raising revenue.

We note that there are numerous risks to TasNetworks' revenue forecasts. Some of these could be highly significant, e.g., contingent projects, and force revenue, followed by network charges up significantly if they come to fruition.

INDICATIVE NETWORK PRICES & CROSS-SUBSIDIES

Whilst we welcome the expected ⅔ per cent decline in small business electricity prices due to falls in transmission prices expected over the next five years, we do not welcome the 1.7 per cent per annum expected increase in distribution prices, which will overwhelm the former.

We are also alarmed at the apparent stalling in the removal of the cross-subsidy that small business currently pays in its distribution tariffs. This follows a period in which good progress was made in removing the cross-subsidy. We note that this is contrary to the public position of TasNetworks in supporting removal. The AER needs to ensure that further progress is made over 2019-24.

LEGACY METERS ISSUE

TasNetworks' has proposed accelerated depreciation for its meters that will be stranded assets due to the introduction of metering competition and advanced meters. This will increase annual metering costs by between $9.29 and $24.85 per annum per meter at a time of high electricity prices. The AER must carefully assess this proposal. In a competitive market, assets stranded by new technology or changed policies would have to be written off and the shareholder face the costs. Moreover, allowing TasNetworks' Proposal would have customers pay twice for essentially the same thing and be contrary to the expectation that advanced meters will lower electricity costs.

TARIFF STRATEGY

The TSBC supports much of the tariff reform strategy of TasNetworks, albeit with some caveats. We particularly support the removal of cross-subsidies that penalise small business. The slow progress in removing these, including over the next regulatory period, is a major disappointment to the TSBC.

The TSBC view is also that an increase in fixed charges will stifle consumer responses to price signals and limit demand side response.

On the other hand, we welcome the focus on Distributed Energy Resources (DER) in the tariff strategy. However, waiting until 2050 to save customers an average of $414 per year from DER is far too long. TasNetworks needs to speed up DER tariff reform.

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INTRODUCTION

1 Introduction

This document is the Tasmanian Small Business Council's (TSBC) submission on TasNetworks' Regulatory Proposal for its transmission and distribution networks for the regulatory period 2019-20 to 2023-24. The TSBC welcomes the opportunity to participate in the Australian Energy Regulator's (AER) regulatory reset of TasNetworks' transmission and distribution network for the period 2019-20 to 2023-24. We also welcome the opportunity to provide this submission on TasNetworks' Regulatory Proposal as an important step in the Determinations.

1.1 Background to Small Business and the TSBC

Small business is the 'engine room' of the Tasmanian economy. There are more than 37,000 small businesses in Tasmania, 30,000 of which are employers, employing over 70,000 full and part-time people. Numerically, they make up in excess of 96 per cent of all businesses in Tasmania and the sector provides more than half of the State's private sector employment. Understanding the small business sector, its aspirations and needs is of vital importance to the enterprises themselves, as well as Government and regulators, as decision-maker. The resources to address the future needs of the state can only come from the generation of new wealth and healthy, vibrant small businesses are critical to this.

The Tasmanian Small Business Council (TSBC) is an "association of [small business] associations", each of which represents their market grouped industry sector. The TSBC seeks to provide the representative voice of small business in Tasmania. The TSBC's role in facilitating meetings of and forums for these trade associations, whose members are predominately small businesses, is paramount to providing informed insights and advice to governments and regulators.

An obvious difficulty for owners of small and micro businesses is the absolute necessity to spend their time working "in the business", while those with larger numbers of employees take a more managerial role and begin to spend some of their time working "on the business". Small business is therefore even more reliant on groups such as the TSBC to develop and put forward informed policy positions to Government and regulators that truly represent their interests.

1.2 TSBC's Interest in TasNetworks' Proposal

Around 37,000 businesses are connected to the Tasmanian electricity network.

Electricity is a major input cost to small business and also a key enabler for every small business – the cost, quality and reliability of electricity supply materially impacts the health of every small business and the vibrancy of the Tasmanian small business sector.

Tasmanian small businesses have a need for competitively priced electricity that contributes to their competitive advantage. Competitors for Tasmanian small businesses include larger players in the local market, inter-state firms providing goods and services in Tasmania and international businesses (where they sell into export markets or compete against imports).

Many of the competitors of Tasmanian small businesses have access to cheaper energy and to competitive energy offers. Tasmanian small businesses therefore suffer a disadvantage in these respects and the TSBC actively supports policy and regulatory steps to help redress this. Having access to a reliable supply of network services at prices that truly reflect efficient costs and therefore

contribute to the provision of competitively priced electricity to Tasmanian businesses is important to the health of the small business sector and the Tasmanian economy.

Across the small business sector overall, electricity is a middle sized cost of production, typically making up between 3-5 per cent of total costs, although within some sectors, such as Tasmanian Independent Retailers, agricultural pursuits such as diary and irrigation, and some manufacturing firms, it can be substantially more. This, in itself, makes electricity important. However, its importance to small businesses in Tasmania is elevated by:

- The need to have access to a reliable source of supply, as many small businesses are heavily dependent on a continuous supply of electricity;
- The fact that some small businesses have energy costs well in excess of the average and, for them, access to competitively priced energy is particularly important;
- The large increases seen in Tasmanian electricity prices particularly over the period from 2009 to 2013, which has had a significant impact on small businesses. Many have been compelled to absorb those cost increases and to reduce profitability, due to the very competitive markets in which they operate and cannot access competing electricity suppliers due to a lack of retail competition, making their competitive disadvantage worse;
- The over-investment in electricity network assets which occurred over the period 2009 to 2013, which was one of the main drivers for electricity price increases over that period, with a resulting need for TasNetworks to limit its ongoing capital expenditure programs until the over-investment is wound out, which could take decades; and
- The increasing competitiveness of standalone (on site) electricity production compared to grid sourced electricity, with price implications for grid sourced electricity if grid defection rates accelerate.

We also note that small business, commercial and industrial customers, comprise approximately 15 per cent of the distribution system's customer base, but consume approximately 54 per cent of the electricity delivered by the distribution network. On this basis, TasNetworks should also have a strong interest in ensuring that its prices and operations support the electricity needs of its small business customers. If they depart the network, or reduce their reliance on it due to excessive charges or more competitive by-pass options, TasNetworks revenue base could be materially impacted.

Small business, like all Tasmanian electricity customers, has a significant investment in the Tasmanian electricity network (grid) by way of past and ongoing contributions to its maintenance and augmentation, through the electricity charges it pays for.

Tasmanian small business wishes to see the value of the electricity network assets maintained, and in fact enhanced, which would be the case if it is adapted to suit the technology requirements of customers into the future, in a "SmartGrid" world.

1.3 Forecasts – Demand, Energy and Customer Connection

Given that forecasts of demand, energy consumption and customer connections are important drivers for expenditure and price outcomes for TasNetworks' transmission and distribution

networks, we provide the following observations on the forecasts provided in the TasNetworks' Proposal:

- The transmission load and generation connection forecasts are rather opaque. The "unprecedented numbers of connection enquiries from new wind generation and solar in Tasmania" reported by TasNetworks ought to provide a reasonable basis for forecasting generation connections. The unknown nature of the second interconnector and its significant impact on the Tasmanian network, should it go ahead, is noted, as is its status as a contingent project outside the forecasts in this Proposal.
- The forecast for Basic Residential connections to increase steadily over the forthcoming regulatory period to around 2,800 connections per annum seems rather unlikely to materialise based on past trends and what is currently known about future drivers of such connections. The 'low' forecast would seem the most realistic.
- Complex Residential connections are forecast to increase steadily over the forthcoming regulatory period, returning to levels observed prior to 2013, but this also seems rather unrealistic based on past trends and what is currently known about future drivers.
- Both Basic and complex commercial connections are forecast to increase steadily over the forthcoming regulatory period, but this seems rather unlikely given recent past experience, their recent depressed levels and what is currently known about the drivers for commercial activity in Tasmania. The 'low' forecast for complex commercial connections may be more realistic.

In summary, there are a number of aspects of TasNetworks' forecasts that seem to indicate a low probability of realisation. Given the important impact of these forecasts on expenditures and prices, the AER should rigorously test the robustness of the forecasts before accepting them and substituting its own (lower) ones as necessary.

2

Consumer Consultation

Goanna Energy Consulting Pty Ltd

Tasmanian Small Business Council
Uniting Small Business

2 Consumer Consultation and Engagement

An important component of any AER regulatory determination nowadays is the consumer consultation and engagement process undertaken by network businesses like TasNetworks. The Rules allow the AER to adjust (downwards) a network businesses' revenue if this process is inadequate, although this has not happened to date.

TasNetworks efforts in consumer engagement have been recognized by the AER's Consumer Challenge Panel representatives (CCP 13) as "overall, one of the best in the NEM, but need continuous improvement, as others are innovating and improving."[7]

The TSBC notes the CCP13 comments and TasNetworks' efforts on customer engagement, as reflected in chapters 3 (Customer Engagement), 7 (customer feedback, revenue capped services) and 17 (customer feedback, alternative controlled services) in its Revenue and Distribution Regulatory Proposal, and in its Tariff Structure Statement.

The TSBC acknowledges and welcomes TasNetworks' efforts.

We also note TasNetworks' customer engagement framework, as described on its website and reproduced in **Box 1** below.

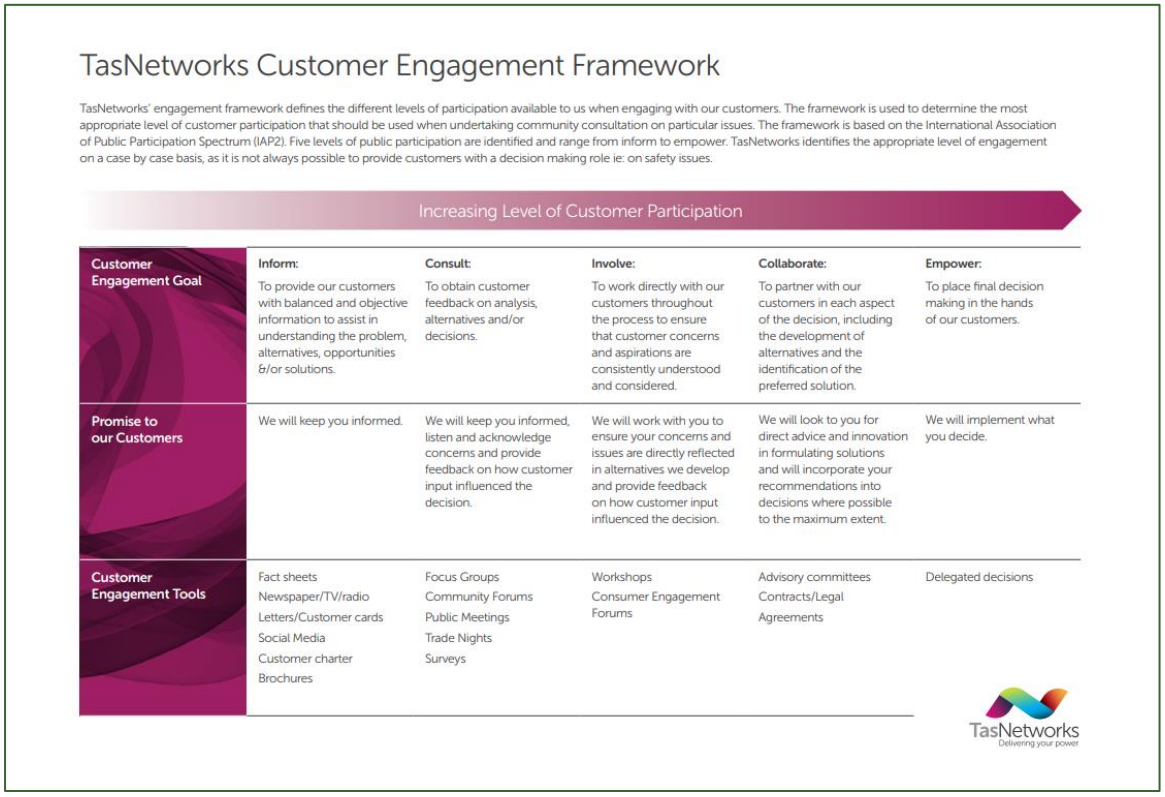
In pursuit of continuous improvement, the TSBC suggests that TasNetworks efforts towards consumer engagement are currently in the 'consult' stage, and to a lesser degree the 'involve' stage, but not yet progressed to the collaborative stage, and the TSBC proposes that there are a number of steps which could be taken towards continuous improvement, as suggested by CCP 13.

The TSBC would like to see specific actions arising from consumer feedback, that is, references in the proposal to specific items demonstrating how customer feedback has translated to specific action. The AER guideline – "Consumer Engagement Guideline for Network Service Providers, November 2013" includes, for example:

> *"We expect service providers to articulate the outcomes of their consumer engagement processes and how they measure the success of those processes. If service providers genuinely engage with consumers on significant issues, they should be able to draw on that information and use it, for example, to help explain the reasoning behind expenditure proposals. Service providers could report the following information, for example:*
>
> - *evidence that the service provider heard from a comprehensive cross-section of consumers. Such reports should include consumer feedback, engagement activity summaries (the scope and objective of each activity), and whether the activities achieved their respective objectives.*
> - *how the service provider considered consumer input and whether that input influenced the business and/or an expenditure proposal (and why). If consumers did exert influence, then the service provider should explain how."*

[7] Consumer Challenge Panel, TasNetworks Public Forum presentation, www.aer.gov.au/system/files/TasNetworks%20-%20TasNetworks%20Public%20Forum%20Presentation%20-%2010%20April%202018.PDF.

Box 1: TasNetworks' customer engagement framework



TasNetworks Customer Engagement Framework

TasNetworks' engagement framework defines the different levels of participation available to us when engaging with our customers. The framework is used to determine the most appropriate level of customer participation that should be used when undertaking community consultation on particular issues. The framework is based on the International Association of Public Participation Spectrum (IAP2). Five levels of public participation are identified and range from inform to empower. TasNetworks identifies the appropriate level of engagement on a case by case basis, as it is not always possible to provide customers with a decision making role ie: on safety issues.

Increasing Level of Customer Participation

	Inform:	Consult:	Involve:	Collaborate:	Empower:
Customer Engagement Goal	To provide our customers with balanced and objective information to assist in understanding the problem, alternatives, opportunities &/or solutions.	To obtain customer feedback on analysis, alternatives and/or decisions.	To work directly with our customers throughout the process to ensure that customer concerns and aspirations are consistently understood and considered.	To partner with our customers in each aspect of the decision, including the development of alternatives and the identification of the preferred solution.	To place final decision making in the hands of our customers.
Promise to our Customers	We will keep you informed.	We will keep you informed, listen and acknowledge concerns and provide feedback on how customer input influenced the decision.	We will work with you to ensure your concerns and issues are directly reflected in alternatives we develop and provide feedback on how customer input influenced the decision.	We will look to you for direct advice and innovation in formulating solutions and will incorporate your recommendations into decisions where possible to the maximum extent.	We will implement what you decide.
Customer Engagement Tools	Fact sheets Newspaper/TV/radio Letters/Customer cards Social Media Customer charter Brochures	Focus Groups Community Forums Public Meetings Trade Nights Surveys	Workshops Consumer Engagement Forums	Advisory committees Contracts/Legal Agreements	Delegated decisions

TasNetworks Delivering your power

Source: TasNetworks website at https://www.tasnetworks.com.au/TasNetworks/media/pdf/customer-engagement/TasNetworks-Customer-Engagement-Framework-v1.pdf.

The TSBC observes that TasNetworks' responses to customer feedback through its engagement activities sometimes but not always result in a favourable outcome from a customer perspective.

Two examples are in **Box 2** below.

Box 2: Examples of TasNetworks' response to customer feedback

Favourable response

Issue – Delivering services for the lowest sustainable cost (Proposal, p 80).
Customer feedback – Customers continue to reinforce the expectation that we continue to operate our business as efficiently as possible, to drive good outcomes for customers today and into the future.

TasNetworks' Response – various, but including "This package of measures will reduce transmission and distribution revenues, in nominal terms over the forthcoming regulatory period, by $29.8 million and $28.4 million respectively compared to our provisional Revenue Proposal plans".

That is a useful demonstration of listening to and acting on customer feedback.

Unfavourable response

Issue – Metering services (Proposal, p 199)

Customer feedback – Some stakeholders expressed concern regarding the increase in metering charges resulting from accelerating the depreciation of the metering RAB. These stakeholders noted that the increase in metering charges may present difficulties for people on low incomes who are already struggling with electricity prices and cost of living pressures.

TasNetworks' response – We are proposing to fully recover our regulated metering capital costs by June 2024.

The TSBC suggests that this response is not in keeping with the concerns of TasNetworks' customers who are most exposed to the increased charges.

The TSBC notes the point made by CCP 13 in its presentation to the public form[8], at slide 6, as follows:

Directions and Priorities Paper (August 2017) –key opportunity for consumer input but how well have the changes since been explained?

The TSBC responded to TasNetworks' Directions and Priorities consultation Paper[9] and made several requests for additional information to be provided in the Proposal. An extract of some of those requests and the TasNetworks response is provided in **Table 1** below.

Table 1: TasNetworks response to TSBC Submission on Directions and Priorities Consultation Paper

Suggested	Response in the proposal
The TSBC suggests that TasNetworks' revenue proposal should provide details of community based network performance (reliability) and that incentive schemes should be based on that performance	Not included and not responded to
The TSBC wishes to understand more fully the drivers for the reduction in (transmission) operating costs and the long term implications/benefits of the reduction in asset services expenditure	Not in the proposal – numeric detail only in the RIN template 1 but no supporting explanation

[8] Consumer Challenge Panel, TasNetworks Public Forum presentation, www.aer.gov.au/system/files/TasNetworks%20-%20TasNetworks%20Public%20Forum%20Presentation%20-%2010%20April%202018.PDF

[9] www.tasnetworks.com.au/TasNetworks/media/pdf/customer-engagement/Direction%20and%20Priorities%20submissions%202015/TSBC-Submission-TN-Directions-and-Priorities-Consultation-Paper.pdf

We look forward to understanding more about this projection (i.e., advanced meter take-up) from the Revenue Proposal.	Some detail included, but not about the slow pace of advanced meter take up.
There is no evidence of where the $28 billion benefits proposed in the *Smart Grid Smart City* report or the ENA's forecast of avoided capex ($1.4 billion by 2024) is reflected in TasNetworks' forecasts	Not included and not responded to
The TSBC seeks to understand in more detail (from the Revenue Proposal when it is released) how TasNetworks is positioning itself to deal with a range of foreseeable future outcomes in order to avoid price shocks or service degradation in the event of a significant change to the existing "steady state" environment.	Not included and not responded to

The TSBC suggests the above responses suggest there is scope for improvement in the overall engagement process.

In **Box 3** on the next page, the TSBC also provides the following comments regarding its own engagement with TasNetworks on this Determination to date.

In summary, the TSBC recognizes and acknowledges TasNetworks' efforts in consumer engagement, and suggests there are opportunities to increase the value that engagement. The TSBC would be happy to work directly with TasNetworks to achieve that increased value.

Box 3: TSBC comments on its engagement with TasNetworks

Positive feedback

Consultation & engagement in general

- Improvements noted in accessibility of key staff.
- Improvement noted in response times to queries, particularly at junior and mid-management levels.
- Increased relevance of material provided.
- Increased depth and breadth of topics.
- Improvements to "open door" attitude, including leadership by example from senior management.
- Active involvement from mid management level through to CEO and including the Chairman at the public forum.

In summary, TasNetworks' attitude to engagement has observably improved.

Information dissemination

- Improvements noted in the frequency, quality and timeliness of information.
- Active Involvement from junior level through to CEO.

Innovation

- TasNetworks is seeking to use a range of inputs, and is sponsoring market research, workshops, and one on one surveys.

Opportunities for improvement

Administration, recording and reporting

- There have been instances of consumer proposals not being progressed when they don't align with TasNetworks' objectives (for example – the consumer proposal to have a "no regrets" policy for consumers willing to trial new tariffs was not recorded in the relevant meeting minutes, until reminded to do so).
- Consumer proposals which are not explored or taken up, without any feedback as to why.

The TSBC suggests that those behaviours lead to scepticism, with the risk that consumers feel that what has been promoted as engagement and consultation is then seen as little more than infomercials and advertorials or 'going through the motions'.

Lack of evidence of the effect of consumer influence on actual outcomes.

- There is little real evidence of consumer inputs and perspectives being represented in actual outcomes or changes (as noted above in the comments relating to the TSBC feedback on certain aspects of the Directions and Priorities Consultation Paper).

3

INDUSTRY CHANGE

Goanna Energy Consulting Pty Ltd

Tasmanian Small Business Council
Uniting Small Business

3 Change, Transformation and Transition

The nature of the changes occurring in electricity consumer choices around generating and storing electricity at or near their homes and businesses will have a major impact on the prices paid by those consumers who are not willing or able to implement the related technologies.

The Sydney Morning Herald, 25 April 2018[10] contained the following report:

> *"The rise of rooftop solar has helped drive down electricity costs for many Australians but the head of the energy market operator warns those still on the grid have been punished with higher prices.*
>
> *"I am truly concerned over the issue of an economic bypass," Audrey Zibelman, the head of the Australian Energy Market Operator, said at a Centre for Independent Studies event this week.*
>
> *"We do not want to invite an economic bypass," she said, "creating the haves and the have-nots."*
>
> *As electricity networks – the poles and wires – still require a fixed, per customer contribution to recover their capital, each electricity user is meant to pay an equal share. However, when people defect from the grid by installing rooftop solar it increases the proportional costs for those who still rely solely on grid power for their electricity.*
>
> *Ms Zibelman raised concerns over the number of Australians defecting from the grid. While she supports the rising levels of solar rooftop installations and the increase in renewable energy, she said it was important Australians remained connected to the grid so that excess energy could be utilised and the power network better managed as the energy sector undergoes a massive transition from its old one-way power system to a multi-directional energy network.*
>
> *"What's happening in the power industry is that the cost of distributed energy resources are coming down as they have the opportunity to use storage and solar, but we would like them to stay part of the overall system so we can use them to help manage the system," she said.*
>
> *"I think the fact that someone can leave the system because they can rely on their own resources is a good thing for an individual but it isn't for the rest of us, because it means you have a smaller pot of people to maintain the system.*
>
> *"The concern is, when the system becomes uneconomic to individuals and they bypass it then it creates a disruption that's hard for us to manage it."*
>
> *Ms Zibelman said solar had not eliminated peak load on the network rather moved it to later in the day, from the afternoon to later at night, but with better management of the system the energy could be utilised throughout the day.*
>
> *"The objective ... is how to make the energy system we have more economical. It is one system and we want to work in the best way possible," she said.*

[10] www.smh.com.au/business/the-economy/i-m-truly-concerned-aemo-chief-warns-on-rooftop-solar-20180424-p4zbg0.html

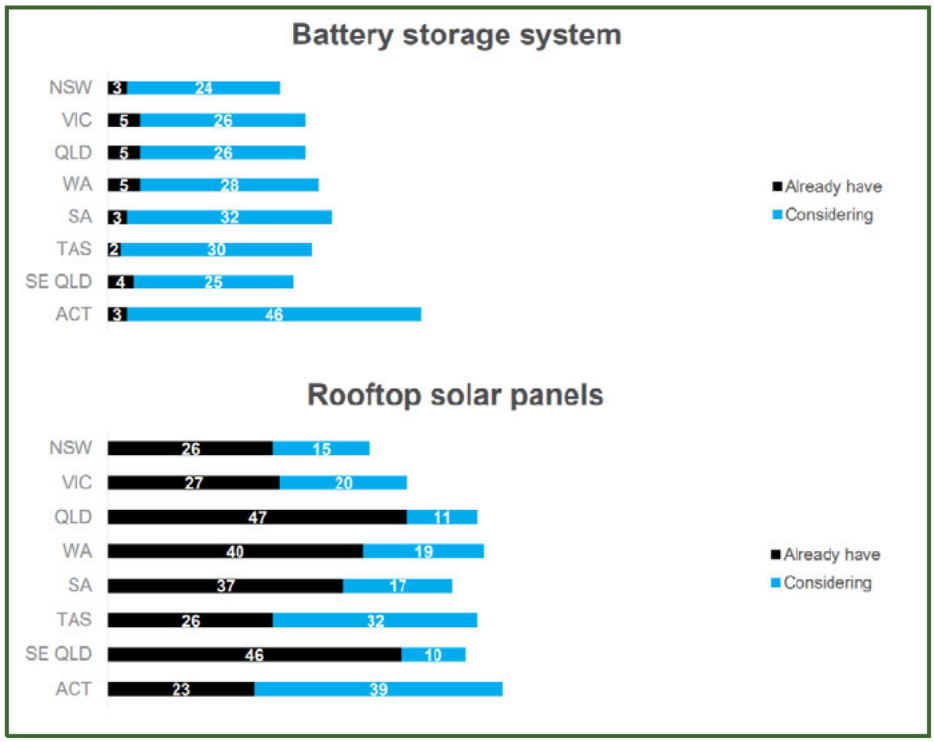
> *The head of energy transmission company TransGrid, Paul Italiano, said the rise of rooftop solar was paving the way for the future but there needed to be tariff reform to better reflect how energy was being used in each home.*
>
> *"The people this impacts the most is anyone who lives in rental or high-density housing, or lacks the financial means to pay for it," Mr Italiano said.*
>
> *"Typically, the most vulnerable have the least flexibility."*

Further, the ACCC commented recently:

> *"However, the vast majority of consumers are still on a standard tariff comprised of a fixed daily charge and a variable usage charge, and most retail products and marketing are focused on pay on time discounts. This dynamic suggests that for the majority of customers, retail innovation has not delivered substantial improvements that help them manage their usage or materially improve the way they access energy."*[11]

In keeping with the trend of investment in battery storage identified in figure 5 of TasNetworks' Tariff Structure Statement, (Regulatory Control Period 1 July 2019 to 30 June 2024), the Energy Consumers Australia Energy Consumer Sentiment Survey December 2017 asked "Which of the following are you intending to purchase for your home in the next 12 months?"[12], with the response represented at **Figure 1** below.

Figure 1: Consumers already having or considering solar and storage installations



Source: Energy Consumers Australia, *Energy Consumer Sentiment Survey*, December 2017.

[11] ACCC, Retail Electricity Pricing Inquiry, Preliminary Report, 22 September 2017, p. 101.
[12] Energy Consumers Australia, *Energy Consumer Sentiment Survey, Dec 2017,* p. 30 available at http://energyconsumersaustralia.com.au/publication/energy-consumer-sentiment-survey-findings-december-2017/.

Despite the relatively poor performance of solar generation in Tasmania compared to mainland states, Tasmanian small businesses are represented in the survey results shown at **Figure 1**and many are actively exploring local generation and off grid options.

The TSBC considers the comments by the AEMO CEO and the ACCC noted above are indicative of a very real threat to value of Tasmania's electricity network. A combination of the continuing reduction in the cost of local generation and storage, and a lack of response to the desire of electricity consumers, including small business, to manage their electricity costs after a period of substantial price rises, is cause for concern.

The TSBC endorses TasNetworks' adoption of the Energy Networks Australia (ENA) and CSIRO's Electricity Networks Transformation Roadmap in developing the TasNetworks vision for 2025.

As we noted in our response to the Directions and Priorities Consultation Paper[13], the TSBC is concerned at the pace of change at which TasNetworks is progressing towards its 2025 Vision.

The *SmartGrid SmartCity* study [14] was a $100 million Federal government initiative which reported in July 2014 and included a range of studies and trials around SmartGrid deployment, including advanced metering technology and tariff trials.

A key outcome of the study was the publication of findings and documentation of insights learned from implementing smart grids during the trial period.[15]

The TSBC is of the view that accessing the results and learnings from the *SmartGrid SmartCity* trial or similar would enable TasNetworks to accelerate deployment of the technologies necessary to progress to its 2025 Vision. Applying the *SmartGrid SmartCity* learnings, refining as necessary, and progressing to implementation at a more rapid pace than is currently the case, would be useful.

Unless the pace is quickened there is a risk that the rate at which customers adopt energy technologies which do not involve a reliance on the grid outstrips TasNetworks' efforts to develop the corresponding grid technologies.

Should that occur, the rate of defection from the grid will accelerate, as will the rate of economic bypass identified by the head of the Australian Energy Market Operator, as noted above, which would be a "lose lose" situation, for customers, TasNetworks and its shareholder, the Tasmanian Government, and would lead to higher prices for those customers who remain grid connected.

[13] https://www.tasnetworks.com.au/TasNetworks/media/pdf/customer-engagement/Direction%20and%20Priorities%20submissions%202015/TSBC-Submission-TN-Directions-and-Priorities-Consultation-Paper.pdf

[14] http://smartcitiesappg.com/wp-content/uploads/PDF/SmartGrid.pdf

[15] http://webarchive.nla.gov.au/gov/20160615043625/http://www.industry.gov.au/Energy/Programmes/SmartGridSmartCity/Pages/AdditionalInformation.aspx

4

CAPEX

4 Capital Expenditure (Capex)

In this section we comment on TasNetworks' capex proposals for both transmission and distribution.

4.1 Transmission Capex

We turn firstly to the capex proposals for the transmission network.

4.1.1 General observations

Increases in the value of regulatory asset bases (RABs)across the NEM, and the flow on effects into the prices consumers pay for electricity, have been the subject of intense scrutiny over the last 12 months and have been the subject of a range of commentary and reporting, including by the ACCC (Retail Electricity Pricing Inquiry, 2017), and the Grattan Institute (Down to the Wire, March 2018). Increases in the value of network RABs has contributed materially to electricity price increases over the period 2006 to the present.

In the case of TasNetworks and its predecessor, Transend Networks, the increase in the RAB for transmission assets between 2006 ($979 million) and 2017 ($1.421 billion) amounted to $442 million, as shown in **Figure 2**.

Over the current regulatory period, 2014-15 to 2018-19, the value of TasNetworks' transmission RAB is projected to remain relatively stable, with a closing RAB value at 30 June 2019 of $1.467 billion in nominal terms.

By the end of the regulatory period which is the subject of this submission, June 2024, the value of the RAB for transmission assets, excluding contingent projects, is projected to be $1.626 billion in nominal terms after allowing for inflation at 2.45% annually (source – TasNetworks document TN103, PTRM model).

The past growth in the value of TasNetworks' transmission assets is shown in **Figure 2**.

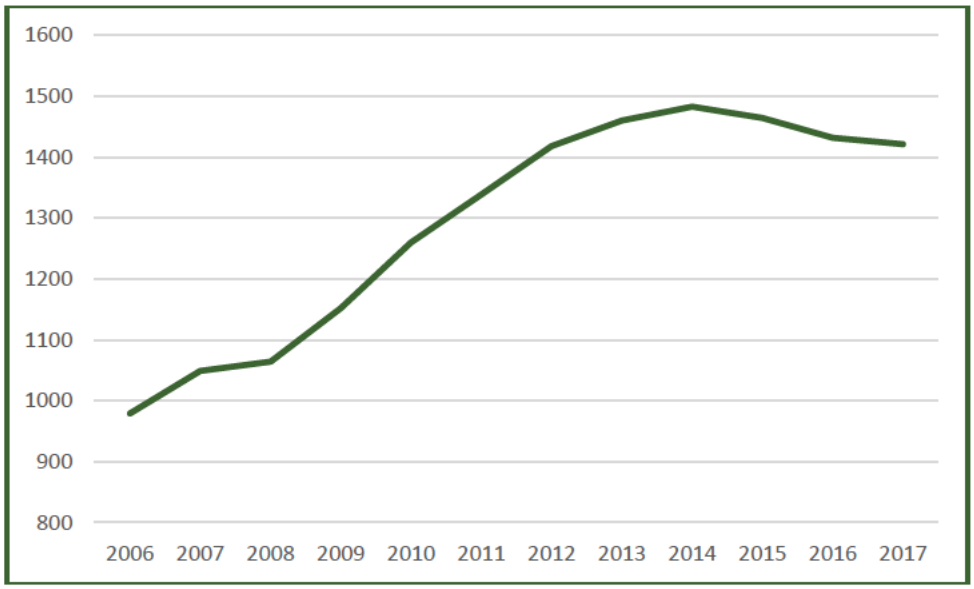
Over the period 2006 to 2017, peak demand, actual and forecast, as shown **Figure 3**, was virtually flat from 2009, after rising until 2008.

The period from 2006 to 2014 was one which involved massive capital expenditure, averaging $127.5 million per year (TasNetworks Transmission Revenue and Distribution Regulatory Proposal, 2019–2024, p. 87), on the basis of grossly overestimated demand forecasts.

The resulting over-investment translates to consumers paying more than they should for the transmission services they receive, given that around 50% of network charges are derived from the value of the RAB multiplied by the allowed WACC (rate of return) and depreciation. The over investment can be expected to be corrected over time, however the combination of a revenue cap and the roll forward (asset) model means consumers, including small business, pay "up front" for any overinvestment.

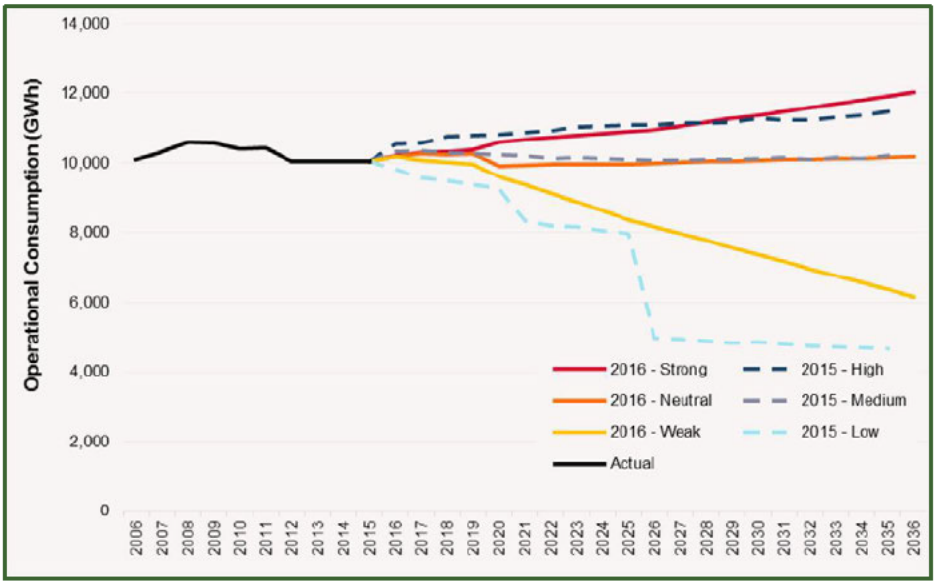
Tasmanian electricity consumers, including small business, are paying for the overinvestment and will continue to do so for the remaining life of the relevant assets, at around 40 years.

Figure 2: Transmission assets RAB value (June 2017 $000)



Source: Goanna Energy Consulting from AER RIN data

Figure 3: AEMO's forecast energy consumption on the Tasmanian network



Source: TasNetworks Transmission Revenue and Distribution Regulatory Proposal, 2019-2024, p. 71.

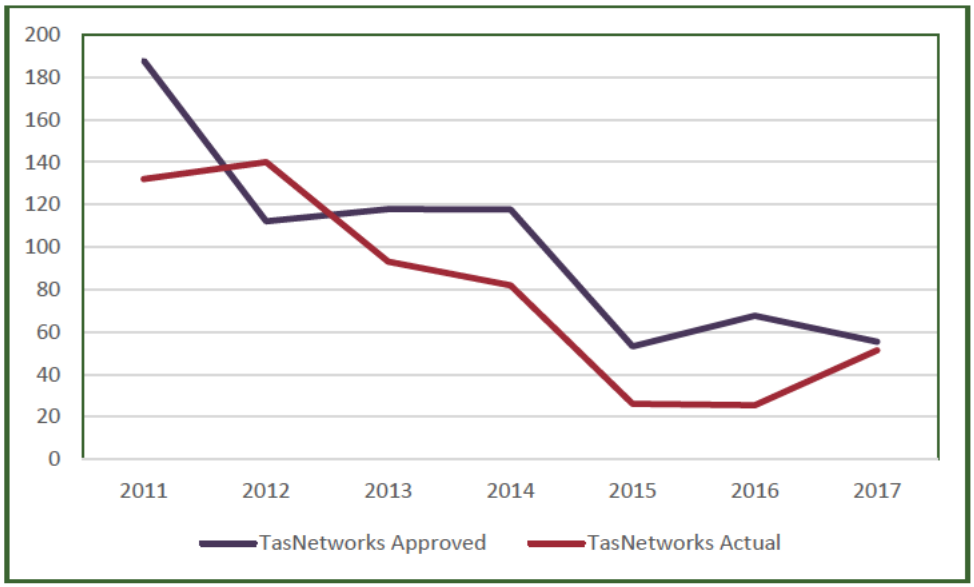
The TSBC notes the average remaining life of transmission assets of 76% (TasNetworks Transmission Revenue and Distribution Regulatory Proposal, 2019 – 2024,.p83), against an expected remaining average life of closer to 50% for a business managing a mature portfolio of electricity transmission assets.

TasNetworks' capital expenditure requirements over the 2019-2024 regulatory period need to be assessed against that background. The TSBC expects that the previous over-investment provides

considerable scope for a winding back of capital expenditure programs, continuing the trend evident from 2011.

The TSBC notes the downward trend in transmission capex actual expenditure from 2012 (see **Figure 4**), to a level of less than half the allowed depreciation in 2014-15 and 2015-16, and also notes the substantial gap between capex which was approved (and incorporated into network charges) versus actual capex spend during the current regulatory period (2014 to 2019).

Figure 4: Capital expenditure - transmission assets



Source: Goanna Energy Consulting from AER RIN data

4.1.2 Projected capital expenditure

Over the 2019-20 to 2023-24 regulatory period, transmission capex is projected to be $260.6 million (June 2019 $ terms), compared to regulatory depreciation of $313 million and capex of $211.3 million for the current (2014 to 2019) regulatory period (shown in

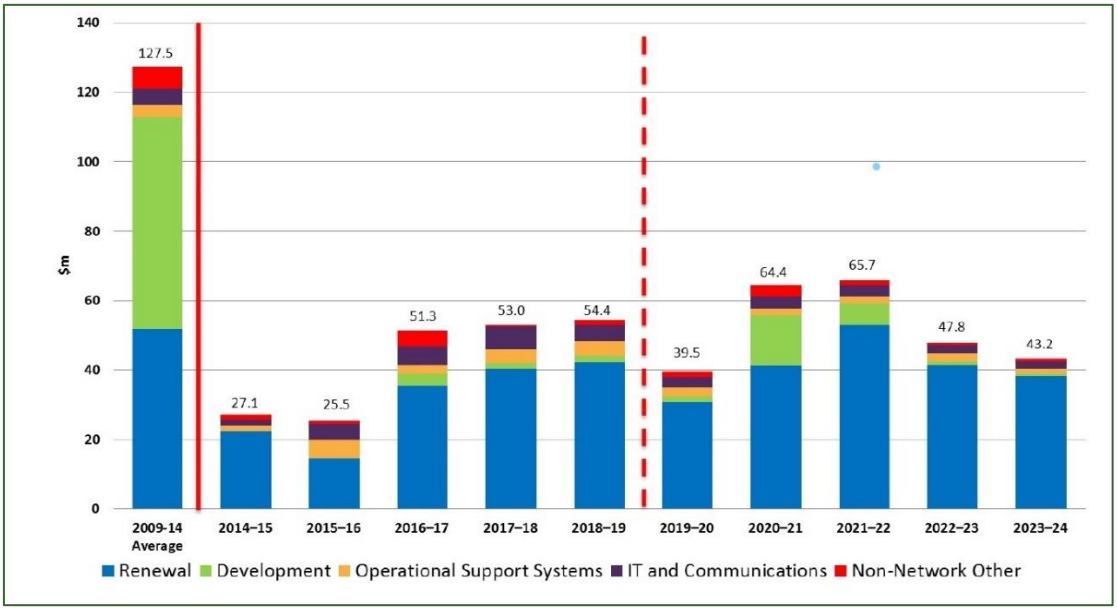
Figure 5).

The TSBC notes the significant shift from development expenditure (connection and augmentation) over the period 2009 to 2014 compared to the current 2014 to 2019 and forthcoming 2019 to 2024 periods.

The TSBC would expect to see a relatively stable level of repex (renewal or replacement expenditure) in a mature network business, however that is not the case for TasNetworks, with expenditure varying from around $13 million in 2015-16 to over $50 million in 2021-22.

The reason for, and the appropriateness of, that variation is a matter which the TSBC believes should be the subject of careful scrutiny by the AER when making its determination.

Figure 5: Overview of actual and forecast transmission capital expenditure (June 2019 $m)



Source: TasNetworks Transmission Revenue and Distribution Regulatory Proposal, 2019 – 2024, Figure 8.3

The TSBC notes that the value of the transmission RAB is projected to increase by $160 million from $1.467 billion to $1.627 billion over the forthcoming regulatory period 2019-24[16], roughly in line with inflation.

There is no evidence that TasNetworks is seeking to increase the utilization of its existing assets and defer capital expenditure, which would, in itself, reduce transmission charges. The opportunity to do so is reflected in the current average remaining life of transmission assets, at 76%

4.2 Comments on Elements of Proposed Transmission Capex

We comment below on the main elements of the TasNetworks' transmission capex proposal – augmentation, information technology (IT) and contingent projects.

4.2.1 Augmentation capex

The TSBC is not able to access information which would enable it to make a judgement about the utilisation of transmission assets but suggests that total demand served by the transmission system compared to the total value of transmission assets provides an approximate guide.

Figure 2 and **Figure 3** above provide a guide to the change in the utilisation rate of TasNetworks' transmission assets, which would be expected to show a substantial reduction over the period 2006 to 2024 (inverse to the increase in asset values).

The TSBC expects therefore that the need for augmentation capex in the period 2019 to 2024 would be close to zero, which accords with the 2019 to 2024 proposed augmentation capital expenditure, with the exception of the dynamic reactive power device at the Georgetown substation, to be constructed over the 2020-21 and 2021-22 financial years.

[16] TasNetworks Post Tax Revenue Model (PTRM).

The TSBC notes that the associated $15 million (approximate) expenditure will be subject to the AER's Regulatory Investment Test (transmission – RITT). The TSBC understands that the main beneficiaries of that expenditure would be Hydro Tasmania, the Bell Bay aluminium smelter and Basslink. The benefit to TasNetworks' broader customer base would be minimal. In undertaking the RITT analysis the AER should determine an appropriate apportionment of costs that recognises the 'beneficiary pays' principle.

4.2.2 Information technology

Proposed transmission capital expenditure includes investments in network control, asset management systems and IT and communications, all of which are part of a broader classification of data management and information systems. Expenditure according to that classification is shown in **Table 2**.

As shown in **Table 2** on the next page, proposed capital expenditure over the five years 2019 to 2024 is $24.9 million, which compares to $42.0 million for the period 2009 to 2014 and $40.0 million for the period 2014 to 2019.

The reduction shown over the three periods is welcome, however it is appropriate to consider capital expenditure in this category for TasNetworks' transmission and distribution businesses together, on the basis that one driver for merging the distribution component of Aurora Energy with Transend Networks to form TasNetworks was the synergies between the two businesses and a reduction in operating and capital expenditure – "Further efficiency gains will be achieved over time as the new company rationalises duplicate systems and finds better ways of delivering services to its customers"[17].

It is therefore appropriate to consider expenditure on data management and information systems for transmission and distribution businesses combined. This is included in the section dealing with distribution capex at Section 4.3

4.2.3 Contingent projects

The TSBC's submission[18] on TasNetworks' Direction and Priorities Consultation Paper (August 2017) commented:

> *The TSBC notes the number and scale of transmission contingent capital projects (p19) totalling $768M, and the trigger events which would need to occur before any of those projects moved from being contingent to part of the capital expenditure program.*
>
> *The TSBC suggests the trigger of passing the AER's Regulated Investment Test should include an analysis of costs and quantifiable financial benefits which will accrue to each section of the Tasmanian electricity customer base, and that the project approval process should ensure that audited benefits exceed costs for any approved project.*

[17] Tasmanian Transmission Revenue Proposal, Regulatory control period 1 July 2014 – 30 June 2019, p. 87.
[18] https://www.tasnetworks.com.au/TasNetworks/media/pdf/customer-engagement/Direction%20and%20Priorities%20submissions%202015/TSBC-Submission-TN-Directions-and-Priorities-Consultation-Paper.pdf.

Table 2: Data management and information systems capex

Transmission IT capex													
	2009-14	2014/15	2015/16	2016/17	2017/18	2018/19	**2014-2019**	2019/20	2020/21	2021/22	2022/23	2023/24	**2019-2024**
Network control	9.0	0.5	3.4	0.8	1.9	2.4	**9.0**	0.9	0.5	0.7	0.7	0.4	**3.2**
AMS	9.0	1.1	1.6	1.6	2.0	1.7	**8.0**	1.8	1.5	1.4	1.5	1.0	**7.2**
Operational support	**18.0**	1.6	5.0	2.4	3.9	4.1	**17.0**	2.7	2.0	2.1	2.2	1.4	**10.4**
IT & comms	**24.0**	1.7	4.6	5.4	6.5	4.8	**23.0**	3.0	3.5	3.0	2.7	2.3	**14.5**
Total transmission IT	**42.0**	3.3	9.6	7.8	10.4	8.9	**40.0**	5.7	5.5	5.1	4.9	3.7	**24.9**

Source: TasNetworks Transmission Revenue and Distribution Regulatory Proposal, 2019 - 2024

The Transmission Revenue and Distribution Proposal includes updated financial information concerning the contingent projects, plus an additional fifth project, North West 220kV redevelopment, with an estimated cost of $80 million.

The total estimated cost of the five contingent projects is now $938 million, and TasNetworks' share of the cost of a second interconnector has already increased by nearly $100 million, from $458 million to $550 million.

The capex value of contingent projects represents close to 60% of TasNetworks' transmission RAB projected as at June 2024 of $1,626 billion, and, assuming they were all incorporated into the RAB, could conceivably increase TasNetworks' transmission revenues and charges by a similar percentage, that is around $90 million per year, based on projected smoothed transmission revenue requirements of around $154 million per year.[19]

It is the TSBC's understanding that all five contingent projects are driven primarily by generation development. The TSBC therefore expects that the RIT-T process will identify the relevant beneficiaries and allocate costs accordingly.

The first of the contingent projects listed in the Transmission Revenue and Distribution Proposal, involving an estimated capital cost of $1.1 billion, with 50% or $550 million to be borne by TasNetworks (with an annual operating cost of $8.35 million, assuming similar cost sharing outcome), is a second Bass Strait interconnector.

The TSBC notes the reference in the Transmission Revenue and Distribution Proposal to the April 2017 study by Dr John Tamblyn[20] into the feasibility of a second interconnector. The report recommends at page 72):

> *… the Tasmanian Government develop a detailed business case for a second Tasmanian interconnector when ongoing monitoring establishes that one or more of the following preconditions has been met:*
>
> 1. *The Australian Energy Market Operator, in consultation with Hydro Tasmania and TasNetworks, concludes in a future National Transmission Network Development Plan that a second interconnector would produce significant positive net market benefits under most plausible scenarios.*
> 2. *Additional interconnection is approved for construction between South Australia and the eastern states.*
> 3. *A material reduction occurs in Tasmanian electricity demand.*

TasNetworks' suggest at page 106 of the Transmission Revenue and Distribution Proposal that:

> *The proposed trigger event for the AER's assessment of this project as a regulated transmission service would be:*
> *1(a) Successful completion of a RIT-T; or*
> *1(b) A decision by a government, governments(s) or regulatory body that results in a requirement for a second Bass Strait interconnector.*

[19] TasNetworks Transmission Revenue and Distribution Regulatory Proposal, 2019 – 2024, p. 187.
[20] Feasibility of a second Tasmanian Interconnector, Final study, Dr John Tamblyn, April 2017

2. *TasNetworks Board approval to proceed with the project subject to the AER amending the revenue determination pursuant to the Rules.*

The TSBC notes with concern the difference between Dr Tamblyn's pre-conditions and the proposed trigger events, on the basis that trigger event 1(b) could be subject to political whim, rather demonstration of genuine benefits to consumers.

ABC news reported on 24th November 2017 that a $20 million business case study into a second Bass Strait electricity cable is to be jointly funded by the Federal and State governments and is to look at the route, capacity, cost and timeframe to build a second cable connecting Tasmania to the mainland. The TSBC understands that considerable resources, including those provided by TasNetworks, have already been allocated to the task.

The expenditure included in TasNetworks' Regulatory and Revenue proposal is $550 million, which would result in a 17% increase in TasNetworks' Regulatory Asset Base, with resulting flow on implications for return on and return of capital, plus annual operating costs.

The resulting increase in network revenue would translate to an annual cost burden in the order of $45 million per year.

The benefits would be largely invisible to consumers, but the impact on electricity prices would not be. The TSBC therefore requests that information concerning the impact on prices should be made public and become part of the public discussion around the merits or otherwise of a second interconnector.

That information would include:

- Updating figures 9, 10, 15.4 and 15.5 in the Transmission Revenue and Distribution Proposal document (pages 19, 20, 189 and 190) to include the projected impact of including contingent project 1, based on a 50% cost sharing arrangement;
- Updating figures 9, 10, 15.4 and 15.5 in the Transmission Revenue and Distribution Proposal document (pages 19, 20, 189 and 190) to include the projected impact of all contingent projects;
- In addition to the average price impacts as presented, identifying the cost impact (network charges) to small business customers; and
- Extending the information presented as discussed above to any regulatory periods where capital expenditure related to the contingent projects will be incurred.

4.3 Distribution Capex

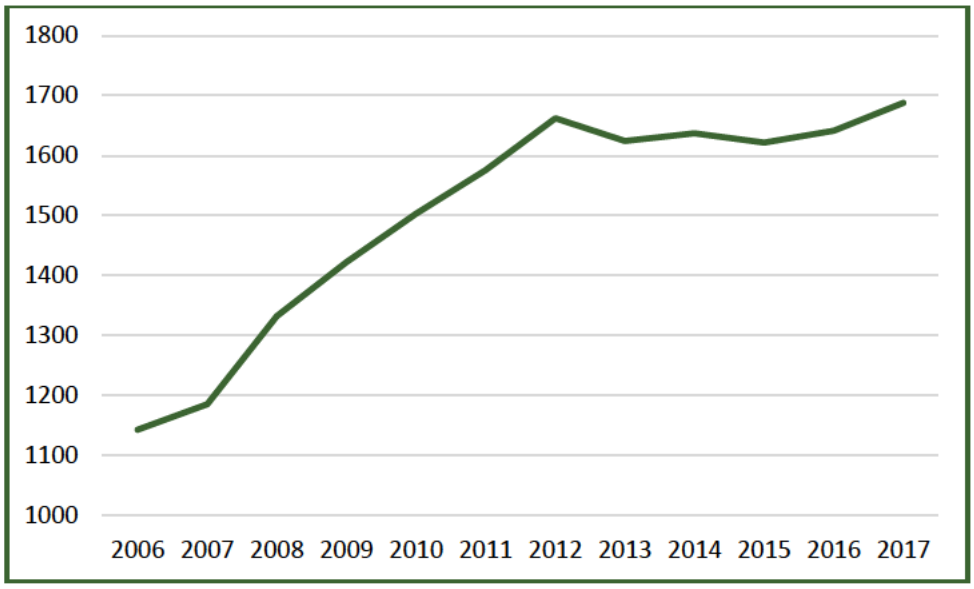
In this section we discuss the TasNetworks capex forecasts for its distribution network, commencing with some general observations, before turning to some specific parts of the proposal.

4.3.1 General observations

A noted in Section 4.1 above, increases in the value of network RABs has contributed materially to electricity price increases over the period 2004 to the present.

In the case of TasNetworks and its predecessor, Aurora Energy Networks, the increase in the RAB for distribution assets over the period 2006 ($1.143 billion) to 2017 ($1,688 billion) amounted to $545 million, as shown in **Figure 6** below:

Figure 6: Distribution assets RAB ($000 June 17)



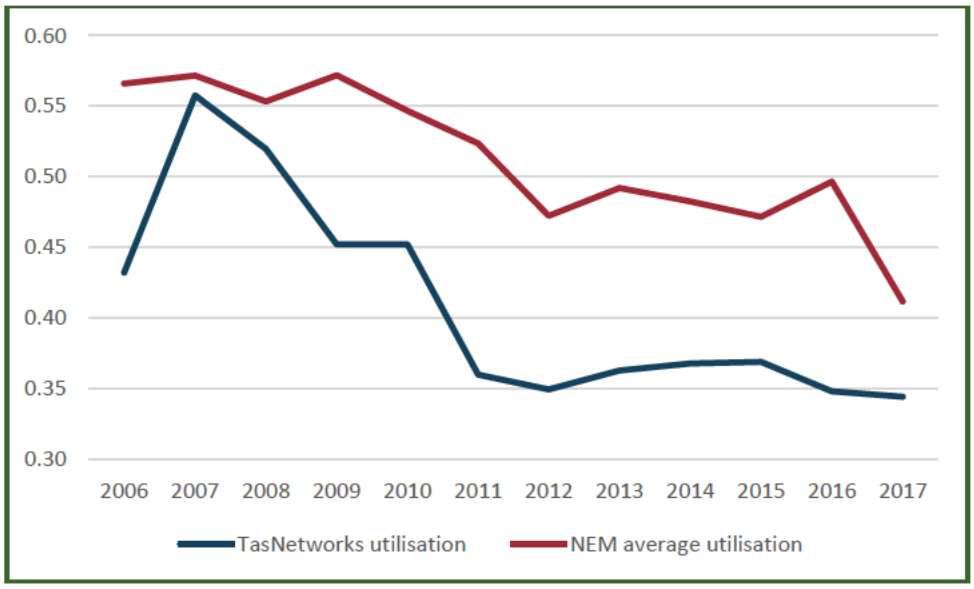
Source: Goanna Energy Consulting from AER RIN data

Over that period, total demand was relatively flat, as noted at **Figure 3** above.

Asset utilisation across TasNetworks' distribution assets has therefore fallen considerably in ten years, from 56% in 2007 to 34% in 2017, and has fallen at a greater rate than other networks in the NEM, as shown in

Figure 7 below.

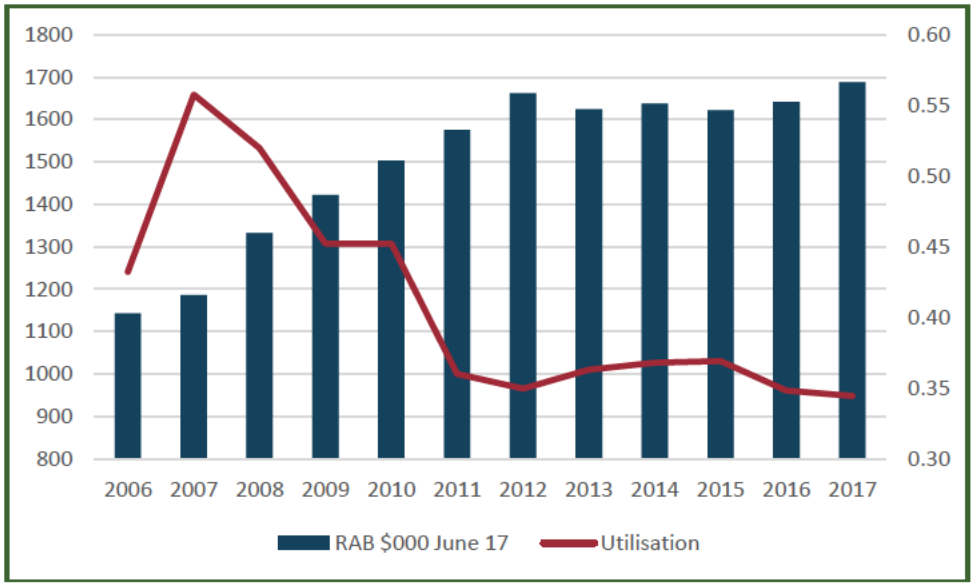
Figure 7: Distribution assets - utilisation



Source: Goanna Energy Consulting from AER RIN data

TasNetworks' RAB value of distribution assets compared to utilisation rate is shown in **Figure 8** below.

Figure 8: Distribution assets - RAB v utilisation



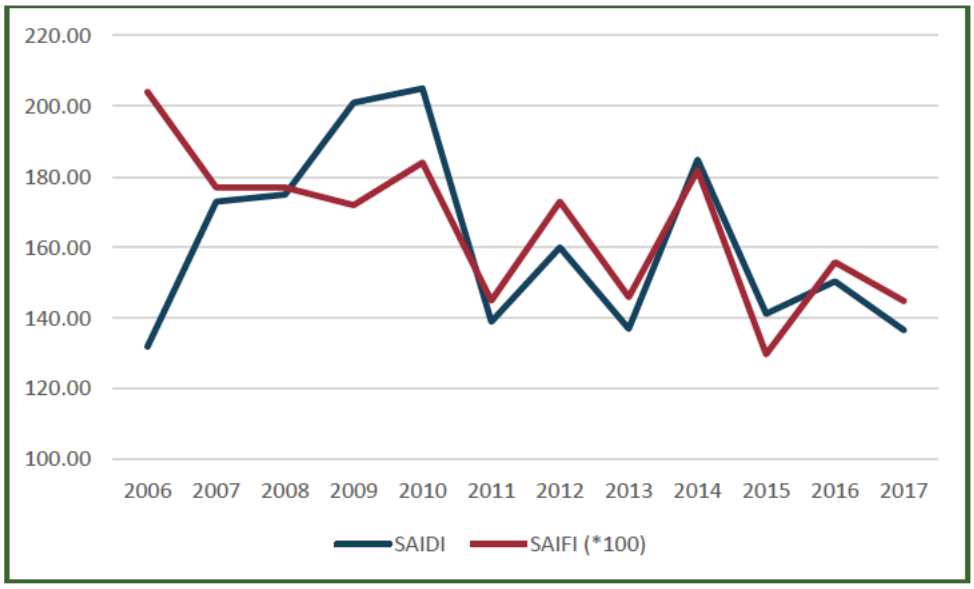
Source: Goanna Energy Consulting from AER RIN data

The TSBC contends that, similar to transmission assets, there has been a massive over investment in distribution assets, between the period 2009 to 2012, with no corresponding increase in service experienced by electricity consumers. Total demand until 2008 was increasing, but declined and then flattened from that point.

Distribution network performance for the period 2006 to 2017 improved slightly, as can be seen in

Figure 9 but that improvement does not reflect the corresponding increase in asset values.

Figure 9: TasNetworks distribution asset performance



Source: Goanna Energy Consulting from AER RIN data

It is with considerable concern therefore that the TSBC notes a further round of large increases in distribution capital expenditure, with a total spend of $738.8 million requested over the five years of the 2019-2024 Regulatory Proposal, compared to actual and forecast expenditure for the preceding five years, 2014-15 to 20218-19, of $569.2 million, an increase of $169.6 million when forecast demand is flat.

The capital expenditure profile for TasNetworks' distribution assets is represented in

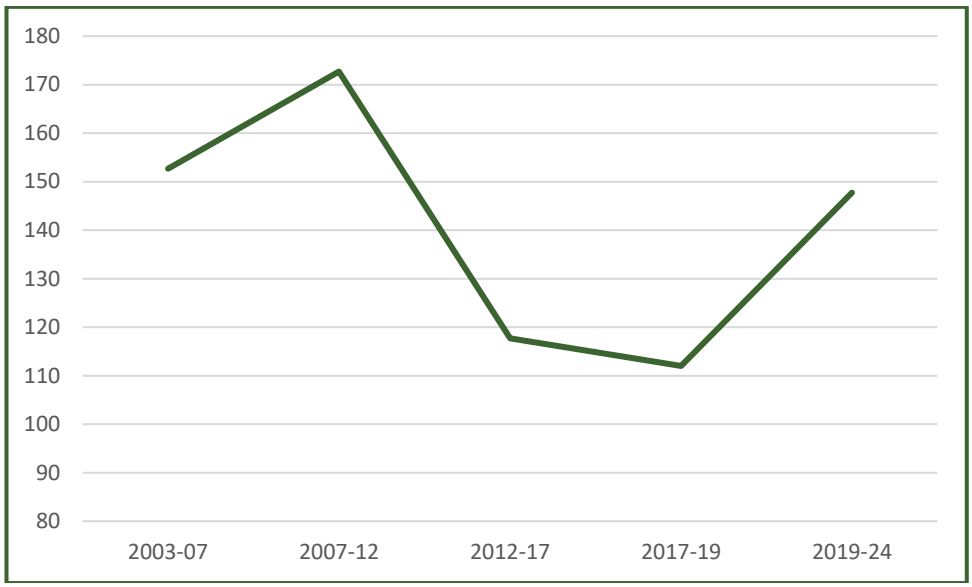
Figure 10 below.

The TSBC can see no justification for the scale of the proposed 2019-24 distribution capital expenditure program. At an average of $160.8 million per year, that level of expenditure is $44.1 million per year above the average annual depreciation allowance, on an already over-inflated RAB. An efficient level of asset replacement would be expected to be no more than the allowed depreciation.

The value of the distribution RAB is projected to increase by $459 million from $1.756 billion to $2.215 billion (nominal dollars) when demand is expected to be flat.

Electricity consumers will therefore face an increase in network charges as a result of the costs of return on and return of the additional RAB value, in the absence of offsetting reductions in either operating expense or the allowed rate of return.

Figure 10: Average distribution capex ($m 2019)



Source: Goanna Energy Consulting from AER RIN data

4.4 Comments on Elements of Proposed Distribution Capex

In this section, we comment on some specific elements of the distribution capex forecasts, namely renewal capex and IT.

4.4.1 Renewal capex

Against the background of the significant increase in the distribution RAB over the period 2009 to 2013, the TSBC questions the need for a further round of increased renewal (replacement) expenditure over the 2019-24 period. The requested spend over that period is $463 million, compared to the previous five year period spend of $302.1 million, an increase of 53%.

TasNetworks suggest the increase is driven by the need to manage safety risks, including expenditure directed to pole staking and vegetation management.

The need for significant capital expenditure in vegetation management is of concern given that previous regulatory determinations have included expenditure to upgrade vegetation management practices and move from a "trimming" regime to a strategically managed "cutting" regime, involving significant up front expenditure in order to reduce annual maintenance costs[21].
Consumers should not be expected to pay more than once for the transition from ad hoc to strategically managed maintenance regimes.

Given the degree of over investment already evident in the distribution asset base, the TSBC does not believe the increase in replacement capex as proposed can be justified, and expects the AER to significantly reduce the allowed expenditure.

[21] For example, https://www.aer.gov.au/system/files/AE038%20-%20Management%20Plan%202011%20-%20Vegetation%20Management.pdf.

4.4.2 Information technology

As noted at section n.3.2, the TSBC considers it is appropriate to consider investments in network control, asset management systems, IT and communications as part of a broader classification of data management and information systems.

For the distribution business, related capital expenditure is as shown below in **Table 3** for the current and forthcoming regulatory periods.

The TSBC notes that distribution IT capital expenditure proposed for 2019-24, at $125.9 million, has increased by $15.4 million, from $110.3 million in the previous regulatory period, an increase of 14%.

IT and comms expenditure is proposed to increase by 32% from an already high $78.5 million.

The TSBC notes a previous reference to IT expenditure in Aurora Energy's Regulatory Proposal 2012–2017. At page 121:

> *"Aurora had developed a comprehensive schedule of projects based on business requirements derived from the Aurora IT Strategy 2009 – 2012 and the Marchment Hill IT Strategy Review (Marchment Hill Review). Built from the "bottom-up", this "organic" program of work, comprising 130 plus projects, was analysed and reviewed by external consultants, paying specific attention to the impact on Aurora's enterprise architecture. Enterprise Architects Pty Ltd (Enterprise Architects) was engaged by Aurora to perform this architectural analysis and to develop its enterprise architecture based IT strategy for Aurora's distribution business.*
>
> *…….. A total of $46.3 million ($2009-10 excluding escalations and overheads) is forecast to be required within this category spread over 10 line items across one overall subcategory; IT and communications. This expenditure profile varies moderately throughout the Regulatory Control Period".*

Aurora and TasNetworks have between them invested in several changes to IT platforms.
The TSBC contends that consumers should not be expected to pay more than once for major changes in strategic direction related to IT infrastructure. Such changes invariably accompany changes in relevant senior executives or occur as a result of mergers, acquisitions or disaggregation.

Judicious selection of IT platforms results in deployment of systems which are capable of being continuously upgraded over an extended period (twenty years), without the disruption and cost which accompanies replacement of entire platforms, particularly tier 1 enterprise systems.

Table 3: Distribution IT capex

Distribution IT capex												
	2014/15	2015/16	2016/17	2017/18	2018/19	**2014-2019**	2019/20	2020/21	2021/22	2022/23	2023/24	**2019-2024**
Network control	3.8	2	0.8	3.3	2	**11.9**	0.8	0.8	0.8	0.5	2.4	**5.3**
AMS	0.7	1.3	2.3	12.9	2.9	**20.1**	3.9	3.5	3.6	3.6	2.2	**16.8**
Operational support	4.5	3.3	3.1	16.2	4.9	**32.0**	4.7	4.3	4.4	4.1	4.6	**22.1**
IT & comms	7	19.4	24.8	15	12.3	**78.5**	20.7	16.4	10.4	27	29.3	**103.8**
Total distribution IT	11.5	22.7	27.9	31.2	17.2	**110.5**	25.4	20.7	14.8	31.1	33.9	**125.9**

Source: TasNetworks Transmission Revenue and Distribution Regulatory Proposal, 2019-2024

4.5 Total Capital Expenditure and RAB

The illustrative transmission and distribution combined RAB values, from 2006 to 2017, ($2017) and from 2018 to 2024 ($2019 nominal), are shown below in **Figure 11**.

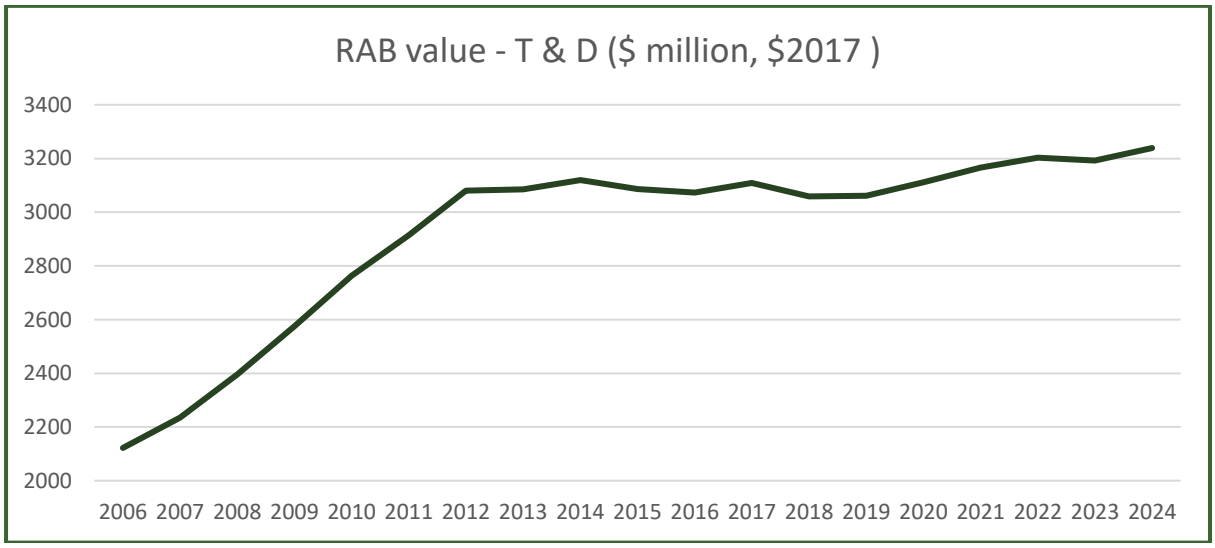
The increase in the value of the combined RABs over that period is over $1.5 billion, or around 75%.

The increase in the value of the RAB is locked in – with return on and return of capital making up around 50% of network charges, which in themselves make up around 50% of consumer electricity bills.

The implications of the scale of that increase to Tasmanian electricity consumers, with demand essentially flat across the entire period, are obvious, and of themselves would contribute, all other elements of electricity prices remaining the same, to a 25% increase in electricity prices.

In the event that one of the contingent projects noted above, the second interconnector, with a cost to TasNetworks currently estimated at $550 million, were to proceed, the value of the total TasNetworks RAB will have doubled since 2006, with demand still flat, and the price implications for electricity consumers even more dramatically negative than they already are.

Figure 11: RAB value - transmission and distribution ($m, 2017)



Note: TasNetworks Regulatory Proposal for 2018-2024, discounted from $2019 to $2017.
Source: AER RIN data to 2017, TasNetworks PTRM 2018 to 2024

4.6 Total IT Expenditure

Total IT expenditure for transmission and distribution combined is expected to be $150.5 million in the current regulatory period, and $150.8 million in the 2019-24 regulatory period, a total of $301.3 million over ten years, as shown in **Table 4** on the following page.

Expenditure on “IT and comms” across the two periods is proposed to be $219.8 million.

Table 4: Transmission and distribution IT capex

Transmission IT capex													
	2009-14	2014/15	2015/16	2016/17	2017/18	2018/19	**2014-2019**	2019/20	2020/21	2021/22	2022/23	2023/24	**2019-2024**
Network control	9.0	0.5	3.4	0.8	1.9	2.4	**9.0**	0.9	0.5	0.7	0.7	0.4	**3.2**
AMS	9.0	1.1	1.6	1.6	2.0	1.7	**8.0**	1.8	1.5	1.4	1.5	1.0	**7.2**
Operational support	**18.0**	1.6	5.0	2.4	3.9	4.1	**17.0**	2.7	2.0	2.1	2.2	1.4	**10.4**
IT & comms	**24.0**	1.7	4.6	5.4	6.5	4.8	**23.0**	3.0	3.5	3.0	2.7	2.3	**14.5**
Total transmission IT	**42.0**	3.3	9.6	7.8	10.4	8.9	**40.0**	5.7	5.5	5.1	4.9	3.7	**24.9**
Distribution IT capex													
		2014/15	2015/16	2016/17	2017/18	2018/19	**2014-2019**	2019/20	2020/21	2021/22	2022/23	2023/24	**2019-2024**
Network control		3.8	2	0.8	3.3	2	**11.9**	0.8	0.8	0.8	0.5	2.4	**5.3**
AMS		0.7	1.3	2.3	12.9	2.9	**20.1**	3.9	3.5	3.6	3.6	2.2	**16.8**
Operational support		4.5	3.3	3.1	16.2	4.9	**32.0**	4.7	4.3	4.4	4.1	4.6	**22.1**
IT & comms		7	19.4	24.8	15	12.3	**78.5**	20.7	16.4	10.4	27	29.3	**103.8**
Total distribution IT		11.5	22.7	27.9	31.2	17.2	**110.5**	25.4	20.7	14.8	31.1	33.9	**125.9**
Total TansNetworks IT							**150.5**						**150.8**

Source: TasNetworks Transmission Revenue and Distribution Regulatory Proposal, 2019-2024

For asset management systems (AMS), expenditure of $28.1 million from 2014-19 will be followed by a further $24 million from 2019-24.

The TSBC contends that it is not possible to justify the level of expenditure proposed at more $1,000 per customer over ten years, given TasNetworks' very small customer base of around 250,000, and urges the AER to scrutinise the proposed expenditure with the assistance of experts competent in the field, in order to determine an appropriate amount for consumers to pay on the basis that systems are fit for purpose and have not been the subject of poor management decisions, for which consumers should not bear the costs.

5

OPEX

Goanna Energy Consulting Pty Ltd

Tasmanian Small Business Council
Uniting Small Business

5 Operating & Maintenance Expenditure (Opex)

We comment below on TasNetworks' operating and maintenance expenditure (opex) forecasts.

5.1 Overview

TasNetworks is proposing a combined total opex of $593 million ($ 2019) for its forthcoming regulatory period (compared to $595.6 million expected in the current regulatory periods). This comprises $187.1 million for its transmission network (compared to $188.5 million expected in the current regulatory period) and $405.9 million for its distribution network (compared to $407.1 million expected in the current regulatory period). The change from the current regulatory period represents a modest real reduction of $2.6 million (-0.4 per cent) for its combined network, made up of $1.4 million (-0.7 per cent) for transmission and $1.2 million (-0.3 per cent) for distribution.

Whilst the modest reductions are welcome and demonstrate an ongoing commitment by TasNetworks to reduce its opex, in our view, they are not as challenging as they could be. Furthermore, it is apparent from Figures 9.3 (transmission) and 9.5 (distribution) in TasNetworks' Proposal that, following a period of useful reductions in opex, TasNetworks has now entered a phase of being satisfied with quite modest future reductions.

The TSBC remains concerned at the substantial size of TasNetworks' opex proposals for both transmission and distribution and the impact they will have on network prices over the forthcoming regulatory period. We note TasNetworks' comments that their proposal contains no ambits claim and that they are the lowest expenditure consistent with the ongoing reliability and security of its networks, but have remaining doubts about the veracity of these claims. We believe it is imperative that the AER robustly and thoroughly test TasNetworks' opex proposals before approving them.

TasNetworks' opex for both transmission and distribution seems to have reached a plateau, notwithstanding some further modest falls forecast over the next regulatory period. On a *prima facie* basis alone, this is of concern to the TSBC as it indicates that TasNetworks appears to no longer be pursuing opex efficiencies to the same extent. Their hunger for efficiency seems to have abated.

At a general level, we remain concerned that certain aspects of the current regulatory regime and the way the AER administers it are not well placed to deliver the most efficient and prudent opex outcomes for network businesses such as TasNetworks. This is a matter of significant concern as it leads to network prices that are higher than they should be, bearing in mind also the significant concern in the Tasmanian community about rising electricity prices. We elaborate on this and comment further below on specific aspects of the TasNetworks' opex proposals.

5.2 Opex Forecasting Approach

The AER's preferred approach to forecasting opex is the so-called 'base-step-trend' method. TasNetworks has applied this method to its opex forecasts for both transmission and distribution. We have concerns with this approach and its ability to deliver the lowest sustainable level of opex. One important concern is that the approach is meant to reveal TasNetworks' efficient level of opex through the choice of a base year that represents this. However, this relies on the initial level of opex chosen being efficient and it is not clear to us that this is the case. All that can be said in favour of the approach is that it contains some incentives, along with mechanisms such as the Efficiency

Benefits Sharing Scheme (EBSS), for TasNetworks to reduce its opex to a more efficient level over time and for consumers to share in the benefits of this.

In this regards, we note with some concern that the further reductions in TasNetworks' opex over the next regulatory period, both for transmission and distribution, are due principally to internal decisions by TasNetworks to include efficiencies or forego expenditure that have nothing to do with the AER's approach. It can be seen from Figures 9.3 (transmission) and 9.5 (distribution) of the Proposal that if TasNetworks had not included these additional efficiencies and strictly applied the AER methodology, then its transmission opex forecast would have been $4.5 million (or 2.5 per cent) higher and its distribution opex forecast $19 million (or 4.7 per cent) higher.

We comment elsewhere in this submission on certain other aspects of the application of the method to TasNetworks' proposals.

5.3 Transmission Opex

We comment below on the key aspects of TasNetworks' transmission opex forecasts.

5.3.1 Internally imposed efficiency factor

TasNetworks has imposed an additional real efficiency factor in its transmission opex of 0.5 per cent in 2020-21, followed by 1 per cent in the following three years. Its Proposal says that this is "in response to customer concerns regarding affordability." Whilst we welcome this as a positive contribution to lowering its costs and responding to the concerns of its customers, it is not clear why TasNetworks settled on these numbers, nor why it imposed a lower efficiency factor in 2020-21 and no efficiency factor in 2019-20? We would therefore both urge the AER to closely examine the size and timing of the TasNetworks efficiency factor and TasNetworks to explain the detail behind how it was determined. The impact of the factor in reducing opex is useful but perhaps not as significant as it could be.

5.3.2 Base year costs

We note that TasNetworks previously proposed 2016-17 as an appropriate base year for its transmission opex in its Forecasting Methodology, but is now proposing that 2017-18 be used. It says that this is because 2017-18 falls within the current transmission and distribution determinations, whereas 2016-17 does not, and is the most recent year and therefore best reflects its future recurrent opex. However, we also note that actual transmission opex for 2017-18 is expected to be $4.4 million higher than the actual outcome for 2016-17 and therefore provides a higher base level of opex for the forecasts. Other things being equal, this would increase transmission opex over the next regulatory period by $22 million.

Earlier on we expressed our concerns about the choice of a base year in setting an efficient level of opex and TasNetworks' decision to change its base year highlights the types of impacts that can occur through the choice of a base year. The AER should closely examine TasNetworks' choice, its reasoning and its impacts on the level of forecast opex.

TasNetworks has outlined the following reasons for its choice of 2017-18 (our response is in italics):

- It is the most recent actual reported operating expenditure that will be available at the time of the AER's final decision.
    - *Whilst this is true, this alone should not determine the year chosen.*

- It is representative of its underlying operating conditions.
    - *This is not to say that 2016-17 is not also representative and TasNetworks initially chose this year.*
- Its selection is consistent with the design of the incentive mechanisms, which provides a constant incentive to deliver efficiency savings.
    - *Presumably 2016-17 also does this and from a lower base.*

We note that TasNetworks is not proposing any non-recurrent costs, zero-based forecasts or adjustments in the forthcoming regulatory period. Hence, these do not impact its transmission opex forecasts.

5.3.3 Step changes

TasNetworks is not proposing any step changes in its opex forecasts for transmission, but appears to have left open the door to do so. Its Proposal mentions the need to undertake a Regulatory Investment Test (RIT-T) for its contingent transmission projects. We believe that TasNetworks should be more transparent and indicate what this might cost and that opex should only increase to the extent that Tasmanian electricity consumers will benefit from such projects.[22]

5.3.4 Output growth

TasNetworks has applied the AER's econometric model to determine this factor with a modest $0.79 million impact on transmission opex over the term of the next regulatory period. In light of the relatively small impact we do not comment further.

5.3.5 Real price escalators

TasNetworks has proposed real price escalators of CPI for non-labour and slightly above CPI for labour for both transmission capex and opex. They have a relatively modest $3.5 million (real) impact on total business opex over the next regulatory period, but we expect that the AER will carefully scrutinise the reasons behind the increases.

5.3.6 Productivity growth

We note that any productivity growth included to reflect 'catch up' to the efficiency frontier will only become a consideration if the AER adjusts the base year chosen by TasNetworks, whilst the impact of economies of scale due to output growth is already captured in the growth factor discussed above. TasNetworks' efficiency improvement targets were discussed earlier.

5.3.7 Other assumptions

TasNetworks has included a number of additional assumption in is opex forecasts, namely, that its base year opex is efficient, that the historic relationship between asset growth and operating expenditure will continue, that its provisions account holds static and that forecast productivity improvements and resulting cost efficiencies are achieved. It notes that if these do not eventuate there could be a material impact on opex, by which we read TasNetworks to mean that it could increase above its forecasts (although the opposite is also theoretically possible, though far less likely based on historical experience). Any such increases would be of concern to the TSBC and TasNetworks should be prepared to inform and consult with consumers if significant increases occur.

[22] The Proposal also mentions the System Security Market Frameworks Review and the Inertia Rule change and similar reasoning applies to these.

In relation to the continuation of the historic relationship between asset growth and operating expenditure, we note that the TasNetworks Proposal is anticipating significant changes in technology and consumer preferences over the next regulatory period and beyond. However, it is not clear from the Proposal how this could impact on this assumption. Given what TasNetworks is anticipating, it should explain how this assumption will be impacted and clarify some of the uncertainty.

Given that TasNetworks has chosen to impose an efficiency factor in its opex forecasts, which we assume to be based on robust analysis, this should reduce forecast productivity improvements and cost efficiencies as a source of uncertainty in its opex forecasts.

We commented on the base year assumption earlier in this section.

5.4 Distribution Opex

We note that distribution opex increased substantially in 2016-17 by $24 million, or 31 per cent, compared to the previous year. TasNetworks' Proposal says that:

> *"Our increased expenditure has been necessary to address emerging risks on our distribution network, such as the bushfire risks posed by vegetation, especially in light of experiences interstate." (p.149)*

We recognise that bushfires can present a significant risk not only to the network but also to life and property, and support the need to ensure that these risks are well managed. Nevertheless, we believe that TasNetworks needs to provide further supporting information to the AER and its customers on why such a significant increase in opex was justified. Moreover, it is of concern to the TSBC that, whilst Maintenance and Vegetation Management opex has fallen since 2016-17, it remains more than $10 million higher than its historical trend level over the entire forthcoming regulatory period.

We welcome that TasNetworks' has expressed its belief that distribution operating expenditure can return to lower levels. We note its comment that it is striving to deliver the required efficiency improvements over both the course of the remainder of the current and the forthcoming regulatory period, and also note its view that it will take time to further reduce opex without compromising network safety and performance. However, it is noteworthy that there is no evidence of further reductions over the entire next regulatory period, with Maintenance and Vegetation Management opex remaining at a level substantially above its historical trend. TasNetworks needs to explain this outcome more fully so that we can understand the reasons behind it and show more evidence that its belief of lower future opex is actually being realised.

Whilst TasNetworks has stated that the increase in 2016-17 was at the expense of its shareholder, not its customers, this is not the case for the ongoing higher level of this category of opex, which will be paid for by customers through DUoS charges. In our view, TasNetworks needs to show a greater level of transparency and accountability to its customers on this matter.

We comment below on the key aspects of TasNetworks' distribution opex forecasts.

5.4.1 Base year costs

TasNetworks has proposed that 2017-18 should be used as the base year for its distribution opex forecasts. They argue that (our response is in italics below each point):

- It is the most recent year available for this determination.
  - *This is true but it is not the only factor that should be taken into account in setting a base year. In our view, it is more important for the base year to reflect the lowest possible starting point for the opex forecasts.*
- It will be efficient as it is lower than its actual expenditure for 2016-17.
  - *We note that opex in 2016-17 was, however, still very high. On this basis, 2014-15 or 2015-16 would set a more efficient base for TasNetworks' distribution opex. In fact, 2017-18 by TasNetworks' own admission still reflects the impact of the higher opex costs incurred in 2016-17, which TasNetworks has said will be reduced over time. On this basis alone, the distribution opex incurred for 2017-18 is not efficient.*
- It is consistent with the design of the incentive mechanisms, which provides a constant incentive to deliver efficiency savings.
  - *The same can be said for our alternative choices for the base year, such as 2014-15 or 2015-16.*
- It is representative of their underlying operating conditions for the current and forthcoming regulatory periods.
  - *The same can be said for our alternative choices for the base year, such as 2014-15 or 2015-16.*
- It is important that the same base year should be chosen for transmission and distribution, as resources in the merged business are able to migrate between the two networks in response to particular needs and to drive efficient allocation of resources. If a different base year were chosen for each network, the allocation of costs would not be considered from the same starting point and the resulting total operating expenditure allowance may be materially higher or lower than the total operating expenditure requirements of the merged business.
  - *We do not concur with this point. Whilst it might be desirable to use the same year for both transmission and distribution, we do not believe that this is essential. We do not agree with the TasNetworks' Proposal that distortions that could result from the choice of different years for each of its networks will be significant. In fact, the choice of a common base year that involved one side of the business having a higher than necessary level of opex is far more likely to distort resource choices and would have the added disadvantage of imposing higher costs on consumers. This appears to be the case for TasNetworks' preferred choice of 2017-18, especially as distribution opex in 2016-17 was still materially higher than trend.*

We therefore have concerns with TasNetworks' proposed use of 2017-18 as a base year for its opex forecasts and would prefer that 2014-15 be used or as a less preferred alternative, 2015-16.[23] We

[23] TasNetworks' Proposal says that they do not regard the lower level of opex expenditure in 2014-15 to be sustainable, arguing that it would expose customers and the broader community to unacceptable reliability

note that this would provide a base year for distribution opex some $7-12 million lower than 2017-18.

We note that TasNetworks is not proposing any non-recurrent or other operating costs in the forthcoming regulatory period. Hence, these do not impact its distribution opex forecasts.

However, TasNetworks is proposing to deduct three zero-based items from its opex amounting to $7 million per annum in each year of the next regulatory period. These are its Guaranteed Service Level (GSL) allowance ($2.9 million per annum), the Electrical Safety levy ($4 million per annum) and its NEM levy ($0.6 million per annum). We note that these are essentially pass through amounts, which we strongly urge should reflect only efficient and prudent costs, although the latter two are imposed externally to this Determination.

5.4.2 Step changes

TasNetworks has forecast four step changes for its distribution opex in the next regulatory period totalling $2.6 million per annum in each year of the period. Our comments are as follows:

- We do not support the inclusion of $1.2 million per annum for additional ring fencing obligations on the basis that TasNetworks has proposed to absorb the costs of some other obligations (amounting to 50 per cent of these costs overall) and it is not immediately obvious why ring fencing is treated differently?
- It is proposing $1 million per annum for increased expenditure on voltage management due to additional distributed generation. It is not clear why this is not being charged to the distributed generation causing these costs?
- TasNetworks have identified a demand management project that will enable it to defer the replacement of an aging transformer. This step change will increase its operating expenditure by a small amount ($0.2 million per annum), but they say that the net effect of this demand management initiative is to deliver savings to customers. We support such initiatives and welcome TasNetworks' inclusion of it on the basis of overall savings. We would welcome TasNetworks proposing other such initiatives if possible.

5.4.3 Output growth

TasNetworks is forecasting annual output growth of between 0.34 to 0.39 per cent over each year of the next regulatory period, with a cumulative cost impact of $4 million. This approach is based on forecast growth in ratcheted maximum demand, customer numbers and circuit length. We note the relatively modest growth rate although the cumulative impact on opex is material and the robustness of the output growth forecasts and their costs should be established by the AER.

5.4.4 Real price escalators

TasNetworks has proposed real price escalators of CPI for non-labour and slightly above CPI for labour for both distribution capex and opex. We commented on this in the transmission opex section above (Section 5.3.5).

and safety risks. However, they do not elaborate on why they draw this conclusion and do not comment on whether they consider this would also be the case for the somewhat higher opex expended in 2015-16.

5.4.5 Productivity growth

TasNetworks is proposing to apply the same internally imposed efficiency factor to its distribution opex as for its transmission opex, that is, 0.5 per cent in 2020-21 followed by 1.0 per cent per annum in each of the following three years. Our comments in relation to this and its productivity growth forecasts for transmission opex made in Section 5.3.6 therefore also apply to its distribution opex.

5.4.6 Other assumptions

TasNetworks uses essentially that same other assumptions for distribution as it does for transmission. We addressed our issues on these in relation to transmission (Section 5.3.7) and the same points apply in relation to the distribution opex forecasts.

6

WACC

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6 Weighted Average Cost of Capital (WACC)

In this section we respond to TasNetworks' Regulatory Proposal for transmission and distribution on the rate of return, as measured by the Weighted Average Cost of Capital (WACC). We discuss the AER's Rate of Return Guideline, the Allowed Rate of Return Objective, the WACC parameters equity beta, market risk premium, cost of debt and *gamma*, and the overall WACC outcome.

6.1 The Rate of Return Guideline

In July 2017 the Australian Energy Regulator (AER) initiated a review of the Rate of Return Guideline and introduced new process elements for the conduct of the review; one being the formation of a Consumer Reference Group (CRG), on which the TSBC is represented.

In deciding to form the CRG the AER noted "we recognize that the decisions we make and the actions we take in performing our regulatory roles and other activities affect a wide range of individuals, businesses and organisations."[24] The Review is occurring in an environment of increasing energy prices that could be described as an 'affordability crisis.' The impact has been particularly severe on low-income households, young families and energy intensive businesses including agriculture, manufacturing and catering. Increasing network charges have been a significant contributor to these unsustainable prices.

The AER's latest timetable indicates that the revised guideline will be published on 17th December 2018.

Concurrently, the COAG Energy Council in February 2018 released draft legislation to replace the Rate of Return Guideline with a Binding Instrument. The legislation foreshadows the repeal of the current Rules that guide the AER in making the Guideline, however the TSBC expects that the Binding Rate of Return Instrument will closely reflect the revised Rate of Return Guideline.

The TSBC notes that TasNetworks has applied for and been granted an amendment to the NER such that the current, December 2013, Rate of Return Guideline will apply to the determination applicable to its Transmission Revenue and Distribution Regulatory proposal. The TSBC understands however that the binding Rate of Return Legislation[25], currently in draft form, will apply.

The TSBC is of the view that it is likely that application of the Binding Rate of Return Instrument would result in a lower Rate of Return (WACC) than that calculated by TasNetworks (5.89% for both transmission and distribution).

6.2 The Allowed Rate of Return Objective (ARORO)

The allowed rate of return objective is:

> *"…that the rate of return for a [regulated network] is to be commensurate with the efficient financing costs of a benchmark efficient entity with a similar degree of risk*

[24] AER, *Position Paper*, November 2017, p. 30.
[25] http://www.coagenergycouncil.gov.au/sites/prod.energycouncil/files/publications/documents/Draft%20legislation%20to%20create%20a%20binding%20rate%20of%20return%20instrument.pdf

> *as that which applies to the [service provider] in respect of the provision of [regulated services].”*[26]

In its Rate of Return Issues Paper (October 2017) the AER indicates at page 10:

> *“A good estimate of the rate of return is necessary to promote efficient prices in the long term interests of consumers. If the rate of return is set too low, the network business may not be able to attract sufficient funds to be able to make the required investments in the network and reliability may decline. Alternatively, if the rate of return of return is set too high, the network business may seek to spend too much and consumers will pay inefficiently high prices.”*[27]

The ARORO seeks to ensure that the returns provided to regulated networks are sufficient to ensure an efficient level of investment, but no more.

The TSBC contends that there are currently no measures in place as part of the existing regulatory framework to test whether or not the ARORO is being achieved. That is, there is no ex poste assessment of the actual rates of return achieved compared to the ex ante allowed rate of return and the actual level of investment which flows from the allowed rate of return.

As a consequence, any errors in regulatory decisions on the allowed rate of return provided to network companies will be locked in, with actual returns (Rate of Return, RoR) actually achieved forming part of the market evidence on which future regulatory determinations are based, thereby perpetuating and reinforcing the errors.

The absence of data for actual returns achieved by regulated networks and the related investment levels appears to both contribute to, and be an effect of, a reliance on the explanatory and predictive power of the AER’s preferred capital pricing theory, using the Capital asset Pricing Model (CAPM). As a result, the AER assumes but does not test whether its regulation of standard control/reference services is effective in constraining sector returns consistent with the ARORO and the relevant revenue and pricing principles.

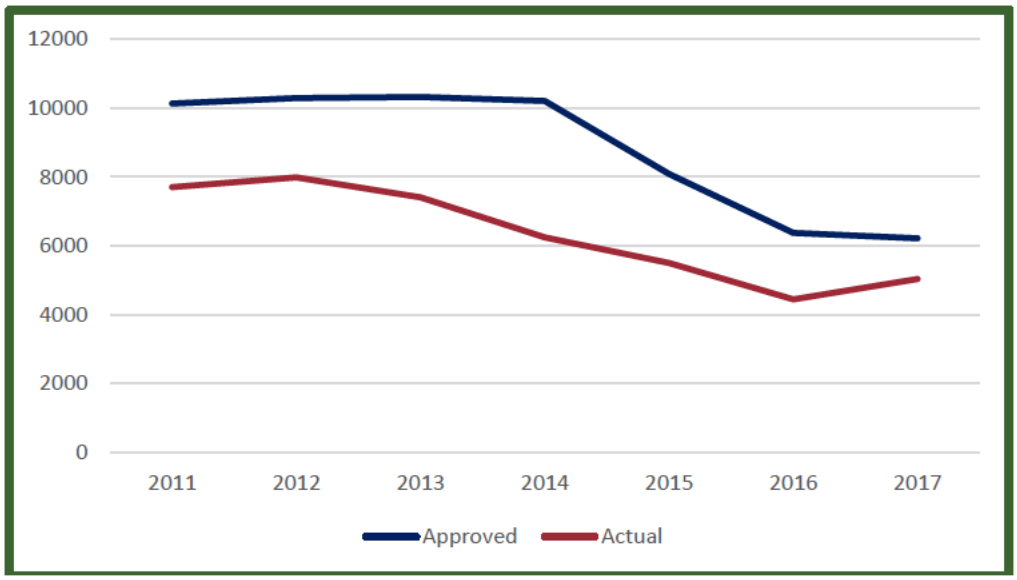
Across the NEM, total capex expenditure has fallen significantly from the high levels experienced from 2011 to 2014 (see **Figure 12**).

While networks generally have reduced augex due to low growth in peak demand (the key driver of augex), the level of repex and IT capex is generally growing. This implies that the current level of RoR is too high and could be reduced.

TasNetworks proposed capital expenditure program demonstrates the general trend (see **Figure 13**).

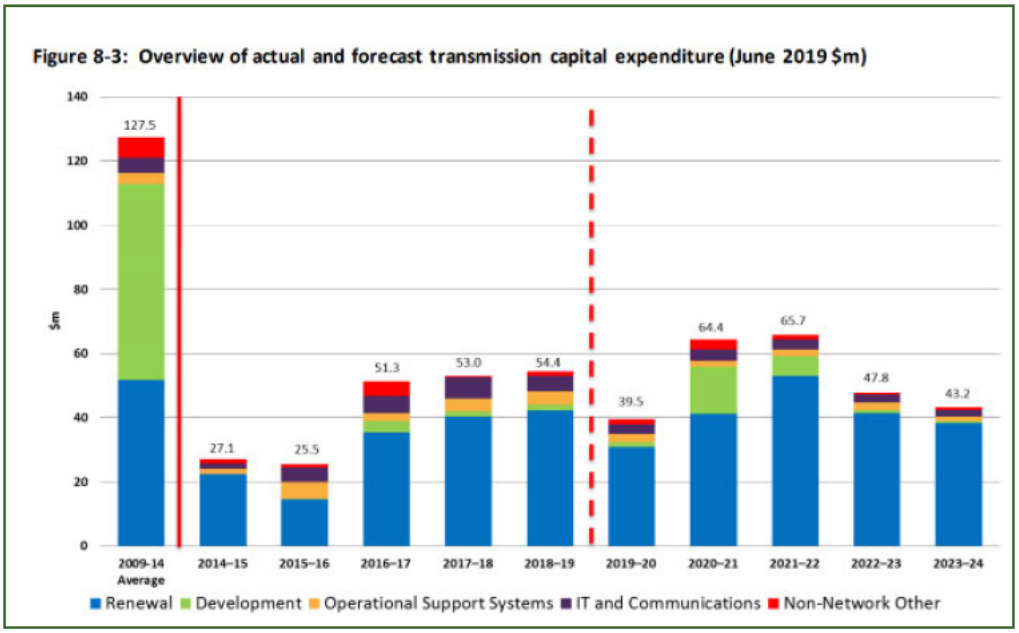
[26] NER, cl. 6.5.2(c) and cl. 6A.6.2(c); NGR, r. 87(3).
[27] AER Rate of Return Issues Paper, October 2017, p. 10.

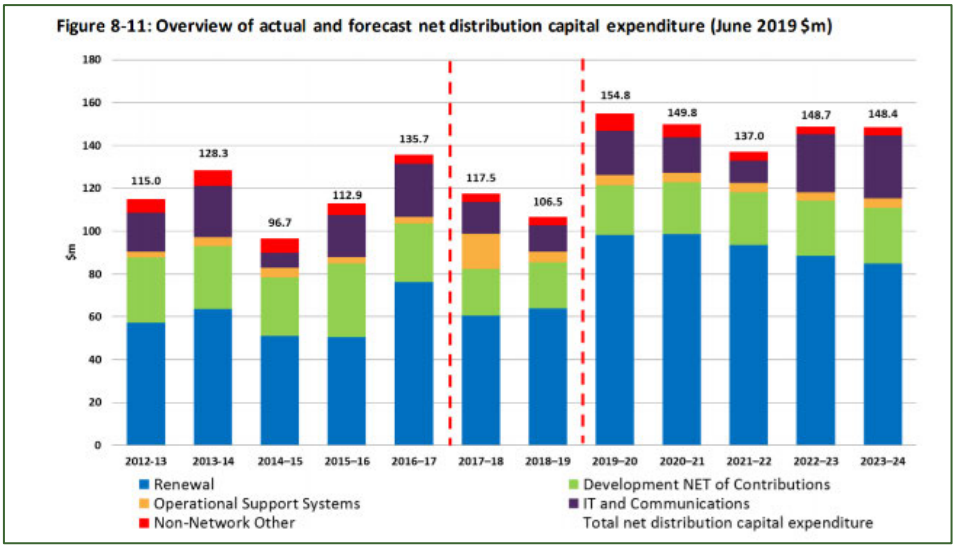
Figure 12: Total NEM capex, 2017 ($m)



Source: Goanna Energy Consulting from AER RIN data

Figure 13: TasNetworks proposed capex, transmission & distribution





Source: TasNetworks Tasmanian Transmission Revenue and Distribution Regulatory Proposal, January 2018

In its November 2017 preliminary report on electricity prices the ACCC noted:

> *"As network operators receive a guaranteed return on their assets, there is an incentive to invest in more assets which can lead to over-investment if the rate of return is set too high. Further, network operators are less likely to seek alternatives to investing in new assets if there are no incentive schemes in place to reduce investment."*[28]

The propensity by network companies to over invest is reflected in the total value of regulated asset bases, as shown in **Figure 14** below.

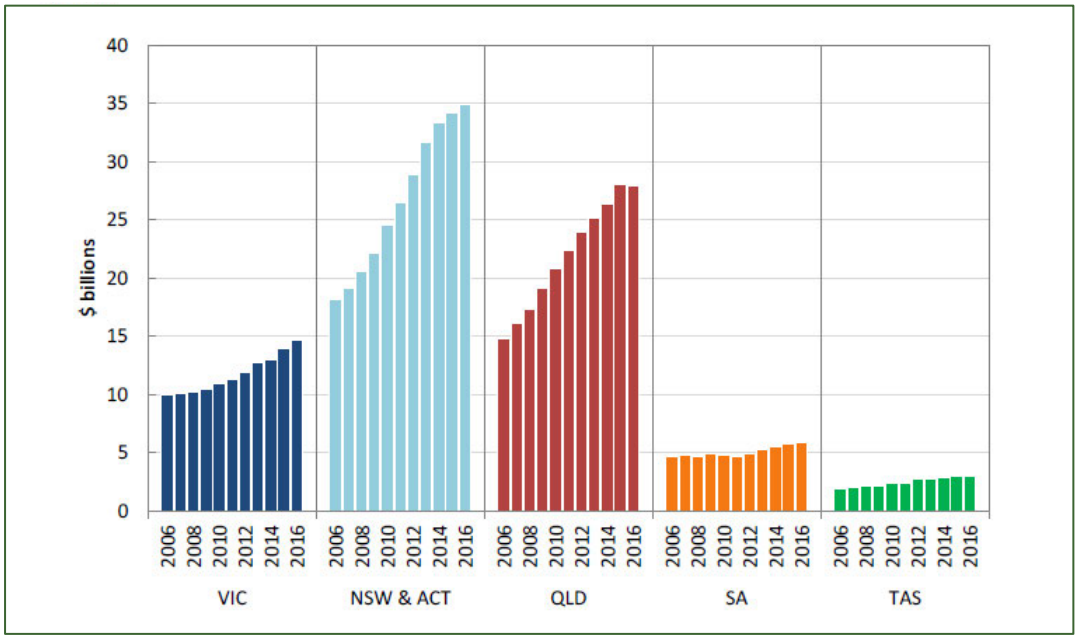
Five years after the adoption of the current ROR guideline, the existence of historically high returns for network companies on the one hand, alongside excess capacity, substantial decreases in consumption of network services and falling industry wide productivity, on the other, is clearly anomalous. This outcome is a result of the regulatory framework in total. The decisions in the present ROR Guideline are a material contributing factor.

Present ROR outcomes – and hence the content of the Guideline itself –are inconsistent with the AROR objective, the National Energy Objectives and the RRPs in the National Energy Laws. While there is variation within the sector, for the typical regulated entity (Benchmark Efficient Financing Entity, BEFE) in the typical year, returns exceed efficient risk-adjusted returns by a substantial margin. Regulated entities as an asset class are therefore generating material excess returns.

This means regulated prices are substantially in excess of efficient prices, taking into account systematic risk. Increases in regulated electricity entity prices constitute around two thirds of total price increases over the last decade. Retail electricity prices have increased by around double the rate of inflation since the current regulatory framework was put in place, as shown in **Figure 15** below.

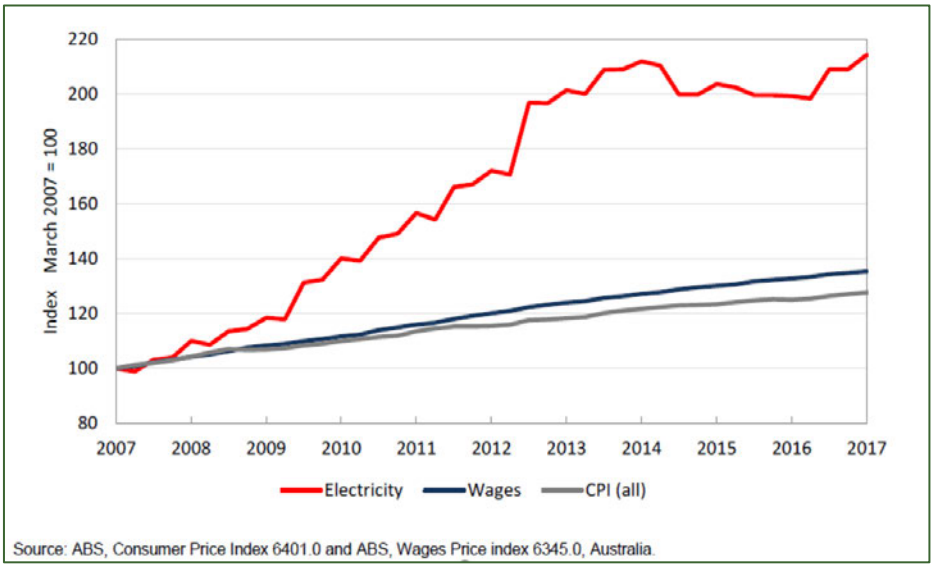
[28] ACCC, *Retail Electricity Inquiry, Preliminary Report*, 13 November 2017, p. 111.

Figure 14: NEM RAB values by State, 2006 to 2016



Source: AER economic benchmarking RIN responses

Figure 15: Retail electricity prices vs CPI & wages, 2007 to 2017



Source: ABS, Consumer Price Index 6401.0 and ABS, Wages Price Index 6345.0, Australia

6.3 CAPM Parameter Values

The allowed rate of return applies to the assets used to provide regulated services. These assets, subject to the regulatory regime and the revenue and pricing principles, provide a relatively stable set of future returns. In determining the rate of return the AER needs to reflect on the extent to which the networks are insulated from economy wide (systematic) risks.

6.3.1 Equity beta

The AER has, in determinations since 2013, relied on estimates of beta from a small number of currently and previously listed firms, giving more weight to this estimate than other suggestions such as international energy networks or other domestic infrastructure firms, in accordance with expert advice.

Given recent sales of these entities, resulting in RAB multiples in the range of 1.3 to 1.6, it is reasonable to assume that the asset risk is higher for the unregulated parts of the business and for the realisation of efficiency improvements than it is for the regulated asset. Adjusting for this beta bias would move the observed AER range from (0.4 to 0.7) to (0.2 to 0.5).

The TSBC suggests the AER should choose a value below the midpoint of this range, commensurate with TasNetworks' low systematic risk exposure, in line with other network businesses.

6.3.2 Market risk premium (MRP)

The data on the Market Risk Premium (MRP) has not fundamentally changed since the introduction of the 2013 ROR Guideline. However, the TSBC is of the view that less weight should be afforded to the Dividend Growth Model, thus favouring an MRP of 5.5 or 6 percent.

6.3.3 Cost of debt

The TSBC supports the continuation of the AER's approach to the transition to the trailing average for return on debt. However we suggest that some adjustments should be made to the process to choose the values for the following reasons:

- Corporate debt is typically raised over shorter periods (and hence lower rates) than the ten year tenor assumed.
- The current approach assumes the efficient business (BEFE) has a BBB+ rating but the estimation is in fact derived from a broad BBB rating.
- Rates actually paid by networks generally, and TasNetworks specifically (due to its status as a State owned entity) are lower than the rate a credit rating of BBB+ would suggest.

The TSBC suggests the AER should calculate a fixed discount factor to reflect these three biases to subtract from the estimate derived from available market data to be applied each year.

6.3.4 Gamma

The TSBC has considered the approach to the utilisation of imputation tax credits that would be expected from an efficient financing structure and concludes that *gamma* (γ) could be close to 1, based on the following:

- An assumption that the utilisation rate of imputation credits (θ) is 100 per cent. That is, TasNetworks is using the most efficient source of finance, that being Australian investors entitled to make use of imputation credits;
- A distribution rate based on what TasNetworks would be expected to distribute based on the value of the RAB, depreciation and any necessary new investment in the RAB. If the value of new and replacement assets is I, and the value of depreciation is D, then a reasonable retention amount on the RAB is

(I –D).

TasNetworks' profit on the RAB will be RAB * WACC. Therefore the retention ratio will be:

*(I – D)/(RAB * WACC)*

Therefore a reasonable payout ratio is:

*(1 – ((I – D)/(RAB * WACC)).*

If that is greater than 1 then it can be assumed that the ratio equals 1, on the basis that any excess payout is unlikely to attract imputation credits, and therefore not affect γ;

If that is < 1 (unlikely given the nature of TasNetworks' assets) then γ would be equal to the payout ratio, assuming a $\Theta = 1$.

The TSBC suggests the AER recognise the inherent inconsistency of observed tax data and make its decision on the basis of the rate that is consistent with efficient costs.

6.4 WACC - Allowed Rate of Return (AROR) Outcome

The TSBC submits that a WACC of 4.76% should be applied for both transmission and distribution assets, on the basis that the systematic (or non-diversifiable) risks borne by investment in either group of assets is the same. The calculation of that outcome, using the parameter values outlined above, compared to TasNetworks calculation for distribution assets, is as follows in **Table 5**. This compares to TasNetworks' calculation 5.89%. Application of this WACC would significantly reduce network charges for all Tasmanian electricity consumers, including small businesses.

Table 5: TSBC's preferred WACC

Component	Debt	Equity
Proportion of capital	60%	40%
	x	x
Cost	5.00	4.40
	=	=
Contribution	3.0	1.76
WACC	4.76	

Source: Goanna Energy Consulting

7

RAB

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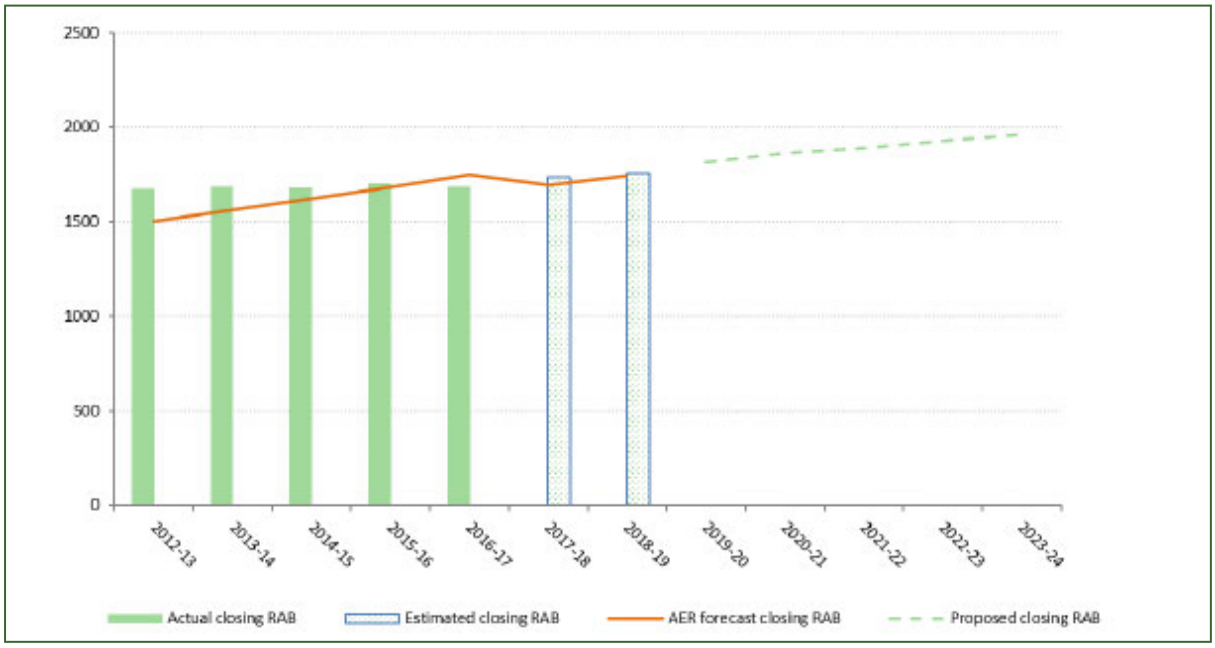
7 Regulatory Asset Base

Information about TasNetworks' Regulatory Asset Base (RAB) for both distribution and transmission is discussed in this section. Additional discussion is in the capex section (Section 4).

7.1 DISTRIBUTION

Figure 16 below, taken from the AER's Issues Paper on TasNetworks' Proposal, shows the growth in TasNetworks' distribution RAB. It can be seen that there has been significant growth in the real value of TasNetworks' distribution RAB since 2012-13 and that further substantial growth is forecast over the next regulatory period. The actual RAB through 2012-13 to 2014-15 was also substantially above the AER's forecasts, although it has tracked more closely to these forecasts since. In real terms, TasNetworks' distribution RAB is forecast to grow by a further $147 million, or 8.1 per cent, over the forthcoming regulatory period, reflecting capex spending planned for the period, as well as past capex spending that has previously been rolled into the RAB.

Figure 16: Projected RAB growth for distribution ($m, 2018-19)



Source: AER, *Issues Paper*, p. 23.

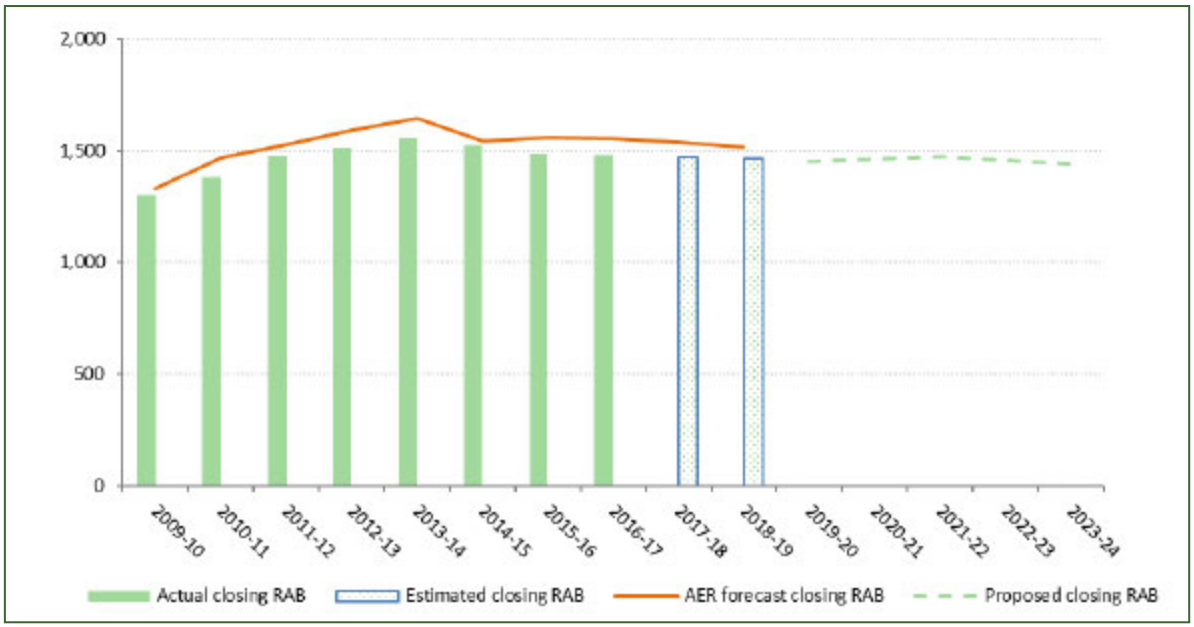
This growth in the distribution RAB is a concern to the TSBC given that growth in TasNetworks' distribution output has been minimal, its network usage in decline and its service levels more-or-less stationary. There is, however, a flow through into higher revenue, paid for as higher distribution prices by small business with little added benefit for this.

7.2 TRANSMISSION

Figure 17 below, taken from the AER's Issues Paper on TasNetworks' Proposal, shows the historical change in TasNetworks' transmission RAB. Although always tracking below the AER's forecasts,

TasNetworks' transmission RAB grew at a significant pace from 2009-10 to 2013-14, reflecting the significant capex (augex and repex) approved by the AER for the transmission network, based especially around growth forecasts that did not materialise. This significant increase in capex, some of which was arguably unnecessary or ahead of time, has since been rolled into the RAB and continues to impact TasNetworks' transmission revenue and prices. Small business is materially impacted through higher transmission charges that include stranded or underutilised assets. The ongoing impact of this is a matter of serious concern to the TSBC. The flattening of capex since then is welcome, albeit a case of 'too little, too late'.

Figure 17: Projected transmission RAB ($m, June 2019)



Source: AER, *Issues Paper*, p. 24.

Looking ahead to the next regulatory period, TasNetworks is forecasting a small real decline of $12.7 million in the value of its RAB, albeit interspersed with small annual increases in 2020-21 and 2021-22. This trend is welcome.

A word of caution should be added, however as, if all of TasNetworks' contingent projects for transmission came to fruition, it would swamp this small decline in the RAB. As the AER points out in its Issues Paper:

> *"TasNetworks has proposed five contingent projects estimated at over $938 million, or more than three times TasNetworks' proposed capex. Should all these contingent projects proceed, they would increase TasNetworks' transmission RAB by more than 60 per cent." (AER, Issues Paper p. 23)*

The impact of such a large increase in TasNetworks' transmission revenues on its transmission charges would be a matter of serious concern to the TSBC. If these projects come to pass, it is vital that they are robustly assessed by TasNetworks and the AER to ensure that they deliver benefits to

consumers commensurate with their substantial costs and that the 'beneficiary pays' principle is applied.[29]

7.3 Is There a Case to Reduce TasNetworks' RAB?

A recent Grattan Institute Report entitled, *Down to the Wire: A sustainable electricity network for Australia*[30], has presented significant evidence that inappropriately set reliability standards and unrealised demand forecasts, have led to a lengthy period of excessive capex spending from AER regulatory determinations across the NEM. These impacts were found to be most pronounced in jurisdictions where electricity networks were in Government ownership. Overall, the Grattan analysis estimated that network assets had been overvalued by up to $20 billion, with significant consequences like unnecessarily high network revenues, which have since and will continue for some time, to substantially elevate network prices.

In relation to TasNetworks, Grattan found that unrealistically high demand growth forecasts (i.e., customer numbers and maximum demand) and to a lesser extent increased reliability standards resulted in excessive capex with the outcome that TasNetworks' transmission RAB is overvalued by up to 65 per cent ($516 million) and its distribution RAB by 19 per cent ($235 million), a total for the business of $751 million. The impact on residential and business tariff customers in Tasmania is shown in the **Figure 18** below taken from the Grattan report's technical supplement (Tasmania is highlighted).[31]

The Grattan report argues that this situation is unreasonable and unsustainable, that the State Governments that own (or owned) the networks bear responsibility and that corrective action is necessary to relieve the cost impacts on consumers. It notes that overvaluation is a key contributor to electricity affordability problems in Tasmania and that the resulting excessive network prices will cause consumers to increasingly by-pass the grid, which will force remaining consumers to pay even higher network prices, thus causing more to leave the network and creating a potential 'death spiral'. The report argues that the Tasmanian State Government should therefore write down the value of TasNetworks' assets by an amount of up to $750 million and then privatise the business.

It further suggests that if governments consider a large write-down of assets too politically difficult, a rebate to consumers that depreciates over time (as the assets do) would have the same effect, but would be vulnerable to political intervention and the changing priorities of governments over time.

The issues raised in the Grattan report are of serious concern to the TSBC. They provide strong *prima facie* evidence that Tasmanian consumers are paying far too much for their electricity and have been doing so for some time without any corrective action. Moreover, they suggest that the Tasmanian Government (mainly past Governments), as the owner of TasNetworks, is responsible for this outcome but has failed to act to correct its impacts on consumers. (In saying this, we acknowledge that the current Tasmanian Government has taken some steps intended to protect Tasmanian consumers from some of the other causes of high electricity prices, such as high wholesale costs and has generally placed a priority on keeping electricity prices affordable and

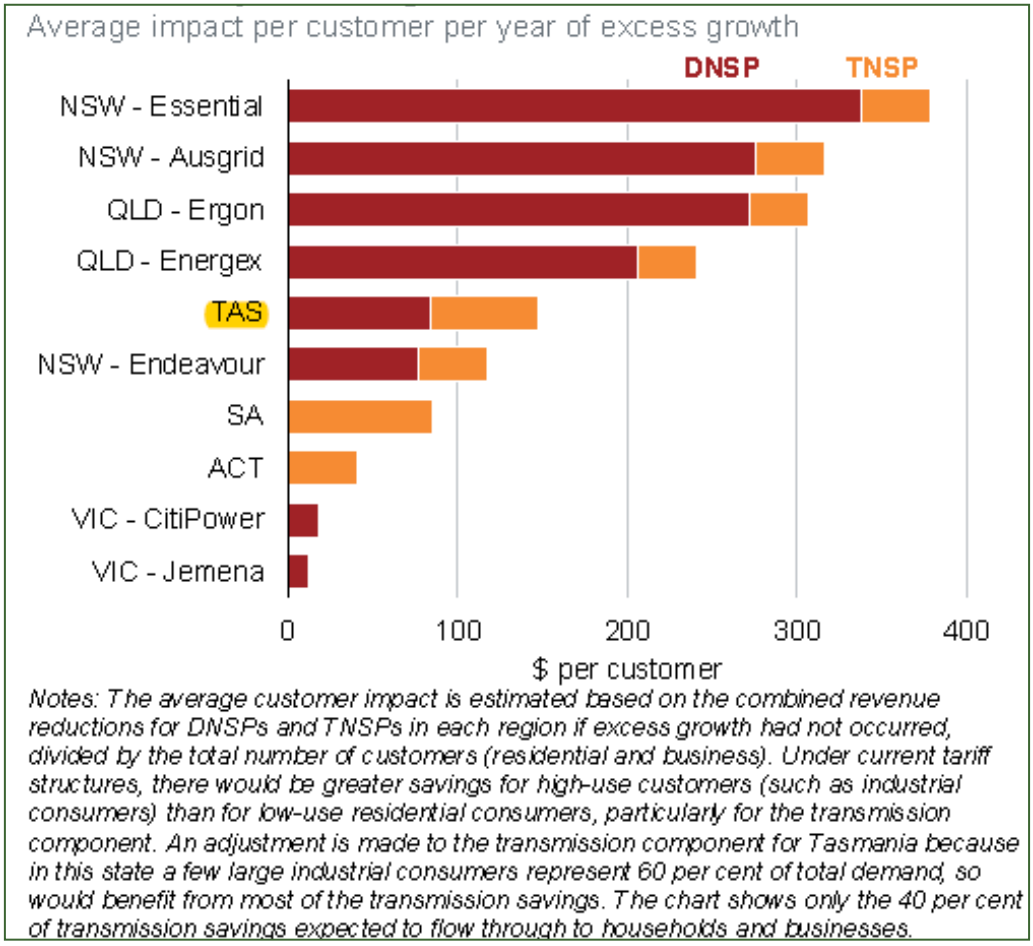
[29] We note that the AER is currently undertaking a review of its Regulatory Investment Test – Transmission (RIT-T), which is used to assess such projects. In our view, rigorous assessment to ensure that benefits to consumers significantly outweigh costs, a transparent and well understood process and consultation with impacted consumers are essential to the application of the RIT-T.

[30] See https://grattan.edu.au/report/down-to-the-wire/

[31] See Grattan Institute, *Down to the wire: Technical supplement* at https://grattan.edu.au/report/down-to-the-wire/

competitive.) The report also says that regulators, including the AER and the regime they administer, share some of the blame as they approved the excessive capex and the regulatory regime did not allow for *ex-post* scrutiny of expenditure, so over-investment was rolled directly into RABs without question.[32]

Figure 18: Impact of inflated RAB on Customer Bills



Source: Grattan Institute, *Down to the wire, Technical Supplement*, p. 16.

The TSBC suggests there is a strong case to reduce the value of TasNetworks' RAB, but recognizes that all of the ramifications of this would need to be considered.

The TSBC is strongly of the view, however, that in the absence of such a decision, TasNetworks capital expenditure program must be constrained so that there is a material and measurable increase in the utilization rate of its assets and the current, widening trend gap between utilization rate and RAB value (as shown at figure 8) is reversed and that trend maintained over subsequent regulatory periods.

[32] We note with a degree of alarm the comments in the Grattan Report that: "Before 2006, regulators could 'optimise' (reset) the RAB. But this power was removed because of concern at the time that network businesses would under-invest in infrastructure. The very high levels of capex that followed indicate that, while removal of 'RAB optimisation' did its job, the regulatory framework lost an important tool for ensuring efficient network expenditure." (p. 28)

The main objective should be to recognise the impact that TasNetworks' overvalued RAB has had on network charges and to begin compensating consumers for this through lower electricity charges as soon as possible.

In the meantime, we would welcome the AER's comments on the issues raised in the Grattan report and its implications for the current determination and the regulatory regime more broadly. Does the AER agree with the methodology and estimates of the Grattan Institute? Is there anything that can be done within the present regulatory regime to reverse with the outcome? If so, does the AER intend to include such action in its determination for TasNetworks? Does the regulatory regime need to be amended to prevent further incidents of this type in future?

8

Economic Benchmarking

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8 Economic Benchmarking of TasNetworks' Performance

The National Electricity Rules (NER) require the AER to have regard to economic benchmarking in assessing TasNetworks' expenditure proposals (capex and opex). The TSBC strongly supports the application of economic benchmarking to assist in the important task of assessing TasNetworks' expenditure proposals, as well as its efficiency and productivity as a network business. This includes historical trends of how TasNetworks' efficiency and productivity has changed over time and how it compares to other transmission and distribution businesses.

The benchmarking data which the AER places in the public domain is of great benefit to the TSBC in allowing us to better understand how TasNetworks is performing and why, and whether it is undergoing ongoing improvements. We feel that benchmarking information helps us to better assess TasNetworks' performance and participate more meaningfully in this Determination. Naturally, benchmarking is not a panacea and has some shortcomings that need to be kept in mind, but in our view, consumers are far better placed with this information than without it.

8.1 Benchmarking Results

The AER has recently published its transmission and distribution economic benchmarking reports,[33] which include data for the eleven year period, 2006 to 2016, and additional analysis and developments (especially for the transmission benchmarks) that make the information even more useful to consumer representatives. We have considered the AER's latest reports in preparing this submission. We have also considered TasNetworks' economic benchmarking report,[34] which is based on the AER's work, but which places this in a more Tasmanian context. Overall, we consider the TasNetworks benchmarking report to be a useful addition to the information on TasNetworks' benchmarks and welcome that TasNetworks has published it.

8.1.1 AER benchmarking results

Turning to the AER's reports, these show mixed results for TasNetworks.

In terms of the transmission multilateral total factor productivity (MTFP) score, TasNetworks' ranks first among the NEM TNSPs, which is pleasing, although its performance deteriorated by 3 per cent in 2016. However, the introduction of a new output specification for transmission MTFP by the AER has lowered TasNetworks' score and places it closer to the pack. We note that its previous position was more of an outlier that made it more difficult to compare TasNetworks to other TNSPs due to the nature of the former output specification (which favoured TasNetworks). We also note with a degree of concern that TasNetworks' transmission capex has made a negative trend contribution to MTFP over the eleven years of data, whilst opex made a useful positive contribution, but has recently turned negative. This indicates that TasNetworks has some work to do in these areas over the next regulatory period and their capex and opex forecasts can be seen in this light.

[33] https://www.aer.gov.au/networks-pipelines/network-performance/annual-benchmarking-report-distribution-and-transmission-2017

[34] https://www.tasnetworks.com.au/TasNetworks/WebParts/TasNetworks/EWP/RR19Download.ashx?d=12543&m=v

TasNetworks' distribution network has consistently ranked at, or near, the bottom of DNSPs' MTFP. We accept that certain Operating Environment Factors (OEF) to do with TasNetworks' distribution network help to explain this, but these factors alone are unlikely to provide a satisfactory explanation. It is entirely possible that, even allowing for these, TasNetworks' distribution network would still benchmark poorly. TasNetworks' performance improved in 2014 and 2015 but deteriorated in 2016.

These results combined with our comments below on TasNetworks' capex and opex productivity suggest that there are some reasons to be concerned about the benchmarking outcomes and likely future trends.

The AER also publishes indices of the distribution multilateral partial factor productivity (MPFP) score for capex and opex. For capex MPFP, TasNetworks also ranks bottom of the pack and its performance has declined markedly over the period 2006-16, by over 10 per cent. TasNetworks' capex forecast for the forthcoming regulatory period shows little sign of abating and, on this basis alone, improvements in its MPFP performance over the next five years remains problematic.

For opex, TasNetworks' distribution network performs a little better but still remains in the upper part of mid-pack, albeit with an improving ranking. Following strong trend declines in productivity for the period to 2012, its opex productivity improved significantly, although there was a significant -7 per cent decline in 2016.[35] Again, whilst OEFs can be used to explain some of TasNetworks' opex MPFP performance, an ongoing lack of efficiency is also likely to be a factor. We acknowledge that TasNetworks has taken steps to improve its opex efficiency in the recent past, but as pointed out earlier, its opex forecasts for the forthcoming period involve modest reductions and its MPFP could well see further deterioration. This is not pleasing and suggests that consumers, including small business, will continue to be pay for inefficiencies in TasNetworks' distribution opex.

The AER also applies a set of econometric models to help it determine and efficient opex for TasNetworks' distribution, which include adjustment for OEFs. The average outcome over the 2006-16 period shows TasNetworks mid-pack, even with the OEFs taken into account.

8.1.2 TasNetworks' benchmarking

TasNetworks' benchmarking report provides some useful additional information, particularly helping to place its operations and benchmarking performance more within a Tasmanian context. We accept that some of the issues raised by TasNetworks are legitimate to consider in the context of benchmarking results. It is possible that taking some of these factors into account would improve TasNetworks' benchmarking rankings somewhat. It is also possible that other factors that other networks would raise could have the opposite impact on TasNetworks' ranking.

In general, we are not attracted to the inclusion of a large range of OEFs in economic benchmarking as this can detract significantly from its value as tool for comparison and assessment of the efficiency of network businesses.

Assessing some of TasNetworks' points is made more difficult by the lack of clear and comprehensive metrics to support them. It also needs to be kept in mind that benchmarking is not used prescriptively by the AER and, as a relatively recent regulatory development in Australia, is still being refined and improved.

[35] TasNetworks explain this as due to the unavoidable need to significantly increase expenditure on bushfire mitigation and vegetation management, which should return to lower levels over time.

It is disappointing, however, that TasNetworks has used its benchmarking report to question the application of benchmarking. It is also disappointing that TasNetworks has used its report to express the view that there will be limits to how much it can improve its productivity in future and to create an expectation that its ranking could deteriorate. We would prefer that it respond positively to the challenge of economic benchmarking and use the results of benchmarking to help it focus on improving its future performance.

9

REGULATED REVENUE

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9 Regulated Revenue

Below we comment on various aspects of TasNetworks' Proposal in terms of the transmission, distribution and total network revenue outcomes for standard control services for the forthcoming regulatory period.

9.1 Network Revenue

According to TasNetworks' Proposal, total revenue for its network is expected to decline slightly by $6.4 million in real terms (in total revenue of over $2,000 billion over the 5 year regulatory period). This is welcome but represents a very small reduction in a basically stagnant network.

On the one hand, there are factors pulling the transmission revenue down. On the other hand, there are factors pushing forecast distribution revenue upwards. We comment on the drivers in each case in separate sections below.

From a small business perspective, this growth in total revenue, albeit quite modest, is still of potential concern.

9.2 Transmission Revenue

There is a small reduction in (unsmoothed) annual nominal transmission revenue from an expected $177.7 million in 2018-19 (the last year of the current regulatory period) to $174.5 million in 2023-24 (the last year of the next regulatory period). In smoothed terms, the reduction is more pronounced going from $172.9 million down to $151.6 million, although this comes at the expense of higher revenue in the first two years of the next regulatory period compared to the unsmoothed outcome. The AER points out in its Issues Paper that TasNetworks is proposing a real 17 per cent decrease in average annual revenues from its previous determination. This decline is welcome.

The key drivers for the (unsmoothed) transmission revenue outcomes over the next regulatory period are the return on capital, opex and (to a lesser extent) regulatory depreciation.

Unsmoothed revenue attributed to the return on capital reduces significantly in the first year of the next regulatory period, but increases steadily thereafter. This outcome is heavily influenced by declines in the WACC parameters compared to the current regulatory period, such as lower interest rates, which are essentially exogenous to TasNetworks and also TasNetworks' decision to reduce its transmission WACC by 0.25 per cent, to the same level as for its distribution network.

Regulatory depreciation revenue outcomes follow a similar pattern to the rate of return.

The increased revenue attributed to both the WACC and regulatory depreciation after 2019-20 reflects transmission capex proposed by TasNetworks. Capex spending will find its way into the RAB, impacting revenue attributable to the rate of return and depreciation, and increase future transmission prices.

Opex is also a key driver of transmission revenue outcomes. As mentioned in the opex section of this submission (Section 5.3), TasNetworks' decision to apply an efficiency factor to its opex forecasts makes a useful contribution to reducing opex spending over the next regulatory period and places some additional downward pressure on its transmission revenues.

In its approach to revenue smoothing for transmission, TasNetworks has made a call that lower transmission revenues in the final year of the regulatory period is to be preferred, as it "delivers a steady reduction in transmission charges over the period, while delivering an acceptable price path for our distribution customers." This is a judgement call by TasNetworks, but it is possible that some customers may prefer the certainty of lower transmission charges up front and given risk factors discussed in Section 9.4 below. The approach also delivers the greater certainty of a front-end revenue increase to TasNetworks, albeit with lower revenues to follow later on.

9.3 Distribution Revenue

Distribution revenue (nominal, unsmoothed) is forecast to increase significantly from $245.3 million in 2019-20 to $309.0 million in 2023-24, an increase of $63.7 million (or 26 per cent). In smoothed terms the increase is by $52.5 million (21 per cent) from $252.9 million to $305.4 million.

The AER Issues Paper points out that TasNetworks proposed significant distribution expenditure reductions for the 2017-19 regulatory period but, for the forthcoming regulatory period, it is proposing a real increase in average annual revenues for distribution of 7 per cent from its previous determination. This turnaround is of concern to the TSBC.

The key drivers are (in order of importance) opex, regulatory depreciation and the rate of return. This is offset to some extent by a negative efficiency carryover due mainly to TasNetworks' overspending its opex allowance in 2016-17 (discussed in the opex section of this submission – Section 5.4). The impact of these three drivers, which were discussed earlier in this submission, on the significant increase in distribution revenue, is of concern to the TSBC.

Similar to transmission, in distribution there are initial reductions in (unsmoothed) revenue attributable to the WACC and depreciation followed by increases in later years of the next regulatory period. The increased revenue attributed to the WACC after 2019-20 would reflect distribution capex proposed by TasNetworks. Capex spending will find its way into the RAB, which is forecast to increase by 8 per cent in real terms, impacting revenue attributable to the rate of return and depreciation, and increase future distribution prices.

As with transmission, although less pronounced, the impact of smoothing is to front end higher revenue in the first three years of the next regulatory period with smoothing lowering revenue in the last two years. Again, it is possible that some customers may prefer the certainty of lower distribution charges up front, with small business sometimes preferring 'a dollar in the hand, rather than two in the bush' and given risk factors discussed in the next section. The approach also delivers the greater certainty of a front-end revenue increase to TasNetworks, albeit with lower revenues to follow later on.

9.4 Risks to Revenue Outcomes

TasNetworks' Proposal mentions certain risks to its revenue forecasts, including:

- That the AER will update the allowed return on debt for transmission and distribution for each year within the forthcoming regulatory period.
- That service performance in any year may vary from target, resulting in penalties or bonuses.

- That actual transmission and distribution revenue recovery each year may vary from the allowance, which may lead to the need for adjustments in subsequent years.
- That contingent projects (which are significant and discussed in Section 4.2.3) and pass through events may lead to additional costs being approved by the AER.
- For transmission, Tasmanian customers are affected annually by intra-regional settlements residue payments and inter-regional charging between Tasmania and Victoria.

In addition, there are a range of other uncertainties, such as those impacting the opex forecasts discussed earlier in this submission (see Section 5), that could impact revenue and flow through into prices.

The TSBC is concerned with the impact that such uncertainties can have on network prices for its members in what is a regulated monopoly service that should be characterised by a high degree of predictability in prices over a five year period. We note with special concern the risks associated with TasNetworks' significant list of contingent projects, which could dramatically increase revenue (and network prices) if they come to fruition. We suggest that the AER use its regulatory powers to try to minimise price uncertainty as far as possible.

10

INDICATIVE PRICES

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10 Indicative Network Prices

In this section we comment on the impact of TasNetworks' Proposal on its indicative network prices.

10.1 Transmission Prices

The AER Issues Paper comments that it expects TasNetworks' transmission charges to decline steadily over the next regulatory period, with real prices set to decline by 5.6 per cent. Whilst transmission charges make up only around one-quarter of small business network charges (and around one-eighth of their total bill), this would still be a welcome outcome (around a ⅔ per cent decline) for Tasmanian small businesses, often struggling with their electricity bills.

10.2 Distribution Prices

In contrast to the transmission price outcome, according to the AER Issues Paper, TasNetworks' distribution proposal entails annual price increases of 4.5 per cent nominal (2 per cent real) over the forthcoming regulatory period. This is a matter of significant concern to the TSBC. Given the distribution prices make up about three-quarters of network charges for small business (or around three-eighths of their total electricity costs), it would increase electricity prices for small business by about 1.7 per cent per annum).

We also note that price increases appear to be inconsistent with the tenor of the feedback TasNetworks obtained from its customer engagement for this Determination. This emphasised the importance of affordable prices to customers, whereas this outcome is serving to make them less affordable through distribution price increases well above the CPI. It also emphasised that although customers want a reliable supply, they are not prepared to pay more for improvement in reliability. By way of contrast, the distribution price outcome appears to involve higher prices for essentially the same reliability.

10.3 Combined Network Prices

The AER expect TasNetworks' total network charges to be 1.8 per cent higher at the end of the next regulatory control period in real terms. The path of these total annual network charges, which combine transmission and distribution costs, is shown in **Figure 19** below taken from the TasNetworks' Proposal.

10.4 Removing Cross-subsidies

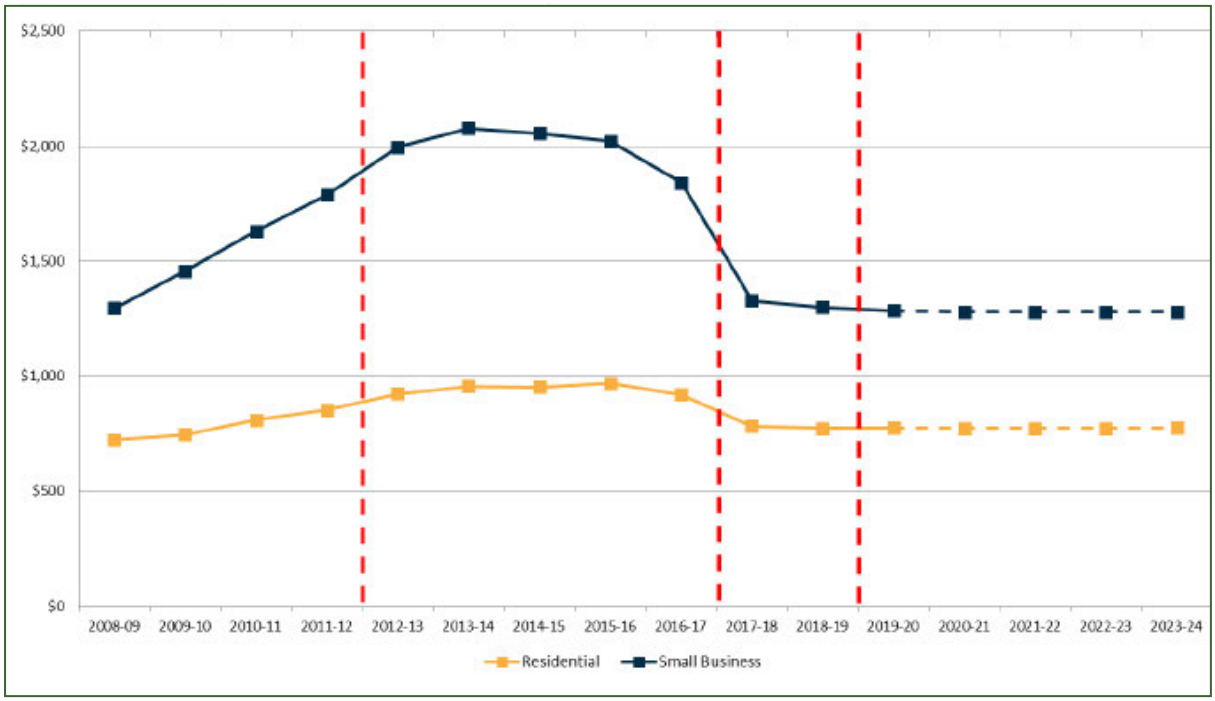
Aside from our concern that **Figure 19** shows an overall increase in small business network costs over the next regulatory period – driven by increases in distribution charges – it raises a matter of potentially serious concern to the TSBC. The AER and TasNetworks would be aware of the endeavours being made by regulators and network businesses to introduce more cost reflectivity into distribution prices. In Tasmania an important component of this is the removal of inefficient cross-subsidies, including a cross-subsidy from the main small business network tariff (TAS22) to other tariffs, including the heating tariffs.[36] The figure shows the significant progress that has been

[36] An analysis of these cross-subsidies and their impacts is contained in a 2016 report by Goanna Energy Consulting entitled, *Cross-subsidies in Tasmanian Electricity Tariffs – impacts on Small Business*, which was

made in reducing this cross-subsidy over the past few years as this explains the main reason for the significant reduction and convergence shown in small business compared to residential network costs.

We are therefore alarmed to see that there appears to be no further progress being made in this direction over the entire forthcoming regulatory period with the difference between total charges for small business and residential consumers stalled. We believe that this is a serious matter requiring further investigation by the AER and would be interested to hear from TasNetworks about it.

Figure 19: Average annual total network charges for distribution customers ($, June 2019)



Source, TasNetworks, *Regulatory Proposal, 2019-20 to 2024/25*, p. 190.

Disappointingly, the progress that can be made in removing such legacy cross-subsidies in network charges and in actioning more cost reflective electricity prices in general, is also being thwarted by the slow pace with which Aurora Energy is approaching the reform of its retail tariffs.

Meanwhile, the Tasmanian Government has acted to protect Tasmanian electricity consumers on regulated retail tariffs from large increases in wholesale costs by capping regulated prices at no higher than CPI for 2017-18. It is now expected to soon legislate to extend this arrangement for a further three years until the end of 2020-21. Whilst we welcomed the initial intervention given it prevented electricity prices for small business going up significantly, there are elements of extending the cap that concern us, including that it could prove to be a further impediment to removing cross-subsidies.

commissioned by the TSBC and is available at https://www.tsbc.org.au/wp-content/uploads/2016/11/Cross-Subsidies-in-Tasmanian-Electricity-Tariffs-and-Small-Business-Oct-....pdf.

11

Other Issues

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11 Other Issues

In this section of the submission we address a number of other significant issues for small business consumers in Tasmania, namely, corporate income tax treatment, TasNetworks' pass-through proposals and the legacy meters issue.

11.1 Corporate Income Tax

We note that TasNetworks has adopted a *gamma* of 0.4 in its transmission and distribution Proposal, which is consistent with the AER's current Rate of Return Guideline. We also note the AER's comments in its Issues Paper that this Guideline is currently under review and that its approach to and value of *gamma* may change as a result, which could then be applied to TasNetworks' transmission and distribution determinations. Hopefully, this will become clearer by the time of the Draft Determinations.

In Section 6.3.4 of this submission, we commented on the *gamma* in detail.

11.2 Pass Through

As a general point, we have significant concerns about the inclusion of pass throughs in regulatory determinations for electricity networks, even allowing for the protections intended to both keep them to a minimum and ensure that they only reflect efficient costs. We do not believe that pass through events are consistent with intent of the regulatory regime to mimic the outcomes that would be seen if networks operated in a competitive market. In an unregulated competitive market any pass throughs would be limited to unforeseen costs to the extent that competition allowed.

Moreover, regulatory pass throughs tend to be heavily influenced by the information advantages held by the regulated networks and are therefore heavily biased towards upward adjustments in costs (with cost reductions far less common). This creates a further regulatory risk for electricity consumers.

In addition, the Rules only permit regulated networks to apply for pass throughs, further entrenching their asymmetrical nature.

Whilst the Rules dictate that the AER must consider TasNetworks' pass through proposals, it should keep the above factors in mind when doing so.

TasNetworks has proposed three additional pass through events for both transmission and distribution as part of its regulatory Proposal. We comment on these below.

In relation to TasNetworks' proposal to include insurance cap events, terrorism events and natural disaster events, we note that the AER will have to consider the level of insurance that an efficient and prudent NSP would obtain and only pass through costs above this. This requirement is important in terms of the containment of pass through costs, but the simplicity and ease of assessing it is not immediately obvious. Small business does not want to bear added costs from this uncertainty.

In relation to terrorism and natural disaster events, we note that a declaration is required by the relevant government. As the Tasmanian Government owns TasNetworks, there is some potential

for conflicts of interest to arise, which the AER will need to be mindful of. Small business does not want to bear added costs from any conflicts of interest.

In relation to natural disaster events, we note that the event cannot be a consequence of the acts or omissions of TasNetworks to be approved as a pass through. This is as it should be.

It is also not clear from the Proposal whether TasNetworks has procured insurance to cover the events it seeks specific pass through cover for and, if it has, whether the level is prudent and efficient. The AER should establish this and inform consumers of the result before agreeing to TasNetworks' proposal. Small business does not want to bear added costs from any decisions by TasNetworks to 'underinsure'. The Tasmanian Government should bear such costs.

Should TasNetworks apply for any pass throughs during the next regulatory period, we expect that the AER will thoroughly and rigorously assess these requests to ensure they are compliant and contain only efficient costs.

11.3 Legacy Meters Issue

We note that TasNetworks' metering proposal involves a capital component of $60.4 million over the next regulatory period with total revenue of $92.2 million, a substantial amount equal to around one-third of its total revenue for standard control distribution services.[37]

We have concerns about TasNetworks' proposal to accelerate the depreciation of its existing fleet of Type 6 meters over the next regulatory period so that they are fully depreciated by the end of 2023-24. TasNetworks' link this to the introduction of metering competition in Tasmania, which has seen Aurora Energy take over the role of metering provider from 1 December 2017. Our concerns relate to:

- The estimated cost of the proposal, which will increase standard meter prices by 49 per cent or $9.29 per annum, at a time of community concern about high electricity prices.[38] Moreover, it would be contrary to the expectation that advanced meters will lower electricity costs.
- In addition, TasNetworks say in their Proposal (p. 202) that "a small number of customers [will be] paying up to an additional $24.85 per annum per metering register for more complex metering." (Our parenthesis) It is unclear who these customers are but it is possible that they include small businesses. If so, our concerns would be heightened due to the significantly higher costs involved. We seek clarification from TasNetworks and the AER about whether small businesses are involved and to what extent?
- Previous TasNetworks metering strategies proposed a roll-out of advanced metering infrastructure.[39] Had that occurred, consumers would not now be asked to pay for the installation of outdated metering technology.[40] Under TasNetworks' current proposal, customers will effectively be forced to pay twice for assets that essentially do the same thing

[37] This includes a rate of return building block totalling $8.1 million and regulatory depreciation of $44.7 million.

[38] If customers switch to a competitive advanced metering service provider, the customer will continue to pay the capital component but will not pay the non-capital (opex) charge.

[39] Aurora Energy, 2012-2017 Regulatory Proposal - MANAGEMENT STRATEGY, NETWORK METERING, DOCUMENT NUMBER: NW-#30161864-V3, DATE: 13 MAY 2011.

– once by way of the meters installed by TasNetworks and again when new meters are installed by Aurora. This is not acceptable to the TSBC as customers are in no way responsible for the installation of past meters and any associated shortcomings.[41]

- More in the realm of principal, we note that this is essentially a regulatory issue arising from a change in technology (following a new pro-competitive policy) that will see TasNetworks' role changed and its existing fleet of meters become stranded assets. In a competitive market, which the regulatory regime is intended to mimic, a firm finding itself in possession of out-dated technology would likely be forced to write this off immediately (a cost to be borne by its shareholders, not its customers). The regulatory imposition of an accelerated depreciation charge would simply not be possible. We seek the same treatment for TasNetworks, with its shareholder to bear the costs of its stranded metering assets.

We recognise that the significance of this issue to the overall base of affected customers will depend on the rate of replacement of existing meters and note that Aurora has indicated that it will only be installing new meters where the old ones are faulty, where electrical work is undertaken or where there is a new connection. This limited approach is also likely to delay the access customers have to the services the new meters can provide, including tariff reform and makes TasNetworks' accelerated depreciation proposal additionally problematic.

[41] We understand that some of TasNetworks' Type 6 accumulation meters have only been installed recently, notwithstanding the known changes in metering arrangements and that in 2008, Aurora received capital funding to roll out advanced meters over a ten year period.

12

TARIFF STRATEGY

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12 Tariff Strategy

As indicated in its response to the Directions and Priorities Consultation Paper, the TSBC is supportive of TasNetworks' approach to tariff reform and notes the following points:

- Moving to cost reflective network tariffs and eliminating existing cross subsidies, which penalise small business, is supported;
- The proposed transition time to wind out existing subsidies is too long;
- The move to demand based tariffs is supported, noting that small business customers need quality information about the basis on which they are being charged and how they can reduce their charges;
- In order to result in changes to consumption, the impact of price signals must be sufficiently large to change consumption behaviour; and
- Any increase in fixed charges is contrary to the objective of using pricing signals to bring about changes in consumption.

The TSBC wishes to reinforce those points and notes that for some business tariffs, proposed increases in the service charge are well in excess of inflation, contrary to its expectations. In Section 10.4 we expressed our concerns about the apparent lack of progress in removing small business tariff cross-subsidies in the TasNetworks Proposal.

Table 6 below provides a comparison of the service charges applicable to some tariffs, comparing the 2016-17 rate to the 2023-24 rate, in nominal dollars. The percentage increase over that period is well in excess of CPI, which at 2.5% per year over that period would result in an increase of 22 percent.

Table 6: Service charges applicable to some tariffs

Tariff	2016-17	2023-24	% change
TASSDM	186.788	399.718	114.00
TAS82	244.704	395.893	61.78
TAS94	48.844	75.298	75.30

Source: TasNetworks, *Tariff Structure Statement, Regulatory Control Period 1 July 2019 to 30 June 2024* and TasNetworks, *Annual Distribution Pricing Proposal 1 July 2016 – 30 June 2017*

The TSBC view that an increase in the level of fixed charges serves to stifle potential consumer responses to price signals and to limit demand side response opportunities has not changed.

As noted in this submission at Section 3 on change, transformation and transition, the TSBC is concerned to see that every possible action is taken by TasNetworks, Aurora Energy, Hydro Tasmania and their shareholder, the Tasmanian Government ,to ensure that the value of the very large investment in electricity network assets is at least maintained, and preferably enhanced.

Ensuring that the value proposition to customers of remaining on the grid exceeds that of investing in off grid technologies and leaving the grid should be a priority for TasNetworks.

The TSBC is therefore pleased to note TasNetworks' focus on distributed energy resources (DER) in its Tariff Strategy Statement.

The network tariff structures associated with DER, together with appropriately structured feed in tariffs, has the potential to provide incentives for consumers to remain grid connected, rather than incentives for them to leave the grid.

At the same time, any additional costs of upgrading and operating the network to cater for two way energy flows should not be borne by customers who do not receive a benefit from that investment.

On the contrary, in the joint media release for the Electricity Transformation Roadmap[42], the Energy Networks Association and the CSIRO indicated:

> *"The landmark joint study, the Electricity Network Transformation Roadmap, identifies measures to pay customers with solar and storage for benefits to the grid and save all customers an average of $414 per year by 2050."*

TasNetworks Tarff Strategy Statement indicates at page13:

> *"With solar panels – and battery storage – becoming more affordable, a key part of our distribution pricing strategy over the five year period covered by this TSS will be developing a greater understanding of how DER can be deployed in ways that benefit, rather than disadvantage, the network and other customers who do not have DER … "*

The TSBC is of the view that developing the necessary understanding cannot be delayed until the end of the 2019-24 regulatory period. By that time, the TSBC contends that the relevant strategies must be in place and being implemented, with a view to capturing the $414 per year noted above.

A key risk in achieving that objective is that electricity customers do not receive price signals which are sufficiently clear and with sufficient financial incentives to encourage the required response.

To that end the TSBC is concerned at the following statements in the Tariff Structure Statement (bold emphasis is the TSBC's):

> *"TasNetworks plans to begin billing retailers serving residential and small business customers on a cost reflective basis during the 2029-34 regulatory period.* ***Whether those prices are passed on to the customer will then become a matter for the retailer to decide****" (p. 33)*

… and …

> *"****If retailers take up this network tariff offering****, it will provide for customers who currently have access to the Grandfathered Feed-in-Tariff (FiT) or Transitional FiT Rate with alternative tariffs to consider as they transition to the lower Fair and Reasonable FiT arrangements" (p. 15)*

Noting the regulatory and corporate separation between TasNetworks and Aurora, the TSBC believes it is essential for the shareholder of those companies (the Tasmanian Government) to ensure there is a joint engagement to ensure that network tariff reform translates to retail tariff

[42] http://www.energynetworks.com.au/sites/default/files/06122016_embargoed_media_release_cr_value_for_energy_customers_in_network_transformation.pdf.

reform and that the results of that engagement are regularly reported and form part of any regulatory proposals.

Box 4 below, from page 36 of the Tariff Structure Statement, identifies what the TSBC believes is an appropriate forum to ensure that the critical issue of effectively signalling networks is progressed, and that relevant discussions should be extended to ensure that both feed-in-tariffs and network tariffs are included in the discussions.

Box 4: TasNetworks' tariff strategy development consultation

> Our customers have told us they expect us to engage with our owner, the State Government, as well as with electricity retailers, to ensure that more cost reflective network pricing is offered to Tasmanian customers in future regulatory periods. Electricity retailers, in particular, have an important role to play in supporting network pricing reform, by ensuring that cost reflective network pricing signals are preserved in the electricity prices seen by all customers, rather than being bundled up as part of the delivered cost of electricity.
>
> For the new network tariffs to achieve the objective of effectively signalling network costs, the price signal must be visible to customers. To that end, we will continue to:
>
> - participate in the monthly joint pricing meetings convened by the Office of the Tasmanian Economic Regulator (OTTER); and
> - provide quarterly updates to the State Government about the content of PRWG meetings.
>
> We will continue to engage with Government and retailers to advance network tariff reform in Tasmania, in the interests of all our customers.

Source: TasNetworks, TSS, p.36.

As previously indicated, the TSBC is of the view that "hastening slowly" is not an option which can be contemplated.