The Tasmanian Gas Market

Building the Pipeline to Opportunities

Prepared for the Tasmanian Small Business Council

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Goanna Energy Consulting Pty Ltd

Executive Summary

Scope of Study

The Tasmanian Small Business Council (TSBC) commissioned Goanna Energy Consulting to examine the Tasmanian gas market to determine its impact on small businesses and the potential for small business to make greater use of natural gas. The scope of work included:

a) identifying the costs and risks to small businesses;
b) considering the potential market impact of the significant Tamar Valley Power Station (TVPS) gas transport contract ending in December 2017; and
c) assessing the impact of the forecast increase in the domestic gas price

These issues have been considered in the context of the Tasmanian Government's *Energy Strategy*, as well as developing a pathway for the small business sector to benefit from competitive gas prices and greater access to natural gas.

The TSBC is credited for instigating this study, providing leadership to address the gas market issues facing the Small and Medium Enterprise (SME) community of Tasmania. Whilst undertaking this study it became very apparent that the issues facing the SME sector are equally applicable to a broader set of stakeholders, including the broader business community (small, medium and large) as well as the general community.

Strategic Positioning of Tasmania's Energy Market

Even though Tasmania is an island, with the Basslink interconnector and the Tasmanian Gas Pipeline (TGP), Tasmania is not an island with respect to power and gas markets. Tasmania is very much an integral component of the east coast of Australia's power and gas markets. Consequently, the challenge facing Tasmania is to capitalise on these energy-transfer links and build robust regulatory, market and investment opportunities to foster the economic growth of the State. Rewarding power and gas strategies need to be developed from a Tasmanian perspective, but also have due regard to the market conditions prevailing on the east coast of mainland Australia which is also connected to global LNG markets.

Highlights of Recommendations

This study has benefited from a wide range of stakeholder engagements which have enriched our understanding and helped shape the recommendations. The authors are deeply grateful to those contributors. The highlights of the recommendations are listed below and then followed-up with further discussion in this Executive Summary; which is then followed by a Report Summary and finally the full detail is outlined in the body of the report. Put succinctly, the highlights are:

❶ The Tasmanian gas market is small and vulnerable and is a wasted resource for the State potentially at risk of spiraling into failure. Cohesive and comprehensive action is required to lift its performance.

❷ The call for action is not beholden upon a single party, but needs the cooperation of the gas pipeline owners, pipeline managers, existing and potential gas customers, and the Tasmanian Government.

The Tasmanian Gas Market Challenge

The Tasmanian Gas Market is relatively small and as a consequence, the scale of the gas market can lead to high unit cost outcomes. The fixed costs associated with building and maintaining gas pipeline assets need to be recovered over time from users and the number of gas molecules transported through the infrastructure. Put simply, the less gas that is transported, the higher the unit cost becomes.

The size of the Tasmanian Gas Market is a reflection of low penetration rates from households and businesses caused by the relative high cost to utilise (e.g. highest transmission charges, higher than national average gas distribution charges), a lack of competition and limited coverage. Furthermore, the gas market is exposed to the risk of volume shrinkage due to the highly variable gas demand required for TVPS and the tenure of the gas transportation agreement which expires at the end of 2017.

Gas as a fuel experiences competition from LPG, electricity (especially for heating and hot water) and wood heating. This, as a consequence, adds to the risk of further volume shrinkage as the cost per user becomes more prohibitive. This dynamic leads to the issue of severe underutilisation of gas, survivability and the risk of spiralling into failure.

It is clear action is required to ensure the viability of the Tasmanian Gas Market and to allow it to thrive.

It is recommended that the Tasmanian Government take the lead in facilitating an approach to address the issues facing the Tasmanian Gas Market, initially through a major review of the market and its performance.

Solution Strategies

The challenges facing the Tasmanian Gas Market need to address the issues of:

a) scale
b) cost structure
c) competition
d) market framework
e) security of supply

Scale	The Gas Market needs to grow in order to become viable, and this growth is likely to be only achievable by ensuring the gas market has a level playing field and is able to become competitive. Expanding the gas network is an important priority, however, increasing the penetration of gas is considered a higher priority. The current level of 5 per cent of households and 2 per cent of businesses is considered too low to support a viable and sustainable gas market. The most effective way to expand the gas market is to improve its relative competitiveness, although there is a case for short-term incentives that provide the community with longer term benefits. Small businesses have indicated that lower gas prices are the most important factor that impact use and take-up but also strongly supported connection and expansion incentives.

Cost Structure	Transmission costs are the highest in Australia and distribution costs are significantly higher than the national average. Addressing high transportation costs is a key to assist the relative competitiveness of gas. Increasing pipeline throughput will allow the fixed costs to be shared and therefore will reduce the costs per unit shipped. Transmission and distribution are both unregulated assets and have therefore been able to set prices largely at their own discretion. Given the Tasmanian Gas Market is now 13 years old, it appears the unregulated transportation pricing has not been able to grow the market to the original conceived levels or to reach critical mass and has produced exceptionally high transportation costs. In that regard, it has failed consumers. The risk of volume shrinkage is a significant risk facing the pipeline asset owners as much as the other stakeholders. In our view, the pipeline owners, market participants, the Government and gas users need to face the reality check that the Tasmanian Gas Market is a wasted resource in need of reform. As a consequence, in order to rectify the position, pipeliners may have to experience some financial pain; which would be a lesser evil than stagnation, or eventual failure. To be clear, whilst the Tasmanian Government does not wear the responsibility of 'saving' a distressed private energy asset owner, it should not allow the market to stagnate and ultimately risk it failing. Better that the Government act as a facilitator of market growth, and to remove structural imperfections and any price distortions. The Tasmanian Gas Market has a problem, and the responsibility for rectification is a shared responsibility. There is a possibility that the pipeline assets could be classified as a regulated asset, and in doing so the owners would receive a regulated financial return. However, if this path were pursued, it does not mean the value of the asset base is necessarily the capital cost expended in construction or acquisition.
Competition	The Gas Market must compete in the energy sector and the gas industry should not be classified as a fuel-of-choice unless there are longer term community and economic benefits. However, the gas market is entitled to a fair playing field. The Tasmanian Government should therefore ensure that electricity tariffs for space heating and hot-water are cost reflective, so that the gas market has a fair opportunity to compete. If there are other externalities that arise from fuel switching, for example from solid wood to gas heating delivering cleaner air, then it is reasonable for the Tasmanian Government to offer incentives to switch.

	Small businesses expressed concern about the lack of retail competition in gas, but until the market can grow it is unlikely to attract any further new gas retailer entrants. Even then, the attraction of new retail entry would be best promoted through encouraging competition in electricity retailing given the larger size of the electricity market and the propensity of energy retailers to offer customers supply of both gas and electricity.
Market Framework	There are potentially beneficial opportunities for Tasmanian government to participate in Australia wide gas market issues that impact on Tasmania. For instance, the Tasmanian Government should develop positions and advocate for Tasmania's interests, on the AEMC and ACCC gas market reviews. Such issues are the reform of the eastern gas markets, regulation of pipelines, market transparency; and AEMC's proposed changes to the Victorian gas spot market. These reforms could well impact competition in the Tasmanian gas market. It is also important for the Government to pay attention to LNG prices as export prices will present uncertainty in gas prices and gas supply to Tasmania. Gas pipeline regulation in Tasmania has been 'light handed' for several reasons: to allow the price of electricity to determine the price of gas, and to reflect the embryonic nature of gas, such that the industry could not influence prices of the overall energy market. The industry may well now have reached a stage where it can more easily influence gas prices, hence our recommendation for a need to examine regulatory options including, the possible application of full (i.e. price) regulation. Furthermore, ACCC evidence of monopoly pricing by unregulated pipeline owners (perhaps symptomatic of distressed asset owners), supports the need for a review. A more proactive stance should be taken by the Tasmanian Government in reviewing pipeline regulation.
Security of Supply	The single transmission pipeline from mainland Australia to Tasmania is of concern with respect to security of supply. The Tasmanian Gas Market could not reasonably justify building a second transmission line given severe under-utilisation of the current pipeline and the cost of duplication. However, as an interim step, emergency storage facilities should be explored, although the small market may also make these problematic. Developing Tasmania's onshore gas resources is also an option, although the current blanket moratorium on fracking acts as a disincentive and should be reviewed in light of the ACCC's support for a case-by-case application.

Report Summary

This Report Summary provides a condensed version of the body of the report.

The Tasmanian Small Business Council (TSBC) commissioned us to undertake a study of the Tasmanian gas market. TSBC, the representative body for small business in the State, felt it important and timely to examine the gas market to determine its impact on small business.

We focused on competitive markets where possible but also recognize a role for intervention given the nascent and small Tasmanian gas market, which would benefit from further stimulation as a spur to growth and competition. This is consistent with the development of other markets. Without a mixed approach Tasmania's gas market will take a lot longer to reach critical mass (if at all).

The Tasmanian Gas Market

Tasmania's natural gas market comprises transmission, distribution, retail and customer components. There is also the prospect of developing onshore shale and offshore conventional gas resources, though none have yet been developed and a five-year moratorium on fracking is a disincentive to explore. The market is a little over 13 years old and is tiny compared to gas markets in other jurisdictions; and in its contribution to the overall Tasmanian energy market (e.g., gas accounts for only 7 per cent of Tasmanian energy consumption, compared to 31 per cent nationally).

The Tasmanian gas market contributes to 7 per cent of Tasmanian energy consumption, and the TGP at peak utilisation is only two-thirds full.

The Tasmanian Gas Pipeline (TGP) is the only gas transmission pipeline into Tasmania and is used by shippers to transport gas. Tasmania does not produce any gas. Shippers supply gas to retailers who sell it to consumers. The TGP can transport 47PJ of gas annually or 129 TJ of gas daily and has significant spare capacity. At peak utilisation it is two-thirds full and underlying demand is about 15 per cent of capacity.

The distribution network (owned by Tas Gas) transports gas from the TGP to consumers. It is small, being less than one-sixth the length of the next smallest network, the ACT's. Yet its asset valuation is twice that of the ACT. It is characterised by a lack of economies of scale and light handed regulation.

In 2014/15, there were 11,765 retail gas consumers and only 743 small business consumers.

There are two active natural gas retailers in Tasmania – Aurora Energy and Tas Gas Retail (TGR). Both supply gas to the full range of customers, including small business. TGR has a dominant market share of about 65 per cent. Aurora has lost market share. Retail gas prices are unregulated.

In 2014/15, there were 11,765 retail gas consumers in Tasmania and only 743 small business consumers (6.3 per cent of the total). Growth in new business connections is very slow-moving.

Natural gas penetration in Tasmania is very low at around 5 per cent, compared to 80-90 percent in south eastern jurisdictions. Penetration among Tasmanian small business consumers is even lower at about 10 per cent of those with access to natural gas and 2 per cent of all small businesses.

Gas consumption is highly variable, ranging from a low of 5.5 TJ on 20 February 2011 to a peak of 86.5 TJ on 7 April 2016. Gas fired generation is the main contributor to this variability. It can treble or even quadruple the underlying daily gas flows into Tasmania.

Power generation can treble or even quadruple the underlying daily gas flows into Tasmania. The loss of gas power generation will present significant challenges for the TGP and the market.

For some time, there has been a concern that likely closure of the Tamar Valley Power Station (TVPS) would result in a major drop off in gas consumption and hence use of the TGP. Following a return to more normal electricity supply conditions after the recent electricity supply problems, the TVPS has been placed in dry lay-up for the possible emergency use in future.

Tasmania's major industries make significant use of natural gas, consuming 4.7 PJ annually. Increases in major load depend on either converting existing major users to gas, or attracting new ones. We are not aware of any such opportunities at present, but future ones could arise. Any reintroduction of a price on carbon would also make conversions to gas more economic. A larger, more competitive gas market would be more attractive to proponents and would also benefit small business.

Cogeneration offers potential to increase gas use and has facilitated some network extensions but the economics of cogeneration can be an obstacle, including access to gas and its price. Small businesses located near to gas network extensions have benefitted from these.

Mid-size industrial or commercial users offer potential to increase the use of natural gas. Their current use of fossil fuels my experience climate change pressures. Those using LPG currently enjoy a price advantage over natural gas. If the Tasmanian gas market was expanded and became more competitive, this would make switching to natural gas more appealing to mid-size users.

Major industries consume about 4.7 PJ (4,700 TJ), while small business consume around 350 TJ of gas annually.

We estimate that small business currently consumes around 350 TJ of gas annually, or 6.5 per cent of non-gas fired generation supply. The very low gas penetration rates suggest considerable scope for market growth, albeit off a low base. Household gas market penetration has similar scope to grow.

The above highlights that there is considerable scope for growth in gas consumption but that the loss of gas fired generation will present significant challenges for the TGP and the market. It also shows the links between large, medium and small gas consumers.

Gas Prices

Tasmanian gas prices in are not regulated but gas retailers must provide smaller customers, including small business, with a standing offer tariff. This comprises a consumption and a daily charge, with bills predominantly reflecting the former. There is no published discounting of tariffs.

By far the largest component of retail gas prices for small business is the distribution charge (48 per cent). Transmission, commodity and retail charges make up the remainder in roughly equal share.

Tasmanian gas prices are not regulated and distribution charges represent about 48 per cent of the cost.

Historically, TGR has set gas prices and Aurora has followed. TGR increased its 2016 gas consumption charges for small business by 7.6 per cent and supply charges by 10.3 per cent. However, in a break with the past, Aurora left its charges virtually unchanged, thereby providing a 7.6 per cent discount on consumption. But Aurora has not marketed its discount with little customer churn ensuing. This may reflect the small gas market, which makes it difficult to justify marketing, and Aurora's low market recognition in gas. This shows that competition in Tasmania's gas market is hampered by its small size – low connection numbers and limited network reach – to the detriment of small business.

The Office of the Tasmanian Economic Regulator (OTTER) regularly compares Tasmanian standing offer gas prices with those in other jurisdictions. Their analysis has consistently shown that small business gas prices in Tasmania are well above those in other parts of Australia. TGR customers pay around 30 per cent more than the average and Aurora customers about 20 per cent more. The Tasmanian small business gas price is more than double the cheapest price.

There are only two active natural gas retailers in Tasmania – Aurora Energy and Tas Gas Retail (TGR); there are no published discounts and there is little customer churn.

Furthermore, Tasmanian small businesses are typically paying between $18,500 and $17,500 for gas annually, compared to a national average of about $12,000 (or about 50 per cent more). This cost penalty increases to about 140 per cent relative to the lowest cost standing offer.

The disadvantage borne by Tasmanian small businesses is actually worse because gas competition in most other parts of Australia provides significant discounts on standing offers, even in the smaller markets. Discounts can be 25 per cent or more in Victoria, and even 10 per cent in the small ACT market.

OTTER found that Tasmanian small business electricity standing offers are below the Australian mid-point. As the Tasmanian gas standing offer is well above the gas mid-point, electricity prices are not effective in keeping gas prices competitive – a key reason for not regulating Tasmanian gas prices.

Tasmanian small businesses are typically paying about 50% more than the national average.

We estimate the gas commodity price in TGR's commercial tariff at $6.20 per GJ, which is higher than the Victorian commodity price ($5.30 per GJ) to which

Tasmania's price is closely linked. The reasons are unclear but could reflect Tasmania's small load, market power or simply estimate errors.

Gas prices have been increasing due to LNG export developments in Queensland, which have flowed through into southern gas markets, including Tasmania. TGR have foreshadowed expected future increases. However, mitigating factors are dampening these, including lower oil prices.

Despite being closely linked, the Tasmanian commercial customer commodity price is 17 per cent more than the equivalent Victorian customer (i.e. $6.20/GJ compared to $5.30/GJ).

Reforms to eastern gas markets following recent reviews could improve their operations with benefits for gas consumers. The ACCC has recommended changes designed to improve supply availability and market transparency, although proposed changes to the Victorian spot market are seen by some industry participants as limiting retail competition in Tasmania. The ACCC will be reviewing the competitive impacts of joint marketing by the Gippsland Basin gas producers, an important matter for Tasmanian gas consumers, which the TSBC should participate in.

Tasmania could potentially also improve supply options through development of its onshore and offshore gas reserves, including re-examining the impact of its five-year moratorium on fracking.

The TSBC should participate in the eastern gas market reviews led by the ACCC.

In Tasmania, major gas contracts expire in 2017 and new ones need to be negotiated. Given the points made above, commodity prices may increase but by less than previously envisaged.

One such contract is to supply gas to the TVPS, which accounts for a large share of the TGP's revenue. This has a significant impact on transmission prices and its 'take or pay' nature allows the TGP to recover its fixed costs from a larger contracted amount of gas. The current 'take or pay' gas contract allows for up to 20 PJ of gas to be provided annually, which is the TGP's main source of revenue.

As owner of the TVPS, Hydro Tasmania will need to decide on gas supply arrangements post-2017 given that the TVPS will only be used for emergencies in future. It could, for example, seek to negotiate a fixed price contract to cover the possibility of emergency use. This would allow the TGP's costs to be spread over a larger amount of contracted gas. Alternatively, it may not seek to renew its contract and assume the risk that it will face high gas prices should the plant be needed. This would prospectively expose other users, including small business, to significant increases in gas transportation charges in future. If so, TGP could face significant commercial pressures with a possibility of downward asset revaluation or even sale. The outcome for gas users would ultimately be less pressure on transmission prices.

The TGP could face significant commercial pressure if large gas supply contracts are not extended, which will then likely have a consequential impact on all gas consumers.

At present, the outcome of this and its impact on transmission charges is uncertain. The TSBC should monitor, as closely as possible, the renegotiation of the TVPS gas contract, which expires at the end of 2017, particularly its impact on the allocation of TGP's fixed costs.

Network charges are almost two-thirds of small business gas bills. Transmission charges account for 15 per cent (2-3 times the norm). Distribution charges are well above the national average.

We estimate the transmission component of small business gas bills at $5.20 per GJ and the distribution component at $16.90 per GJ. They increased by 6.8 and 8.5 per cent respectively in 2016. No reasons were provided and both TGP and TGN publish little information about their costs and charges. The level of network charges, their rate of increase (4-5 times CPI), and the lack of transparency should be of concern to small business and the TSBC.

Transmission charges account for 15 per cent (2-3 times the norm) and distribution charges are well above the national average.

There is an argument that monopoly pipelines, such as the TGP and TGN, should be regulated. Price regulation of monopoly pipelines is common in other countries (but less so in Australia).

ACCC has found that pipeline regulation has some flaws – evidence of monopoly prices, ineffective light handed regulation and a lack of transparency.

It would be timely to review the light handed regulatory regime and to determine if it should be changed.

Finding ways to improve the capacity utilisation of the Tasmanian gas network would help to lower costs (and this should flow through into prices). This report contains a number of findings and actions that would help to expand the Tasmanian gas market and pipeline utilisation.

Transmission component of small business gas bills have increased by 6.8 per cent, and distribution charges by 8.5 per cent, with no reason or published information.

We estimate that the retail component of TGR's 2016 business tariff is $6.70 per GJ, an increase of 15 per cent on 2015. The increase and a lack of explanation for it should be of concern to the TSBC.

Switching to gas has had only modest success due to low electricity heating tariffs, the costs of changing appliances/equipment, higher gas prices and LPG prices below natural gas prices. Looking more to the future, there is a possibility that electric heating running costs could continue to fall (with advances in heat pump technology) and make gas space heating less competitive, although pressures to increase electric heating tariffs in Tasmania could offset this.

Expanding the Network, More Connections and Gas Supply Vulnerability

With 43,000 potential connections, Tasmania's natural gas network has less than half the 100,000 reach originally envisaged. Existing reach is significantly due to $56 million provided by the Tasmanian Government to help initial roll out and to connect customers. Similarly, the lack of network since is, in no small part, due to the end of Government support. Tas Gas has no plans to expand the network without Government support, but has built a few one-off expansions for new load.

The Tasmanian Gas Network was originally envisaged to reach 100,000 customers but has only been expanded to 43,000. At 2014/15, there was only 12,508 residential and commercial customers.

As such, there is a lack of strategic direction in the further development of the State's gas network. This also raises equity issues with only a small minority of Tasmanians having access to natural gas.

By contrast, the Victorian Government, provides $85 million (jointly funded with the Federal Government) for supply of reticulated natural gas across regional and rural Victoria.

Having examined the existing network and areas where expansion is easiest and most logical, we found seven areas worthy of further consideration by way of developing a business case: Launceston and its northern and eastern suburbs; Launceston's airport precinct; East Devonport; Ulverstone; additional parts of Burnie and; Wynyard; Smithton, which has industries that would benefit from natural gas, such as dairy and food processing; and Hobart's eastern shore, Kingston and Cambridge.

According to the ACCC, a recent proposal to extend the network from Port Latta to Smithton, which had secured Federal funding of $6 million, did not proceed due, at least in part, to the TGP asking shippers to pay a 200 per cent premium on their past charges.

Incentives to connect to gas, such as appliance rebates, can play an important role in allowing the small Tasmanian natural gas market to expand and reach critical mass. Attractive incentives were originally offered to households and by all accounts stimulated connections. Government financial support played a major role. While Tas Gas continues to offer incentives, these have not been as successful in expanding the market. Aurora does not appear to offer any connection incentives. The limited nature of connection incentives, including for businesses, is holding back the market.

The single pipeline connecting Tasmania is a point of gas supply vulnerability. Supply disruption could significantly impact gas consumers, including small business, as well as electricity generation. The small size of the gas market would make pipeline duplication uneconomic, but other measures could be examined to reduce vulnerability, such as storage, line pack or local gas production. However, each is problematic in such a small market.

Gas Regulation and Policy

Tasmanian network and retail charges are not regulated. The reasons for light handed relate to the small size of the gas market, with gas not seen as an essential service, electricity prices expected to place a cap on gas prices due to substitution possibilities and the threat of additional regulation acting as a discipline on monopoly gas suppliers, making market power in gas pricing ineffective. Our report raises issues around each of these justifications for light handed regulation.

The Tasmanian gas market has grown to around 12,000 connections and, whilst it remains small, monopoly gas suppliers now have more influence over the prices, electricity prices are not providing an entirely effective ceiling on gas prices (e.g., they have increased substantially, contain cross-subsidies and electricity is not always a good substitute for gas). The threat of regulation is not an effective discipline on the market power of a monopoly pipeline (e.g., it still leaves scope for monopoly pricing and relies on detection). In addition, gas is now essential to consumers, including vulnerable ones.

Moreover, price regulation is common to monopoly gas networks here and overseas. The ACCC has found evidence of monopoly pricing by gas networks under light handed regulation, problems with the existing test for covered (regulated) pipelines and a lack of transparency in the costs and charges of unregulated pipelines. It has recommended reforms to improve the regime.

The ACCC has recommended reforming the current light handed regime.

Light handed regulation has been in place in Tasmania for 13 years without review. The ACCC has found flaws in the regime and has highlighted that TGP attempted to increase its charges to shippers by 200 per cent for use of a proposed network extension to Smithton. Although the ACCC inquiry concluded that the TGP owner was trying to recover the expected revenue loss arising from TVPS no longer requiring gas post 2017. TGR is also indicating that higher pipeline charges will be a major cause of future gas price increases. In addition, the end of the current gas contract for the TVPS could place added upward pressure on transmission charges. Given the above, it is justified to review Tasmania's light handed approach to regulation.

It would also be useful for the Tasmanian Government and the TSBC to support the ACCC's proposals to strengthen pipeline regulation, including their application to Tasmania; and advocate to the ACCC's forthcoming review on whether the availability or pricing of capacity on regional pipelines raises any concerns as a possible contravention of the *CCA* in Tasmania.

We note that gas users can seek a 'Declaration' or 'Coverage' under the CCA or National Gas Law. This allows for the application of third party access rights or full price regulation. It is beyond the scope of our report to provide advice on how these approaches might be applied to Tasmania's gas pipelines, or if they would benefit gas consumers, including small business, but the matter warrants further investigation. This should also consider progress with implementing the ACCC's recent recommendations.

The Tasmanian Government's original gas policy objectives included introducing natural gas to diversify the State's energy sources and ensuring that the natural gas industry is "efficient and competitive". However, to date the industry cannot be described as "competitive" or necessarily "efficient". Obstacles include small size, very limited network expansion, comparatively high gas prices, little retail competition, and high network charges.

The Tasmanian gas market has failed to deliver the Tasmanian Government's original gas policy objectives.

In the interim, there has been little said about how relevant the original gas market objectives remain, how they are tracking or whether they continue to support Tasmania's interests. In fact, the Government has tended to keep at arm's length from the gas market. It would be timely to review current policy.

Under the current Government's *Tasmanian Energy Strategy*, it is intended that energy should work to the advantage of the Tasmanian people, and strategically for investment attraction and job creation. We examined the original gas policy objectives and the main outcomes sought through the *Tasmanian Energy Strategy* relating to natural gas (see Table 4). The overall impression is one of gaps to fill, opportunities to grasp and a need to review existing policy settings.

We also examined the 43 Actions in the *Tasmanian Energy Strategy,* of which two relate to gas (see Table 5). Whilst there is limited information about how these are progressing, there is a need to better integrate gas into the Strategy and for a more strategic approach to gas policy, addressing key gaps in the Tasmanian gas market, like the lack of network expansion, lack of competition, price pressures, gas security risks, and the effectiveness of light handed regulation.

When assessing the Tasmanian Energy Strategy, we concluded that there are gaps to fill, opportunities to grasp and policy reviews required.

Perspectives of Small Business

We undertook an online survey of the views of Tasmanian businesses on the gas market. Whilst the sample was small, the results still provide useful commercial insights. They are summarised below:

- Gas has mostly displaced liquid fuels (in 39 per cent of cases), followed by electricity (33%).
- By far the most common reason for connecting to gas was its cheaper cost.
- 94 per cent of respondents experienced gas price increases in the past year and all experienced price increases over the past three years, of which half were increases of 10 per cent or more.
- Over 90 per cent of respondents recognised TGR as a gas retailer. Recognition of Aurora was well behind this at 39 per cent, suggesting it lacks presence in the gas market.
- Over 80 per cent of respondents agreed that gas should be more available, whilst 77 per cent felt that prices were too high and 64 per cent that there was not enough competition. Nearly two-thirds supported government incentives to connect. A significant number said they would connect if gas was available or would increase their use if gas was cheaper.
- Over 90 per cent said that expanding the gas network and lower gas prices were the most important factors in decisions about increasing their use of gas. Over 80 per cent said that lower transport charges and incentives to connect were important. Price regulation and more competition both received support from more than 70 per cent of respondents.
- The results suggest a potential by both current and new gas users to add to gas use.

Based on an online small business survey, gas displaced diesel and electricity, 80 per cent indicated natural gas should be more available and 77 per cent indicated prices were too high.

Perspectives of Other Stakeholders

Views on the Tasmanian gas market were obtained from other stakeholders are summarised below:

- The small size of the gas market and limited coverage are a hindrance to further growth.
- There are opportunities for government funding of economic network expansions and new connections, noting that SMEs will be beneficiaries.
- The single gas pipeline limits the "competitive dynamic" in the market.
- It was pointed out that, if TGP seek to abuse their monopoly power, gas customers can seek to strengthen the regulation applied to the TGP via the national gas and access regimes.
- LNG developments represent an unprecedented level of volatility and uncertainty in gas markets, though these pressures have abated due to depressed world oil prices.
- Uncertainty about upstream gas prices and Tasmania's small market deter competition.
- Market pricing for gas is working given the nexus between natural gas, LNG and electricity prices, although future electricity tariff changes could alter this.
- The original reason for light handed regulation may have changed, as the network now connects vulnerable customers and public housing, but there is no obligation to supply.
- Gas market reviews by the ACCC and AEMC could have important implications for Tasmania. However, proposed changes to the Victorian gas spot market create barriers to entry, limit competition and reduce transparency. This could limit gas competition in Tasmania.

Uncertainty about upstream gas prices and Tasmania's small market has been a deterrent for competition

Key Findings

These are presented below and covered in more detail in the body of the report along with related Actions:

1. There is a lot of potential for growth in Tasmanian gas consumption, including by small business and households, who have very low gas penetration levels (2 and 5 per cent respectively)

2. Expanding the network would help to increase gas consumption but to be realised would require some government support

3. More connections will also help to increase gas consumption but again some government support is needed, at least for a time

4. The incomplete gas network means that some Tasmanians are connected to gas but others not, raising equity issues

5. Small business appears to have an appetite to increase their gas use if the conditions support it, especially access, competitive pricing and connection costs

Key findings relate to strong potential growth, network expansion and strong appetite to increase gas usage.

6. The single gas pipeline is a point of energy vulnerability in Tasmania

7. The retail gas market suffers from a lack of competition but actions can be taken to improve this, especially by growing the gas market, making it more competitive and reducing pipeline charges

8. Small business gas prices are high and not competitive but actions can be taken to improve this, especially by growing the gas market, making it more competitive and reducing pipeline charges

9. The lack of retail competition means there is little price competition but steps can be taken to deliver both more competition and competitive prices

10. Power generation is important to the Tasmanian gas market but has been variable, and is likely to be present in future other than in times of emergency

Further key findings relate to vulnerable gas supply, poor competition, high gas prices, power generation criticality and the need for regulatory review.

11. The Tasmanian gas market is vulnerable to loss of major industrial load and opportunities for major new load, whilst uncertain would be beneficial to the market. Small business and household load growth opportunities are more certain and should therefore also be pursued.

12. Gas commodity prices have increased and this poses challenges for Tasmanian gas users and its small gas market, and new contracts will need to face these challenges, though Tasmania's strong links to the historically more tempered Victorian gas commodity price increases are an advantage

13. Tasmanian gas transmission and distribution charges are expensive and comprises a significant part of gas bills

14. The unregulated monopoly status of gas transportation charges should be reviewed to determine its continued relevance and consistency with the need to develop the Tasmanian gas market

15. A major review of the gas market is needed to ensure it does not continue as a significantly underutilised resource with a potential risk of eventual failure, instead maximising its potential to benefit Tasmanian gas users and the State's economy

* * * * *

Abbreviations

ACCC	Australian Competition and Consumer Commission
AEMC	Australian Energy Market Commission
AER	Australian Energy Regulator
CCA	Competition and Consumer Act
CCGT	Combined Cycle Gas Turbine
COAG	Council of Australian Governments
LPG	Liquefied Petroleum Gas
MDQ	Maximum Daily Quantity (of gas)
NCC	National Competition Council
NGO	National Gas Objective
NEM	National Electricity Market
OCGT	Open Circuit Gas Turbine
OTTER	Office of the Tasmanian Economic Regulator
SME	Small to Medium Enterprise
TVPS	Tamar Valley Power Station
TGP	Tasmanian Gas Pipeline
TGN	Tas Gas Networks
TGR	Tas Gas Retail
TSBC	Tasmanian Small Business Council

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Introduction

- Tasmanian small business and the gas market
- Scope of study
- Our approach
- A mix of competition and intervention needed
- Report structure

Goanna Energy Consulting Pty Ltd

1 Introduction

1.1 Background to the Report

The Tasmanian natural gas market is relatively new, having only commenced in 2003 and it remains quite small when compared to gas markets in other jurisdictions. It would be fair to say that it has, in many important respects, fallen short of expectations notwithstanding that gas offers access to a significant alternative fuel and is important to gas consumers in Tasmania – large and small.

Small business is currently a light user of natural gas and relatively few Tasmanian small businesses use gas compared both to electricity and to their peers in other jurisdictions. Nevertheless, gas could offer potential for greater use by small businesses with savings in energy costs and efficiency. There may be aspects of the gas market that limit the extent to which small businesses can make use of it at present or other barriers to its greater use. This could be detracting from the competitiveness and productivity of Tasmanian small businesses which, in turn, could be detrimental to the State's economy.

The Tasmanian Small Business Council (TSBC), the representative body for small businesses in the State, therefore felt it was important and timely to examine the Tasmanian gas market at this point in its development to determine its impact on small business and what potential there is for small business to make greater use of natural gas.

1.2 Commissioning of Goanna Energy Consulting & Our Remit

In view of the above, TSBC commissioned Goanna Energy Consulting to undertake a study of the Tasmanian gas market and how it relates to small business. Our scope of work is described below:

- Identify the costs and risks to Tasmanian small business of their limited access to natural gas.
- Consider the impact on small business of the renegotiation of the Tasmanian gas transport contract post December 2017 together with a forecast increase in the domestic gas price.
- Consider the above in the context of the Tasmanian Government's *State Energy Strategy – Restoring Tasmania's Competitive Advantage,* which has as a key objective "ways in which energy can once again be utilised as an economic driver including by securing a stable and sustainable price path that can provide relief to customers and help grow the economy and attract new investment."
- Determine a pathway for better outcomes for small and medium enterprises (SMEs) in Tasmania who make use of gas and would benefit from more competitive prices or greater ability to access natural gas.

1.3 Small Business in Tasmania

The TSBC describes small business as the 'engine room' of the Tasmanian economy. There are more than 37,000 small businesses in Tasmania, 30,000 of which are employers. They employ 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 small enterprises themselves, as well as Government and regulators as decision-makers. According to the TSBC, 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.

Energy is important to many small businesses. It is vital to their operations and energy costs are of interest to all small businesses. For some, energy is a major operational cost.

Tasmanian business tends to be at a competitive disadvantage compared to their counterparts in many other parts of Australia when it comes to energy.

Tasmanian small business tends to be at a competitive disadvantage compared to their counterparts in many other parts of Australia when it comes to energy. They do not have access to competitive retail energy offers in either gas or electricity. They also face among the highest gas prices in Australia.

1.4 Our Approach to the Report

In developing this report, we have researched and analyzed relevant information about the Tasmanian gas market and key external influences on it. We have then considered the position and needs of small businesses in relation to energy and gas in particular, as well as their relative position compared to other Tasmanian energy consumers and small businesses elsewhere in Australia. This has allowed us to formulate conclusions on the role that gas plays – and could play – in relation to the Tasmanian small business sector.

We also undertook an online survey of Tasmanian businesses regarding both their use of gas and views on the Tasmanian gas market. This provided a real world and practical commercial context to the study. Some Tasmanian gas market stakeholders were also interviewed on their role in and views on the market. The results of the survey and interviews were then integrated into the report and, along with the research undertaken, were used to help us develop our findings and conclusions.

Whilst the study has concentrated on the small business sector, it became apparent in compiling the report that many of the issues faced by the SME's are relevant to other gas users (large and small) and a broader set of stakeholders and where applicable, this has been referenced in the report

1.5 Competition or Intervention?

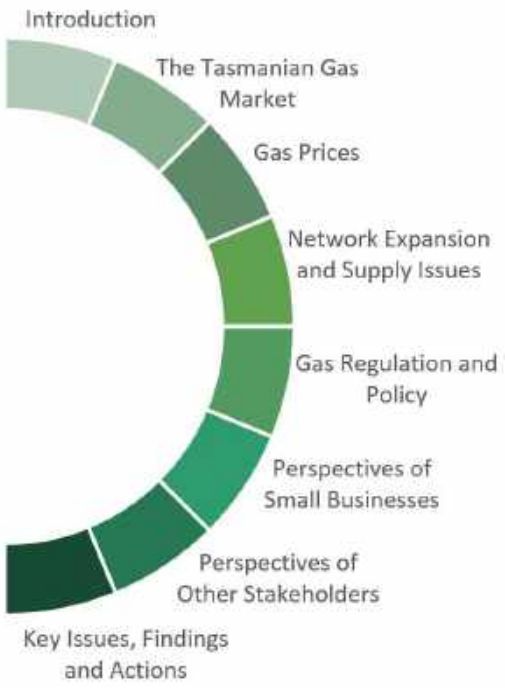
Approaches to markets, or industries, can conveniently be characterised as either focused on competition or intervention by governments. Most economists tend to favour the former. Whilst this provides a convenient point of differentiation for policy, it can also prove to be simplistic. Most markets in the real world tend to be characterised by some combination of both competition and intervention. The more important objective should be to ensure that the mix of both is applied so that the market in question performs as efficiently as possible and benefits the consumers involved.

Moreover, intervention can sometimes be used to give a market a 'leg up' so that it becomes more competitive, or develops scale faster than it otherwise would. For example, this was the case with the Australian telecommunications market in the 1990s when new competitors were provided with regulatory advantages over the incumbent provider, Telstra, to assist them entering the market. As it has transformed from a regulated monopoly to a more competitive structure, the energy market in many States has also followed an approach based on a combination of competition and regulation to help stimulate competition, e.g., structural separation, privatisation, regulation of monopoly networks, regulated tariffs with 'head room' and consumer protections. The Victorian gas market is also currently being expanded through a government funded scheme.

It is our belief that the very small and nascent Tasmanian gas market would be assisted in the speed and scope of its development, and to ward off threats, through a limited number of targeted Government interventions designed to stimulate market growth and competition. Without these the market will continue to underwhelm in terms of its development, competition will not be stimulated and some Tasmanians will have access to natural gas but not others. There is also a risk that ultimately failure could threaten. To be sure, the application of such a mixed approach to the initial establishment of the market succeeded in stimulating an initial (albeit insufficient) uptake of gas. It is our view that a renewed focus on some Government intervention aimed at stimulating both market growth and competition are required for the Tasmanian gas market to reach its potential. Without this the market is likely to remain an essentially underutilized resource for some time to come.

1.6 Report Outline

In order to achieve the brief of this project, the report is structured to first provide (in Chapter 2) the readers with an outlook of the Tasmanian gas market and its impacts on small businesses.



The following chapter (3) examines gas prices and their impacts on small business.

Chapter 4 considers gas supply issues and how they affect small business.

In Chapter 5, we look at the role of regulation and government policy in the performance of the Tasmanian gas market and how this could be used to better serve the interests of small business.

The results of our survey of Tasmanian businesses are presented in Chapter 6 and we comment on the implications of the survey's findings for this Report.

Chapter 7 discusses the results of our interviews with a range of gas market stakeholders.

Finally, in Chapter 8 we set out our main issues, findings and a list of follow-up actions that flow from these.

2

Outline of the Tasmanian Gas Market

- Tasmanian gas pipelines underutilised
- Natural gas penetration at 2% for small business, signalling scope for growth
- Variable natural gas demand and consumption

Goanna Energy Consulting Pty Ltd

2 Outline of the Tasmanian Gas Market

This Chapter describes key aspects of the Tasmanian natural gas market from the perspective of small business. It considers both internal aspects of the gas market and some external factors that impact on it.

2.1 Overview of the Market

The natural gas market in Tasmania is made up of transmission, distribution, retail and consumer components. Each is described separately below. A high level picture of the market is provided in Table 1 below.

Table 1: Summary of the Tasmanian Natural Gas Industry

	2011/12	2012/13	2013/14	2014/15
Total natural gas supplied (GJ)[1]	2,140.135	3,185.526	2,620.215	2,683,752
Total energy supplied as natural gas (GWh)	594.5	884.9	728	745
Total gas customers (nos)	9,487	10,967	11,978	12,699
Change from previous year (%)	2.4	15.6	-9.2	6.0

Source: Office of the Tasmanian Economic Regulator, *Energy in Tasmania – Performance Report, 2014-15,* January 2016, p. 141

The Tasmanian natural gas market is nascent and small, accounting for only around 2 per cent of Australian demand. Natural gas supply in Tasmania commenced in 2003 and there were a total of 12,699 customers connected to the network on 30 June 2015. This compares with 272,528 electricity customers in Tasmania and 119,000 small gas customers in the ACT (a market of roughly comparable size though with some different characteristics).

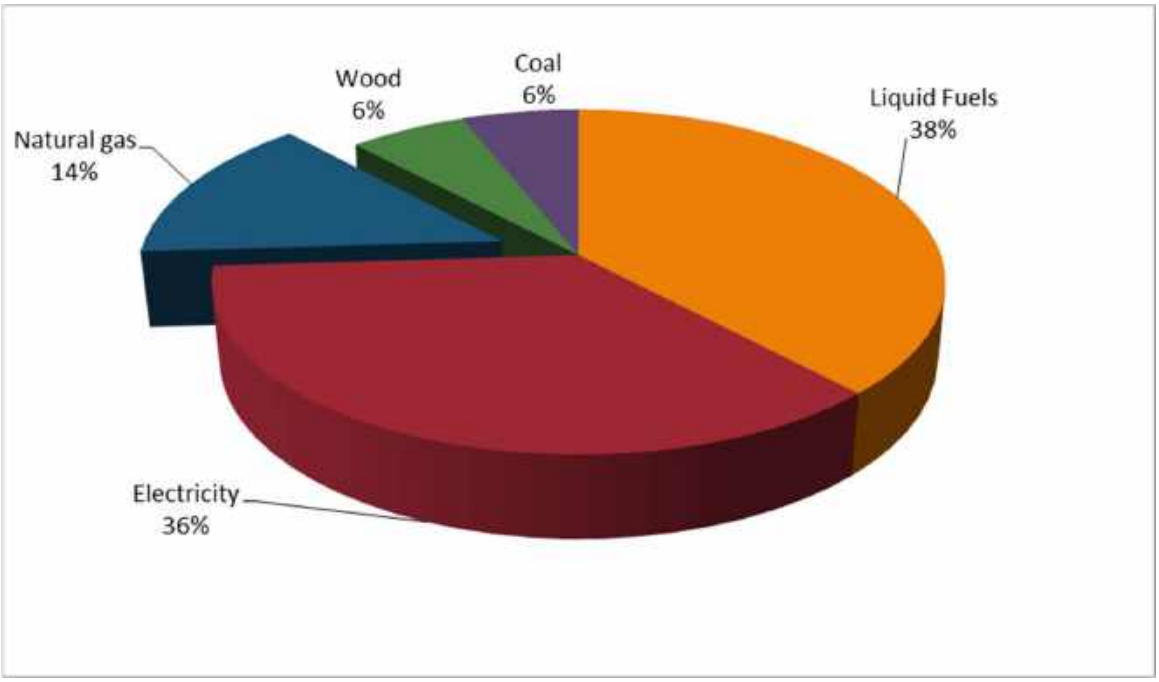
[1] A Giga Joule (GJ) equals 1 billion joules.

A total of around 783 Tasmanian businesses are connected to natural gas, with most being small to medium sized businesses. We estimate the total number of SME's connected at about 743. This is out of a total of 37,000 small businesses operating in Tasmania.

In 2014/15, 2,684 TJ[2] of natural gas was supplied in the Tasmania Distribution system. This equates to 745 GWh, or only 7.6% of the 9,752 GWh of electricity demand and underlines the small size of the market.

Natural gas accounts for around 14 per cent of total energy consumption in Tasmania (see Figure 1). This is small relative to other States, including cool winter ones such as Victoria, and the market remains small more than a decade since inception. This suggests there could considerable scope for growth in gas consumption, including by small consumers, a mainstay of the Victorian market.

Figure 1: Tasmanian Energy Consumption by Fuel Type, 2012/13



Source: Bureau of Resources and Energy Economics, *Australian Energy Statistics*, 2014.

[2] A Terra Joule (TJ) equals 1,000 GJ.

2.2 TRANSMISSION

Figure 2 shows a map of the Tasmanian gas transmission system. This runs from Longford in Victoria undersea to Five Mile Bluff (near Bell Bay) and then underground to Port Latta in the North-West of Tasmania, as well as south down as far as Bridgewater, just north of Hobart. It was commissioned in 2003, has a total length of 740 km and has a capacity to supply around 47 PJ[3] per annum (129 TJ per day). At record peak demand of 86 TJ, only two-thirds of the pipeline's daily capacity was being used. At underlying demand of around 18 TJ per day only about 15 per cent of the pipeline is utilised. The 2.6 PJ of gas supplied to Tasmania in 2013/14 represents only 5.5 per cent of the TGP's annual capacity. Hence, the pipeline is very underutilised.

The pipeline is owned and operated by Tasmanian Gas Pipeline (TGP), which was purchased in 2011 by Palisade Investment Partners. It is the only source of natural gas into Tasmania. Box 1 below contains a brief description of the history of the TGP and its main characteristics.

Box 1: Brief History and Main Characteristics of the Tasmanian Gas Pipeline

The TGP was constructed by DEI Tasmania Holdings Pty Ltd, a wholly owned subsidiary of Duke Energy International, following a feasibility study by Duke Energy and an agreement being finalised with the Tasmanian Government on 6th April 2001. The project commenced in late 2001 and was completed in 2003. The 724 km pipeline was built at a cost of over $400 million and underwritten by a contract to provide haulage for gas to be delivered to the Tamar Valley Power Station from August 2002 until December 2017.

TGP was sold to Alinta Ltd on 23rd April 2004 as part of Duke Energy's divestment of underperforming assets. Following several changes of ownership and company reorganisations, TGP was transferred to Babcock and Brown Infrastructure, Prime infrastructure and then acquired by Brookfield Australia. In July 2011, TGP was bought by Palisade Investment Partners for an estimated $200 million.

Palisade estimate the replacement value of the pipeline at $670 million with an asset life of 70 years. They say that revenue is underpinned by take-or-pay contracts to 2017-2018, indexed to CPI and list risks including the need to renegotiate supply contracts after 2017 and contract pricing currently well below where it would be if the TGP were regulated, due to the high asset value

Source: Goanna Energy Consulting, *Investment Magazine*, 16 August 2011 and http://palisadepartners.com.au/assets/tasmanian-gas-pipeline/

The TGP provides the ability for shippers to transport natural gas to Tasmania. These shippers supply natural gas to retailers via a series of nine separate pipeline networks. The TGP also has 3 large gas consumers that connect directly to it (Bell Bay Aluminium at Bell Bay, Grange Resources at Port Latta and Tamar Valley Power Station (TVPS) at Bell Bay). These connections are available for use by other businesses but have been specifically designed for the businesses they serve.

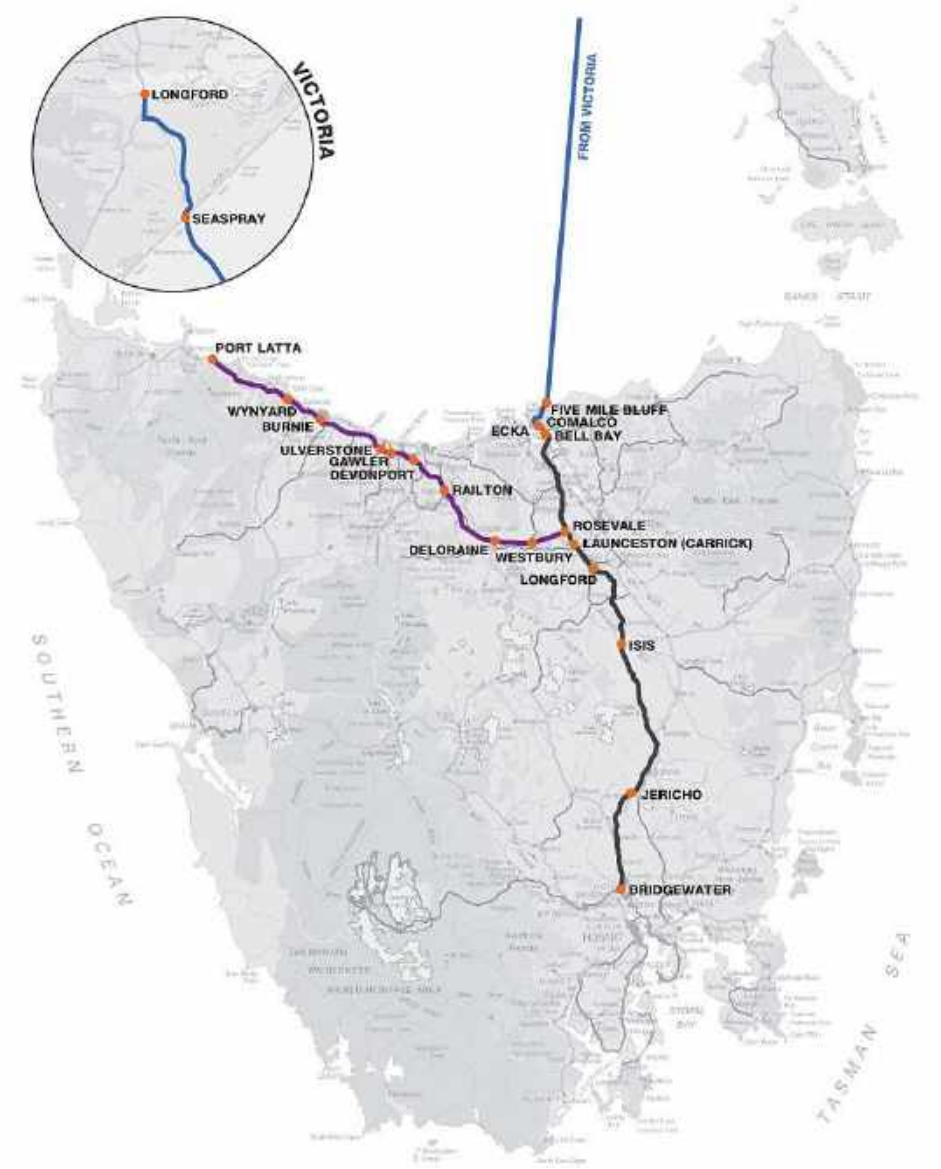
TGP revenues are derived mainly from the current 'take or pay' agreement with TVPS for the shipping of up to 20PJ of gas annually until December 2017. In addition, the two major industrial customers (Bell Bay

[3] A Peta joule (PJ) equals, 1,000 TJ.

Aluminium and Grange Resources) account for 2.8 PJ pa of gas. The remainder of the gas supplied to Tasmanian customers is via the distribution network.

TGP has also identified an opportunity for its surplus line pack capacity of 150 TJ to be used for natural gas storage, primarily for injection into the Victorian gas network and is progressing this.

Figure 2: Tasmanian Natural Gas Transmission System



Source: Tasmanian Gas Pipeline, http://www.tasmaniangaspipeline.com.au/map.

2.3 DISTRIBUTION

The distribution network transports gas, at lower pressures than the transmission network, from meter stations to gas consumers and connects to the TGP at nine points along its length. The network is owned by Tas Gas and comprises approximately 712 km of gas pipe, constructed over two major stages from 2003 to 2007, and supplies gas to the State's commercial and residential natural gas customers.

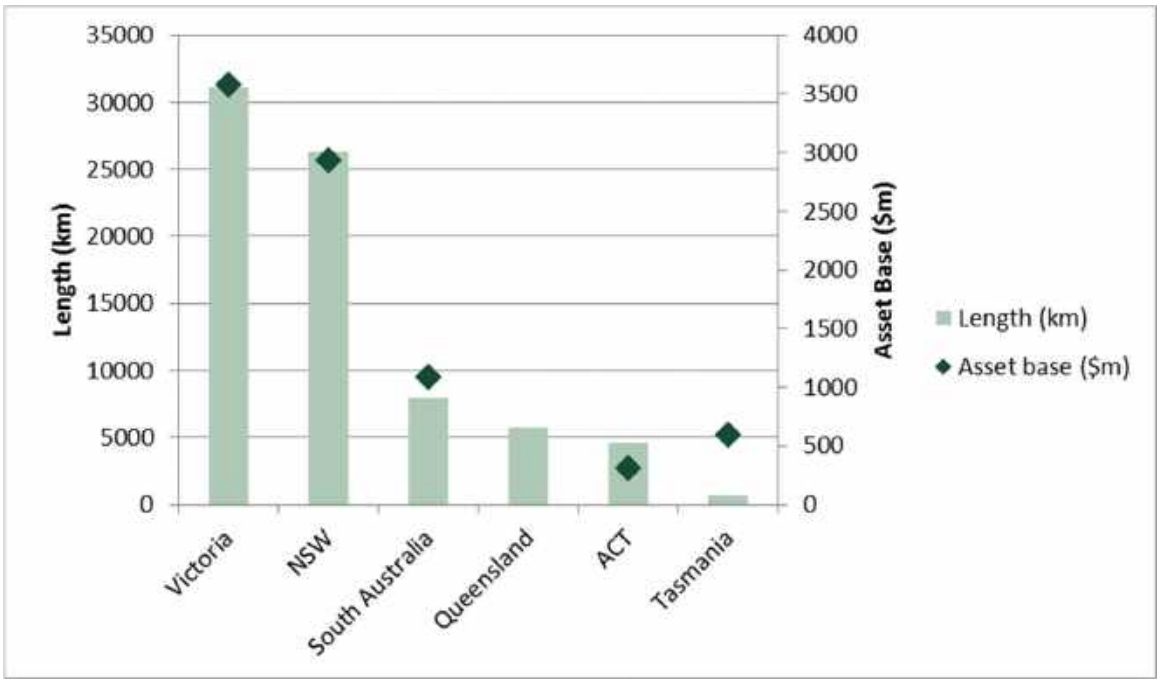
Gas supplied via the distribution network currently totals 2.68 PJ, consisting of 1.9 PJ servicing larger customers over 10TJ pa and 0.76 PJ servicing residential and small business customers.[4]

This network is very small by comparison to the more mature gas distribution networks operating in other States, as shown in Figure 3 below. Tas Gas Networks' (TGN) mains are less than one-sixth the length of the next smallest network, that in the ACT. However, TGN's asset base is twice the size of the ACT's. Its ratio of network length to asset base is also nearly six times higher than in the next highest jurisdiction shown (South Australia), which also has a geographically dispersed network. On the one hand, this would reflect TGN's lack of economies of scale and its younger network, but it could also be symptomatic of factors such as capital inefficiencies, an over-valued (inflated) asset base and reliance on light handed regulation. A lack of transparency about TGN's costs and its unregulated nature make it difficult to determine the exact reasons. In any case, this is an important reason why gas distribution charges are expensive and a high proportion of gas bills in Tasmania.

Tas Gas Networks' (TGN) mains are less than one-sixth the length of the next smallest network, that in the ACT. However, TGN's asset base is twice the size of the ACT's.

[4] Office of the Tasmanian Economic Regulator, *Energy in Tasmania Performance Report 2014/15*, January 2016, Table 16.1, p. 141.

Figure 3: Gas Distribution Mains – Length and Asset Base



Source: Goanna Energy Consulting adapted from Australian Energy Regulator, *State of the Energy Market, 2015 Edition,* Table 4.2, p. 113.

2.4 RETAIL

Gas retailers arrange for supply, carry out billing and revenue collection, and bundling of product options to suit customers' needs. There are two active natural gas retailers in Tasmania – Aurora Energy and Tas Gas Retail Pty Ltd (TGR). The latter has the dominant market share at about 65 per cent. EnergyAustralia, a major mainland retailer, is also known to supply gas to a small number of large customers. Aurora has lost market share in recent years with its share falling from 47 per cent in 2008 to only 35 per cent at present, a further deterioration in the limited competition that exists.

Unlike electricity, where only Aurora Energy offers retail services to the entire market, in gas both retailers pursue the full range of gas consumers, including small business.

Full retail competition (FRC) has applied to the gas retail market since its inception. Prices are unregulated and consumer protection provisions apply, particularly aimed at smaller consumers, but there is no obligation to supply (as in electricity) with natural gas not considered to be an essential service.

2.5 CONSUMERS

As already mentioned, Tasmania's natural gas market is small. Information on retail customer numbers is shown in Table 2 below. In 2014/15 there were only 11,765 retail gas consumers in Tasmania. However, customer numbers have increased by around 2,800 since 2010/11.

Table 2: Tasmanian Natural Gas Retail Customers[5]

	2010/11	2011/12	2012/13	2013/14	2014/15
Total Customers (nos)	8,939	9,862	10,780	10,979	11,765
Growth pa (%)	na	10.3	9.3	1.8	7.2
Residential Customers (nos)	8,237	9,123	10,039	10,242	10,982
Growth pa (%)	na	10.8	11.0	2.0	7.2
Business Customers (nos)	702	739	741	737	783
Growth pa (%)	na	5.2	0.3	-0.5	6.2

Source: Office of the Tasmanian Economic Regulator, *Energy in Tasmania – Performance Report, 2014-15,* January 2016, Table 17.1, p. 145.

From a small business perspective, it is notable that only 783 businesses were consuming natural gas in 2014/15. We estimate that about 743 are small businesses, a mere 6.3 per cent of the total number of customers. Moreover, over the period covered by the table, growth in small business connections has been sluggish, with connections falling slightly in 2013/14 before recovering in 2014/15. Small business connection growth has also lagged well behind residential connections over most of the period covered.

The rate of natural gas disconnections also increased significantly from around 100-200 per annum in the three years to 2012/13 to 473 in 2013/14 and 370 in 2014/15. We understand that these mainly relate to payment difficulties, especially related to low income consumers, although some natural gas customers may have also returned to alternative fuels such as LPG. Presumably the latter reflects dissatisfaction with the cost of natural gas or other aspects of supply. The price of LPG is now slightly below that of natural gas, which could attract more consumers away from natural gas in future, if sustained.

Gas penetration, or the proportion of households and businesses connected, is still very low in Tasmania at only 5 per cent. This compares to 80 per cent in the ACT, which has about the same population as Tasmania, experiences cold winters and has had a gas reticulation network for about 30 years, albeit one concentrated

[5]Customer numbers differ to those in Table 1 because some customers connected to the distribution network are not classified as retail customers, e.g. customers connected but not consuming gas or if a connection is disconnected. Furthermore, there can be a mismatch in timing between when the distribution network recognises a customer compared to when the retailer does.

on a few urban areas. Penetration is 90 per cent in Victoria and 80 per cent in South Australia, which have cool winters but older and larger reticulation networks. Gas penetration for small business consumers in Tasmania is only around 2 per cent of all small businesses and perhaps 10 per cent for small businesses with access to the gas network.[6]

2.6 TASMANIAN GAS RESERVES

There are prospects for the development of gas reserves to provide Tasmania with additional sources of gas, both onshore (shale gas and oil) and offshore (in Bass Strait).[7] A combination of exploration and development of such reserves stimulated by prevailing and prospective gas prices, infrastructure to link such reserves to Tasmania and the mainland, as well as growth in the Tasmanian gas market would be needed. However, the prospects of this occurring remain problematic.

Most controversially, the use of fracking to explore and exploit Tasmania's onshore gas reserves has raised land use and environmental concerns. This led to the Tasmanian Government imposing a five-year moratorium on the use of fracking techniques in February 2016. This decision was not made with the benefit of an independent review to consider the full impacts of fracking, though some public submissions were received and considered beforehand.

At the time, there were a number of companies involved in exploring for shale gas and oil in Tasmania. While some interest in exploration remains, the moratorium has dented its attractiveness as fracking is critical to the exploration and exploitation of shale deposits. The CEO of one of the exploration companies commented at the time that the decision was "politically motivated", that "there is no real science behind the decision" and that the company would consider whether to take its business elsewhere.[8]

The use of such moratoria on fracking techniques has also been questioned. For example, a recent review in the Northern Territory concluded that there was "no justification whatsoever for the imposition of a moratorium on hydraulic fracturing in the Northern Territory." The Productivity Commission and Australian Competition and Consumer Commission (ACCC) have also raised questions about the use of moratoria.

Most recently, the ACCC has recommended that proposals for gas exploration and development be reviewed case-by-case and "should take account of a range of considerations including the costs and benefits to the domestic gas market, and to industrial users in particular, as well as environmental and social concerns."[9] In relation to the Tasmanian Government's decision, we are concerned that it has not been made following a thorough assessment of all the arguments for and against and that the economic impacts on Tasmania may not have been adequately considered.

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[6] We estimate that around 7,500 businesses currently have access to natural gas. In addition, LPG currently has a price advantage over natural gas, which would make the cost of conversion for many of those businesses with access to natural gas, but not currently connected, uneconomic.

[7] Origin Energy's Yolla gas field lies about 120 kilometres off the northern coast of Tasmania, roughly equidistant to the mainland and produces 24 PJ of natural gas annually.

[8] Comments by Mr Terry Kallis, CEO, Permatherm, reported in ABC News, *Fracking banned for five years by Tasmanian Government*, 26 February 2016 at http://www.abc.net.au/news/2015-02-26/fracking-banned-for-five-years-by-tasmanian-government/6265378.

[9] ACCC, *Inquiry into the East Coast Gas Market*, April 2016, p. 3.

2.7 GAS CONSUMPTION

Tasmania's daily gas consumption since the beginning of 2010 is shown in Figure 4 below. The high variability of gas demand is obvious from this chart, with extremes in demand ranging from a low of 5.5 TJ on 20 February 2011 to a peak of 86.5 TJ on 7 April 2016.

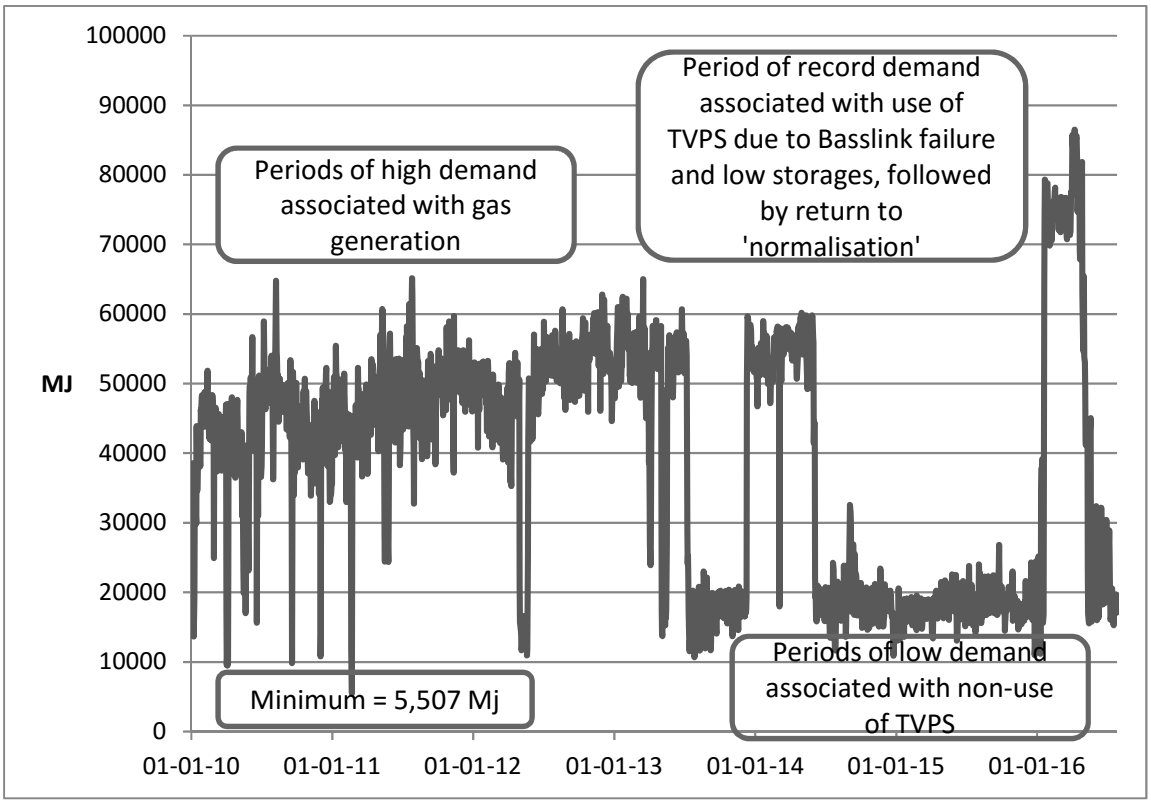
From mid-January this year until early May, gas demand was running at record highs due to the re-opening of the TVPS in response to the failure of the Basslink interconnector and low hydro dam levels. This followed an extended period of low gas flows from mid-June 2014 to January 2016 due to the TVPS being shut down.

However, even at the highest levels, daily flows are still only two-thirds of the pipeline's capacity, leaving at least one-third of the pipeline unused under any conditions.

Underlying daily demand is probably more like 18 TJ (only about 15 per cent of daily capacity) and is less variable. This is essentially comprised of major industrial, smaller industrial and commercial and household use. With gas fired power generation in play it is not unusual for demand to increase by three or four times this level.

Gas consumption in Tasmania can be broken down into its main uses. Gas fired power generation can consumer up to 20 PJ of gas annually but it is also not unusual for its demand for gas to be zero. The two large industrial users consume around 2.8 PJ, remaining larger industrial users consuming over 10 TJ pa 1.9 PJ, small business users around 0.35 PJ and households around 0.4 PJ. The minor consumption share of small business (6.4 per cent of gas consumption excluding power generation) is apparent.

Figure 4: Tasmanian Daily Gas Flows



Source: TGP Pipeline Statistics at http://www.tasmaniangaspipeline.com.au/pipeline-stats.

2.7.1 Gas Fired Power Generation

As mentioned before, gas for power generation can be a significant component of overall Tasmanian gas consumption, however, it is also highly variable. Variation is dependent on a range of factors. These include relative power prices and demand in Tasmania and Victoria, the availability of hydro and wind generation, drought and the availability of the Basslink interconnector. As such, power generation adds greatly to gas demand and its peakiness. This is evident in Figure 4 above and in the high variability in its share of annual gas consumption.

The main gas fired power station is the TVPS. The station was shut down in May 2014 and closed in November 2015 pending its future sale, reducing gas consumption for electricity generation to near zero. This decision was reversed in January 2016 as a result of the failure of Basslink and low hydro dam levels.

The use made of gas generation has important implications for the future of the gas market in Tasmania. Gas fired generation currently operates on the basis of long term 'take-or-pay' contracts, which provide a stable revenue base for the TGP and therefore reduce the cost of Tasmania's gas transmission infrastructure for business and household customers. The current gas transmission contract for power generation finishes at the end of 2017. If the contract were not renewed or contract demand was significantly reduced, it could result in increased gas prices for remaining customers and make gas a less competitive fuel for large and small business consumers.

The Tasmanian Government has said that the TVPS's "sale is now completely off the table"[10] and it has been placed in dry lay-up pending future emergency use should electricity supply conditions warrant.

2.7.2 Major Industrial Use

A number of Tasmania's Major Industries are connected to natural gas. Bell Bay Aluminium and Grange Resources are connected directly to the main transmission pipeline. Other major industries such as TEMCO, Boags, Tasmanian Alkaloids, Simplot, Fonterra, Nyrstar, Cascade and Cadburys are connected via the distribution network. Whilst there may be some scope to increase existing major industries' use of gas, this is limited and Tasmania would need to attract new majors to do so. Although this is an aim of the Tasmanian Government and part of its *Tasmanian Energy Strategy*, at this point in time, no new major industrial load appears to be in prospect.

This is an important issue for small businesses as major new gas load would help to boost transmission pipeline and distribution network utilisation. This would help spread the costs of gas infrastructure and could also result in extensions to the network, depending on its location. On the other hand, gas price pressures, including commodity prices and transportation charges, provide a downside risk to not only growth in major industrial load, but also the continuity of existing load. Any loss of major industrial gas load would further reduce the size of Tasmania's already small gas consumption and put more pressure on remaining gas users, including the prospect of the costs of network infrastructure being reallocated to a smaller base of gas use.

[10] See Tasmanian Government, *Submission to the Parliamentary Standing Committee of Public Accounts - Inquiry into the financial position and performance of Government owned energy entities*, May 2016, p. 23 at http://www.parliament.tas.gov.au/ctee/Joint/pacc.htm.

This illustrates the important linkages between different types of users in the Tasmanian gas market.

We are aware that during the time that the carbon tax operated in Australia, some large users were investigating the possibility of switching parts of their operations to natural gas. The abolition of the tax changed the economics of such projects, but any future carbon price could make them more attractive.

2.7.3 COGENERATION

Cogeneration often makes use of natural gas as a fuel source. There are three reasonable size cogeneration facilities in Tasmania – Simplot's food processing plant at Ulverstone, the Launceston General Hospital and the Fonterra cheese factory in Wynyard. There is scope to increase gas use through the installation of additional cogeneration using industrial, health, local council and commercial facilities. However, as with elsewhere in the National Electricity Market (NEM), the economics of cogeneration in Tasmania is complicated by a lack of transparency in gas, power generation and network costs. The economics of cogeneration can also be improved through carbon abatement measures.

Small business probably has limited scope to install cogeneration, but could benefit from additional cogeneration being installed by others, due to greater use of the gas network or extensions to it. One recent example of this is the installation of a cogeneration plant at Simplot's food processing plant at Ulverstone, with gas thereby also becoming available to other consumers in the area.

2.7.4 MID-SIZED INDUSTRIAL AND COMMERCIAL USERS

There would be a significant number of medium sized industrial and commercial businesses in Tasmania that could make use of natural gas, but who are not yet connected. Some of these currently use liquid fuels, coal or wood and pressure on them to move away from these fuels may increase due to climate change issues. Others use LPG, which currently enjoys a price advantage over natural gas. More mid-sized industries would be attracted to gas if it were competitively priced and readily available. Increased gas use by medium sized firms could also help to increase the use of the existing gas network and help to lower its fixed costs, or help make extensions to the network feasible.

Some businesses use LPG, which currently enjoys a price advantage over natural gas.

2.7.5 SMALL BUSINESS GAS USE

Small businesses currently make light use of the gas network. There are some 37,000 small businesses in Tasmania, but only 743[11] are connected to natural gas, a penetration rate of only about 2 per cent. We understand that around 7,500 small businesses currently can physically connect to the gas network. This means that only about 10 per cent of these are actually connected. At an average consumption per annum for small business of 473 GJ per annum, small business would currently be consuming a total of

There are some 37,000 small businesses in Tasmania but only 743 are connected to natural gas, a penetration rate of only about 2 per cent. Only about 5 per cent of households in Tasmania are currently connected to natural gas.

[11] There are 783 business customers connected, with three being large transmission connected customers and 37 consuming more than 10TJ, the cut off for smaller tariff customers.

around 350 TJ of gas annually, only 13 per cent of the total gas supplied through the distribution network in 2014/15.

This suggests that there is considerable scope for more small business connections to gas supply, which would help to grow the use of gas in Tasmania.

2.7.6 HOUSEHOLDS

As mentioned earlier, only about 5 per cent of households in Tasmania are currently connected to natural gas. This is negligible when compared to other jurisdictions. Moreover, only around 25 per cent of households that can currently connect to gas supply have actually done so. Once again, this provides considerable scope to increase the penetration of gas into households as a means of growing the use of gas and its infrastructure in Tasmania.

2.8 CHARACTERISTICS OF GAS CONSUMPTION

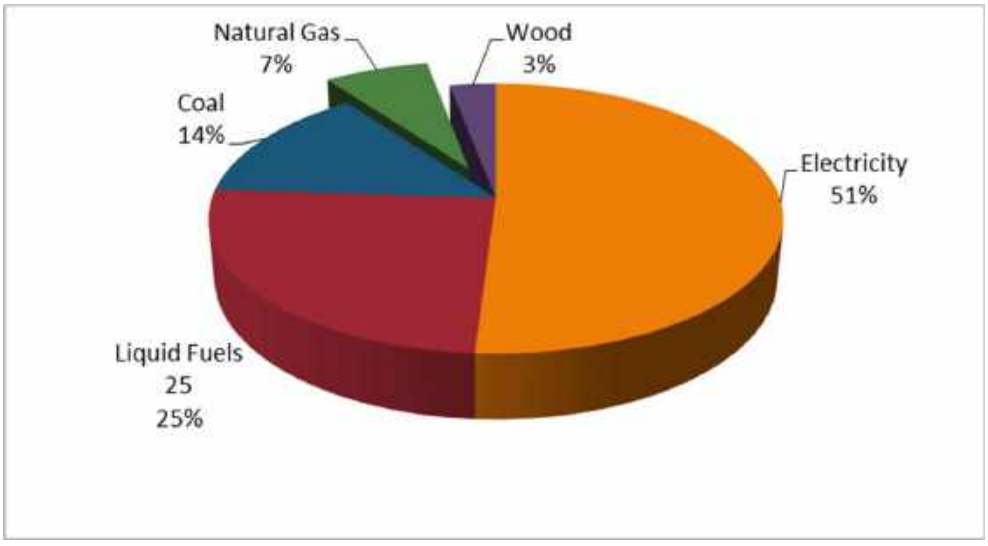
Figure 5 shows that, at 7 per cent of total energy consumed, gas is a relatively modest contributor to energy consumption by the Tasmanian industrial sector. This is in contrast to Australia overall, where it accounts for 31 per cent of energy consumed. Tasmanian small businesses involved in industrial activity would account for even less than this, with the bulk of industrial use being by larger industrial firms. This reflects factors such as the relatively recent availability of natural gas in Tasmania, existing capital stock, the cost of conversion and the relative price of natural gas compared to alternative fuels such as electricity, liquid fuels and coal.

In the Tasmanian commercial sector, electricity is the dominant fuel type, with only minor consumption of natural gas, LPG and wood. Natural gas consumption is significantly higher in other jurisdictions, such as Victoria and South Australia, where it is used predominantly for space heating. The high level of reverse cycle air conditioning (and heat pumps) installed in Tasmanian commercial premises has limited the use of gas for space heating in Tasmania. There is an opportunity to change this with a relatively high level of building construction now occurring, especially in Hobart.

Liquefied petroleum gas (LPG) is used by some households and small businesses for space heating, hot water and cooking. As previously stated, LPG currently has a price advantage over natural gas for commercial use. However, natural gas is safer and does not involve on-site storage.

Wood has been the traditional source of heating in Tasmanian households and hospitality businesses and still has a significant place in this market. It is still relatively easy to obtain and can be a cheap form of heating, but supply is getting tighter and environmental concerns are increasing.

Figure 5: Fuel Types Used in Tasmanian Industrial Sector, 2011/12



Source: Australian Bureau of Statistics, *Energy Account Australia*, 2011-12.

2.9 CONCLUDING REMARKS

The Tasmanian natural gas market is relatively small compared to other Australian States, with liquid fuels and electricity making up the bulk of fuel types. Gas penetration for small business is low, at a mere 2 per cent, with residential customers making up the bulk of connections; but at a 5 per cent penetration rate, the household penetration of gas remains very low. Gas fired power generation can be a significant component of gas consumption in Tasmania, but is highly variable and its future use looks likely to be restricted to supply shortages in electricity.

Even with record demand from the TVPS, the TGP is only two thirds utilised. As such, when there is no demand from the TVPS, the utilisation rate is lower, as low as 5.5 per cent of its annual capacity. The distribution network is also characterised by low utilisation, as well as limited coverage and a relatively high network length to asset base ratio.

gas prices in Tasmania will be discussed in the next chapter, to provide additional context to the Tasmanian gas market.

3

Gas Prices

- High Standing Offer Gas prices, Spot prices, Transmission charges and Distribution Charges
- Lack of competition in retail market
- Contract renegotiation of TVPS will affect small business and all gas consumers

Goanna Energy Consulting Pty Ltd

3 Gas Prices

Gas prices in Tasmania are not regulated. As such, they are determined by forces operating in the open market. Whilst gas retailers do provide small consumers with a standing offer price, there has historically been no published discounting on these rates (which apply to smaller customers consuming less than 1,000GJ p.a).[12]

3.1 Current Gas Prices for Small Business

New prices for both Tas Gas Retail (TGR) and Aurora Energy residential and commercial customers took effect on 1 January 2016. These are shown in Table 3 below.

There are several aspects of these prices in terms of their impacts on Tasmanian small businesses that require commentary.

Table 3: Standard Tasmanian Natural Gas Tariffs, 2016 (excl GST)

	Aurora Energy	Tas Gas Retail
Business		
Consumption charge (cents per MJ)	3.25	3.5
Change (%)	0	7.6
Supply charge ($ per day)	1.16	1.16
Change (%)	0	10.3
Residential		
Consumption charge (cents per MJ)	3.12	3.21
Change (%)	0	12.9
Supply charge ($ per day)	0.462	0.4689
Change (%)	0	11.6

Source: Aurora Energy and Tas Gas websites.

[12] The AER energy price comparator website *Energy Made Easy* confirms that there are no gas offers for Tasmanian customers.

First, both retailers have consumption charges for small businesses that are significantly higher than for residential consumers (14 per cent in the case of Aurora and 9 per cent for TGR). This is notwithstanding that small businesses usually consume larger amounts of gas than households and *a priori* would expect their consumption charges to reflect this, that is, be lower per MJ. Supply charges are more than double those charged to residential consumers.

We note that electricity tariffs for Tasmanian residential consumers are also significantly lower than for small business and gas charges may reflect the ability of gas retailers to charge small customers at just below the electricity price in an unregulated market.[13] Meanwhile, LPG pricing for small business has significantly reduced with up to five suppliers competing for this market. This has restrained natural gas price increases, but individual customers must seek competitive offers to achieve a reasonable outcome on energy pricing.

Secondly, TGR, the retailer with the largest market share, has increased its 2016 consumption charges by 7.6 percent and its supply charges by 10.3 per cent, both significant amounts. Although it has not provided specific reasons for these increases, it has previously flagged that it expects real increases in consumption charges in the order of $1.25 to $1.75 per GJ per annum until 2018, due to increases in the price of gas itself and transportation charges. According to TGR, these equate to real increases of 5-6 per cent per annum, around three times the current rate of inflation.

Thirdly, Aurora has not increased its commercial gas charges for 2016. This is a significant break with the past, as Aurora has tended to follow the price lead set by TGR (the larger gas retailer) and mirror almost exactly their charges. Aurora therefore provides a price discount compared to TGR of 7.6 per cent on gas consumption charges for small business and around 3 per cent for residential consumers. This can be seen by comparing the TGR and Aurora gas prices shown in Figure 6 and Figure 7.

On the surface, this has resulted in some price competition in the Tasmanian gas market.

However, to date, there appears to have been little customer response to these price differences. We understand that customer switching has been virtually unaffected. This may well reflect a lack of knowledge about the discounts on the part of smaller customers, who have limited knowledge of the gas market, and lack the time and resources to better inform themselves.

We understand that customer switching has been virtually unaffected by Aurora's decision not to increase its 2016 gas tariffs.

Moreover, Aurora does not appear to have marketed the discounts to potential new customers. This could reflect the small size of the Tasmanian gas market and therefore the limited ability to attract new customers with a marketing campaign, limiting the benefits to be gained through marketing expenditure. If so, this is an example of how competition in the Tasmanian gas market is hampered by the small size of the market, both in terms of the small number of customers and the limited reach of the natural gas network.

[13] The low residential electricity prices are a legacy of government policy at a time when electricity prices were under state government control and therefore were more reflective of political priorities. Small business effectively subsidised residential pricing. This was still the case when Tas Gas entered the unregulated market and gas pricing has reflected electricity pricing.

3.1.1 How Tasmanian Gas Prices Compare

The Office of the Tasmanian Economic Regulator (OTTER) provides a regular report which compares the regulated retail price (called the "standing offer") for gas in Tasmania with standing offer charges in other Australian jurisdictions for both residential and business consumers.[14] This provides a convenient and reasonably robust means of comparing gas prices for small business in Tasmania with other parts of Australia. The results of OTTER's latest comparison for gas standing offers are reproduced in Figure 6 and Figure 7 on the following page.

This shows that the standing offer gas prices paid by Tasmanian small businesses are well above the average for Australia across all consumption levels shown, which reflect the range of small business gas consumption. Whilst the absolute level of prices paid by Tasmanian small businesses does decline with higher levels of consumption, this is also the case in other jurisdictions. Overall, small business in Tasmania appear to pay around 30 per cent more for their gas from TGR, and 20 per cent more if they buy gas from Aurora, than the average regulated price for businesses around Australia. Tasmanian small business pays more than double the price for gas compared to the cheapest standing offer price.

The OTTER report also shows the cost of gas to Tasmanian small business compared to their counterparts in other States for a typical Tasmanian small business consumption level of 475,000 MJ per annum (see Figure 8). This shows an annual gas cost of around $17,500 for a Tasmanian small business buying gas from Aurora and $18,500 if they buy their gas from TGR at the average Tasmanian consumption level, compared to an average across Australia of about $12,000, a difference of between $5,500 to $6,500 (or 45 to 55 per cent). Compared to the lowest cost of about $7,500 per annum (AGL Victoria), the cost disadvantage for a Tasmanian small business is $10,000 to $11,000 per annum (or 133 to 145 per cent). In fact, throughout most of Victoria and much of New South Wales, the two States most likely to compete with Tasmania, small business enjoys significantly cheaper gas than in Tasmania.

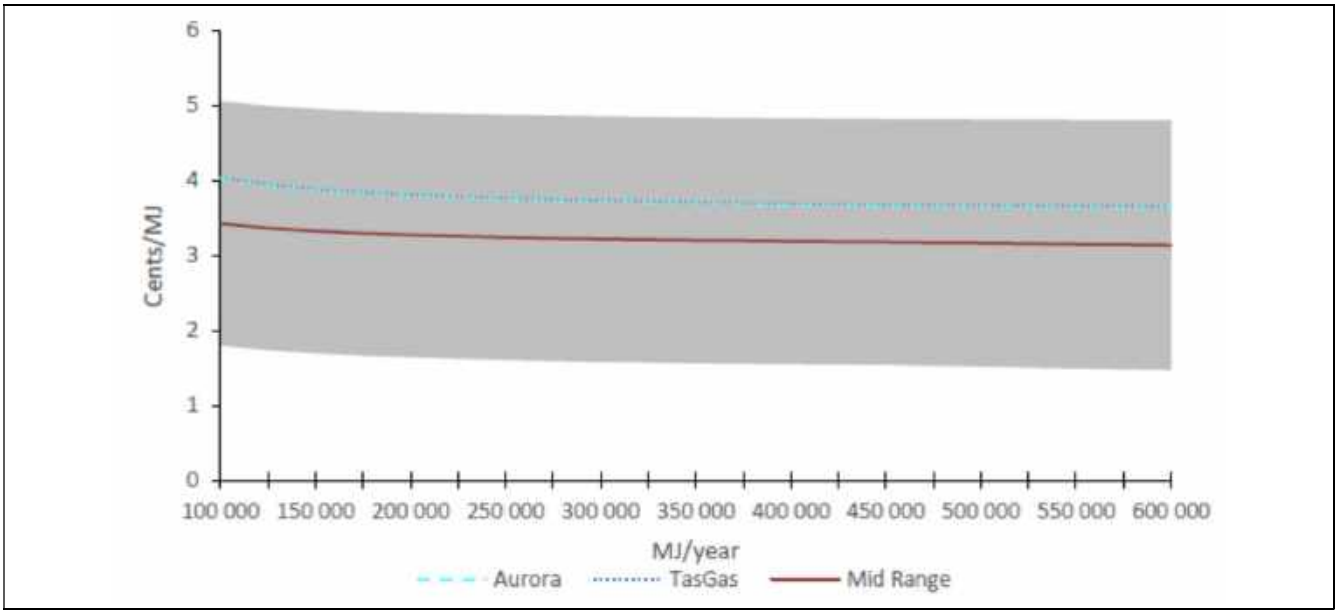
However, the gas price and cost disadvantage suffered by Tasmanian small business is actually worse than these figures depict. This is because in jurisdictions where gas and/or electricity retail markets have active competition, including New South Wales, Victoria and South Australia, customers have access to significantly cheaper prices than those available under regulated standing offers. For example, AER analysis of offers posted on its *Energy Made Easy* web site showed average discounts on standing offers of 10 per cent in New South Wales and Victoria and 5 per cent in South Australia and the ACT. In Victoria, discounts on the standing offer of 15 per cent or more are quite common.

As mentioned earlier, there are no gas price discounts offered to Tasmanian small businesses. This reflects the lack of competition in the retail market.

There are no gas price discounts offered to Tasmanian small businesses, unlike their peers in other jurisdictions.

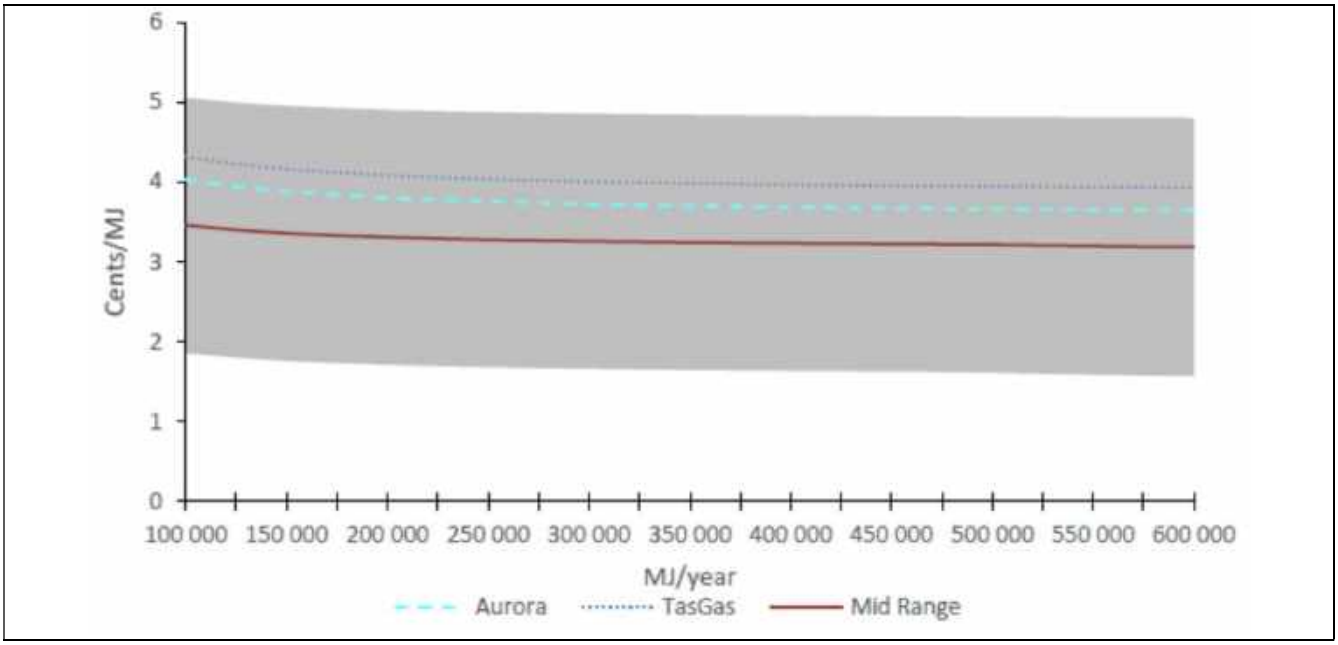
[14] It also does this for electricity.

Figure 6: Comparison of Small Business Gas Prices, October, 2015



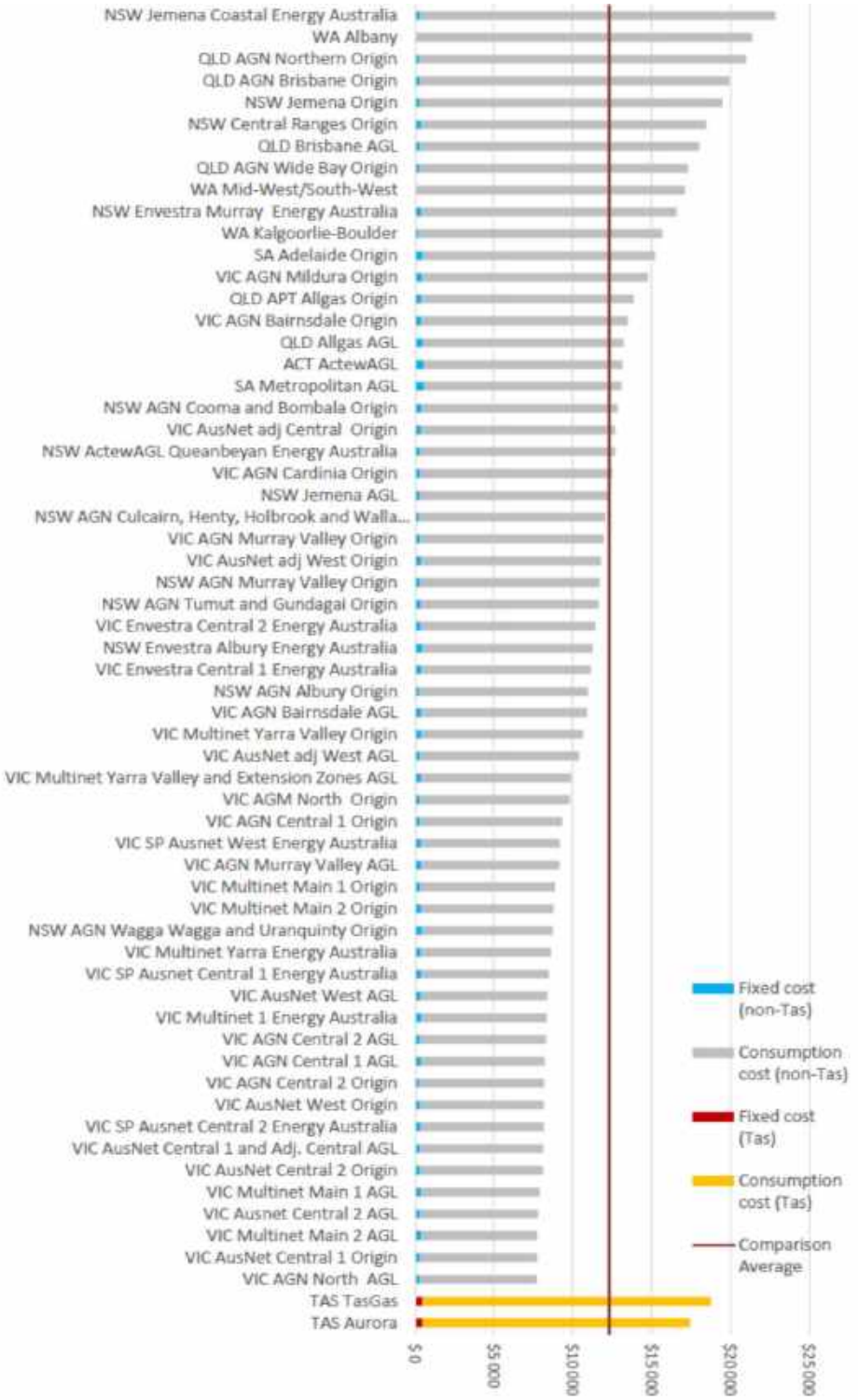
Source: Office of the Tasmanian Economic Regulator, *Comparison of Australian Standing Offer Energy Prices, October 2015 Edition*, Figure 4.3, p. 18.

Figure 7: Comparison of Small Business Gas Prices, February, 2016



Source: Office of the Tasmanian Economic Regulator, *Comparison of Australian Standing Offer Energy Prices, February 2016 Edition*, Figure 4.3, p. 18.

*Figure 8: **Annual Gas Costs for Small Business (based on annual consumption of 475 000 MJ)***



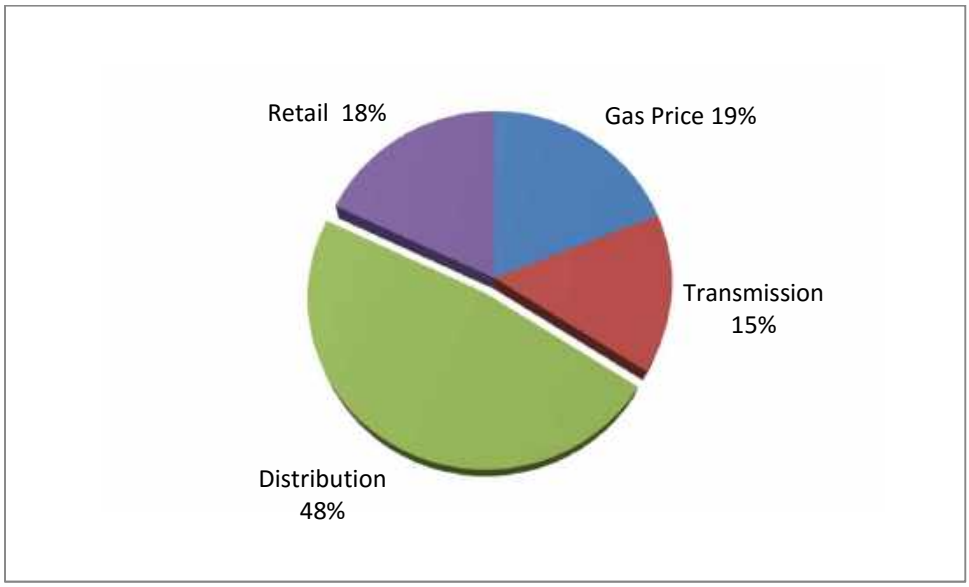
Source: Office of the Tasmanian Economic Regulator, *Comparison of Australian Standing Offer Energy Prices, February 2016 Edition*, Figure 4.4, p. 19.

Moreover, the OTTER report shows that standing offer electricity prices for small business are less than the mid-point of prices available across Australia. As small business gas prices are well above the mid-point, this suggests that reference to the electricity price in placing a cap on gas prices – and using this as a reason not to regulate gas prices – is not an effective means of providing Tasmanian small businesses with competitive gas prices.

3.2 Dissecting a Small Business Gas Bill

Figure 9 below shows the key components of a typical Tasmanian natural gas bill for commercial users. The largest single component by far is accounted for by the distribution network, which makes up almost half of the bill. The other half is made up of three components – the gas commodity charge, transmission charges and retail charges – which each account for similar shares.

Figure 9: Components of a Typical Tasmanian Commercial Gas Bill



Source: Goanna estimates

The remainder of this section provides an analysis of each of these components and related charges.

3.2.1 Gas Commodity Charges

Gas transported to Tasmania through the TGP is sourced from the Gippsland Basin. This means there is a strong link between gas commodity charges in Victoria and Tasmania.

We estimate that the price of the gas commodity in commercial Tasmanian gas tariffs for business consumers is around $6.20 per GJ. This is significantly higher than the spot price for gas in Victoria shown in Figure 10 of around $4-4.50 per GJ. Whilst this is not directly comparable to a longer term gas commodity price, it does provide a published point of reference. A

Tasmanian gas commodity prices for small business in Tasmania are around 14 per cent higher than gas commodity prices typically seen in Victoria

recent analysis of gas price trends found that the average gas commodity price in Victoria for 2015 for large and small industrial consumers[15] was around $5.30 per GJ and $4.90 per GJ respectively (excluding legacy contracts).[16] The same study reported a wholesale gas price of $5.30 per GJ for Victorian households.[17] This suggests that gas commodity prices for small business in Tasmania are around 14 per cent higher than gas commodity prices typically seen in Victoria.

Published information on some recently negotiated Eastern market gas contracts suggests commodity prices of around $5 per GJ for short term contracts and around $9 per GJ for long term contracts.

Significant increases in gas prices since the beginning of this decade are also apparent from Figure 10 for all States covered. This reflects the impact of a developing LNG industry in Eastern Australia combined with stronger linking of eastern State gas markets. Tasmania is connected to the Victorian gas market via the TGP and its gas prices closely reflect developments in this market. The increase in gas prices in recent years is apparent from the trend line for Victorian gas spot prices shown in Figure 10. Whilst the increase in Victorian prices is more subdued than for Adelaide and Sydney, due to its weaker links to the LNG developments in Queensland, it is still significant and Victorian prices have been tending to converge with gas prices in other states. Tasmania is not immune from these developments.

As mentioned earlier, TGR has already flagged the likelihood of increases in its retail gas prices due partly to increases in the price of gas from Victoria. This is associated with the developments mentioned above and the flow on impacts in all eastern gas markets.

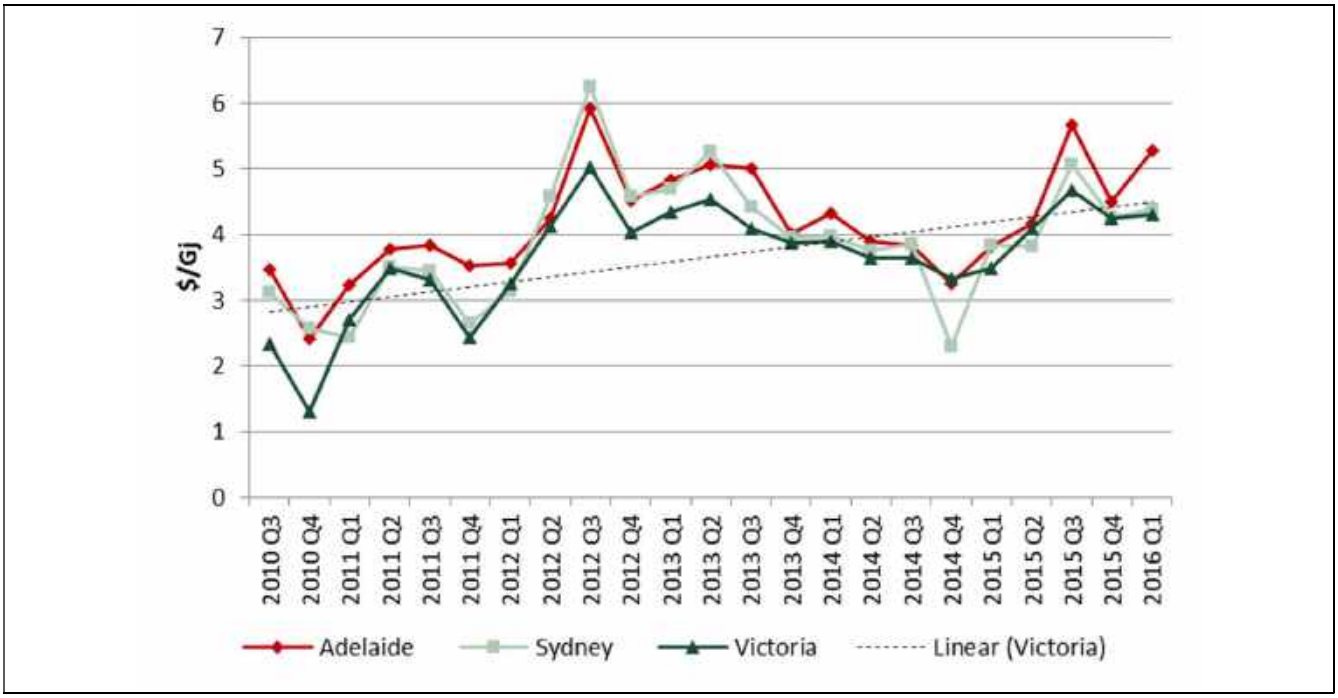
Some commentators have suggested that Australian domestic gas prices will converge on the LNG 'netback' price (that is, the Asia-Pacific LNG export price, less the long-run marginal cost of transport and liquefaction). At the extreme, it has been forecast that this could result in gas prices in Australia as high as $12-15 per GJ later this decade. However, these high end estimates now appear less likely due to the recent reduction in world oil prices, which will be reflected in LNG export prices.

[15] The definition of large industrial consumers was those consuming more than 1 PJ per annum, whilst small industrial consumers consumed between 0.1 and 1 PJ per annum. All gas retail tariff customers in Tasmania are below the 0.1 PJ threshold.

[16] Oakley Greenwood, *Gas Price Trends Review (Revision 1)*, February 2016.

[17] The study did not report separately on small business consumers but we note the proximity of gas commodity prices paid by all three consumer categories in Victoria, as well as the retail gas tariffs for small businesses and households in Tasmania.

Figure 10: Quarterly Short-term Gas Prices



Source: AER website at http://www.aer.gov.au/industry-information/industry-statistics?f[0]=field_accc_aer_sector%3A5&f[1]=field_accc_aer_stats_category%3A904.

The Productivity Commission has pointed out that the Australian gas market is influenced by many factors and that prices may diverge from the netback price at any given time due to:

- Uncertainties about LNG prices;
- The linking of Asia-Pacific LNG prices to oil prices;
- The lumpy nature of LNG investments;
- Lags in bringing new LNG facilities on line;
- The common use of long term contracts in the eastern Australian gas market, which slows down the response to unexpected changes in the Asia-Pacific market, although in Tasmania all existing gas contracts expire by December 2017 and will have to be renegotiated; and
- Uncertainties about gas well deliverability and regulatory impediments to increasing supply, which could mean that supply constraints will be borne by domestic gas users.

More recently, the ACCC has investigated competition in the east coast gas market and found that:

- Whilst there are sufficient gas reserves available to meet demand into the foreseeable future, it is not at all clear that reserves will be developed in time to meet demand due to:
    - The amount of gas flowing to LNG projects which is removing gas from the domestic market;
    - Low oil prices which are reducing incentives to invest in new supplies for both the domestic and LNG markets;
    - Moratoria and other regulatory restrictions which reduce investment in onshore gas exploration and development, including in Tasmania; and
    - Domestic reservations policies which may lower domestic gas prices in the short-term, but are unlikely to do so in the longer term as they reduce the incentives to invest in gas supply, can lower the scale of projects and risk their viability.
- Gas pipeline sector issues are exacerbating domestic gas supply and pricing issues:
    - Although some pipeline operators have responded positively to emerging market needs, the ACCC also found evidence of monopoly pricing such as rates of return much higher than the benchmark return used by the AER in regulatory decisions (even where investments are fully underwritten by shippers) and excessive 'as available' and interruptible charges, as well as forward haul charges that are 2–5 times higher than they would be if the pipeline was regulated;
    - The current regulatory regime for gas pipelines is not constraining the monopoly pricing behaviour of pipelines and needs to be strengthened, including its non-application to pipelines that face no competition and the threat of regulation not being effective; and
    - That expansions to regulated pipelines may be unregulated and limited information is available about pipeline costs and their relationship to prices.
- The gas market is opaque and inflexible and is not signalling expected supply problems effectively, including the level of reserves and resources, current and expected future production, gas prices, transportation prices, and the level and availability of storage, hindering the market's ability to respond to changes in gas availability and domestic gas prices.

The ACCC have made a number of recommendations to improve the way the east coast gas market works which would require actions by Governments and bodies such as the AEMC, as well as highlighting actions it will undertake itself under competition law.

We are of the view that recent developments have tempered, for the time being at least, some of the upward pressures on domestic gas prices, including:

- The decline in world oil prices;
- Slower economic growth in China and its transition to a more consumption based economy;
- The emergence of competing LNG suppliers in other countries;
- Stronger interconnection of pipelines in eastern Australia and the creation of bi-directional flows;
- Project cancellations and lags in bringing some LNG facilities on line; and
- Cost overruns on projects making the economics of LNG exports less appealing.

Ironically, some of these factors could reduce the incentive to explore and develop new sources of gas in future if the persist, which would ultimately place renewed upward pressure on gas commodity prices. For example, a prolonged period of low oil prices could have such an outcome.

On the other hand, there are a series of reforms to gas markets underway with the explicit intent of benefitting gas consumers. These include Rule changes recently made (or underway) by the AEMC. The ACCC have also recently completed an inquiry into the competitiveness of the Eastern Australian gas market. For these reviews to be effective they will need to increase competition in downstream gas markets, in upstream activities and improve the transparency of gas market information, including prices.

Weak competition in the Gippsland Basin (e.g., a high concentration of gas ownership and the continued sanction of joint marketing) can work against the interests of Tasmanian gas consumers. Importantly, given the findings in its recent report, the ACCC will consider the competitive effect of the joint marketing arrangements of the Gippsland Basin producers. The TSBC should participate in this review given its importance to Tasmanian gas users.

Tasmania's small gas market also affects gas pricing with little or no price leverage possible. On the other hand, as mentioned earlier in this section, its gas commodity prices have historically been closely reflective of Victorian prices, which remain lower than in other eastern States.[18] There appears to be little reason to expect this to change significantly in future and prices paid for gas supply in Victoria in future contracts should influence Tasmanian gas commodity prices too. This is important as significant gas supply contracts in both Victoria[19] and Tasmania will need to be renegotiated from 2017 and recent prices paid in Victoria may provide important clues as to future movements in Tasmanian prices.

The Victorian gas spot market is a relatively open market for buyers and sellers with a high degree of price transparency. However, the AEMC has proposed changes to the market which could limit its open trading platform with possible implications for Tasmanian gas commodity prices, contract negotiations and competition. Some stakeholders have expressed fears that this could create a future barrier to new entry and competition with impacts on competitive gas pricing in Tasmania (see Section 7.1.6).

3.2.2 TRANSPORTATION CHARGES

As shown earlier in Figure 9, transportation charges (transmission and distribution) make up 63 per cent of a typical small business gas bill in Tasmania, with distribution charges alone accounting for nearly half of the bill. So they are very significant to small business gas consumers.

According to the Australian Energy Regulator (AER), transmission charges make up 5-10 per cent of a typical residential gas bill. This compares to 15 per cent for the TGP, a significantly higher proportion.

For distribution, the AER report that these charges range between 30 per cent in Victoria and 70 per cent in South Australia. TGN's charges represent about 50 per cent of a gas bill for smaller customers. Although Tasmania's small and relatively new network would have some effect on keeping network costs down (e.g., lower operating costs), on the other hand, the small size of the market and pipeline underutilisation also means that fixed costs need to be spread over a smaller number of customers; and the costs of building the network are still being amortised.

[18] The Victorian gas market is much larger than Tasmania's (annual demand of 220 PJ compared to only about 2.6 PJ). Historically it has therefore been able to exercise price leverage, which has been captured in Tasmanian gas prices. However, the advent of even larger LNG demand has changed this dynamic.

[19] For example, contracts with the Gippsland Basin producers for two of the three main Victorian retailers, AGL and EnergyAustralia expire in 2017.

We estimate that gas transmission and distribution charges in TGR's 2016 commercial gas tariffs amount to $5.20 and $16.90 per GJ respectively. This is an increase of 6.8 and 8.5 per cent respectively compared to 2015. On this basis, transportation charges are responsible for two-thirds of the increase in TGR's charges for 2016.

As far as we can ascertain, neither TGR, TGN nor TGP have provided reasons for these increases. As mentioned earlier, in 2014 TGR did flag the likelihood of significant gas price increases over the subsequent four years and cited transportation charges as one cause, but did not elaborate on the reasons.

Figure 11 and Figure 12 show Tasmanian gas transmission and distribution charges respectively compared to those in other jurisdictions. Of particular interest is that:

- Transmission charges into Tasmania are the highest in Australia at around 0.5 cents per MJ for both small business and households, presumably reflecting factors such as transportation distance and very low network utilisation, which increases unit costs, but perhaps also the monopoly power and unregulated status of the TGP. This places them at two and a half times the national average. Jurisdictions such as New South Wales (rural) and South Australia also have relatively long transmission lines and (in the case of the former) some areas of low network utilisation but their transmission charges are around half of those in Tasmania.

Transmission charges into Tasmania are the highest in Australia at around 0.5 cents per MJ for both small business and households.

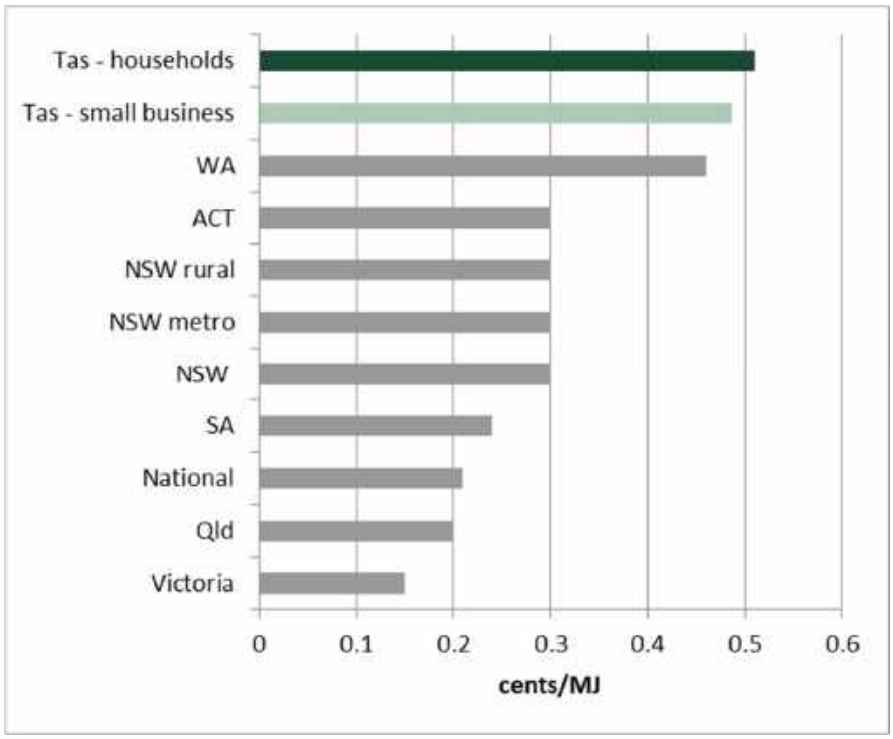
- Tasmanian distribution charges are around 1.6 cents per MJ, 45 per cent higher than the national average (1.1 cents per MJ). As mentioned previously, Tasmanian distribution charges also make up the highest component of small customer gas bills (48 per cent). This most likely reflects factors such as the small size of the Tasmanian gas market, an underutilised network, which increases unit costs and perhaps also the monopoly power and unregulated status of the distribution network.

The high absolute level of Tasmanian gas transportation charges, their rate of increase, the foreshadowed further increases and a lack of transparency in Tasmanian gas transportation charges should be of concern to Tasmanian small businesses and the TSBC.

Seen in this context, light handed regulation does not appear to be fully effective in protecting the interests of small gas consumers in Tasmania.

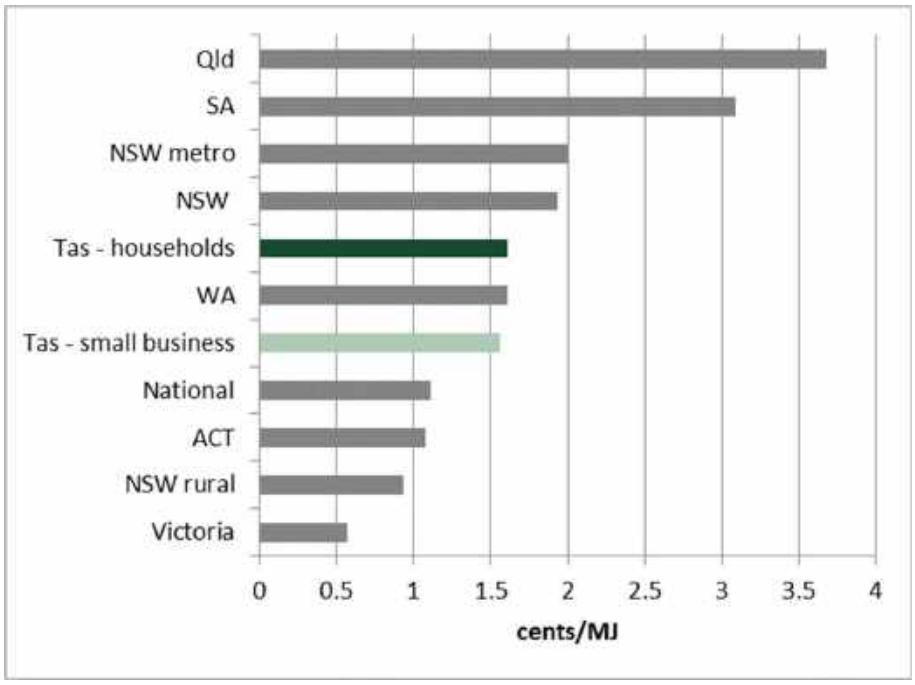
Whilst only four eastern Australian transmission pipelines are currently under full regulation, the TGP represents a natural monopoly asset with no prospect of competition. Its only competitive disciplines are weak ones of gas competition from electricity and a threat of future regulation.

Figure 11: Gas Transmission Charges by Jurisdiction, 2015



Source: Goanna Energy adapted from Oakley Greenwood, *Gas Price Trends Review (Revision 1)*, February 2016

Figure 12: Gas Distribution Charges by Jurisdiction, 2015



Source: Goanna Energy adapted from Oakley Greenwood, *Gas Price Trends Review (Revision 1)*, February 2016

As mentioned in Section 3.2.1, in its recent report into competition in the eastern gas market, the ACCC has expressed concerns about some aspects of pipeline regulation relevant to the above comments, including evidence of monopoly pricing, the inability of light handed regulation to act as an effective check on this, and the lack of transparency in pipeline costs and charges. Whilst it did not refer specifically to the Tasmanian pipelines, or any other specific pipeline for that matter, there are reasons to believe that its concerns could apply to Tasmania.

The ACCC has expressed concerns about some aspects of pipeline regulation, including evidence of monopoly pricing, the inability of light handed regulation to act as an effective check on this, and the lack of transparency in pipeline costs and charges.

For example, the ACCC report cites one example from Tasmania where the TGP appears to have attempted to charge shippers around 200 per cent more than they had previously paid for transportation charges along a proposed extension of the gas network from Port Latta to Smithton. The ACCC Inquiry considered that, this was because the pipeline operator was trying to recover the revenue it expected to lose as a result of Hydro Tasmania reducing its Maximum Daily Quantity (MDQ) for gas-fired generation post-2017. The Inquiry considered, "that this contributed to the project not proceeding", despite an offer of $6 million in Federal Government funding.[20]

In this instance, the TGP's behaviour appears to have contributed to an important expansion of the Tasmanian gas market not occurring which detracts from the efficient operation of and growth in that market. An opportunity to expand the network, increase gas consumption and spread fixed network charges across a larger gas load, has been lost.[21]

The TGP's behaviour appears to have contributed to an important expansion of the Tasmanian gas market not occurring which detracts from the efficient operation of and growth in that market.

As for distribution, all significant pipelines are fully regulated reflecting their natural monopoly status, apart from those in Brisbane, which have operated under light handed regulation from 1 July 2015. (However, it is too early to say if this application of light handed regulation will be affective for small business gas consumers in Queensland, who are currently paying the highest distribution charges in the east coast market.)

As indicated above, we have concerns about the impact of the current pipeline regulatory regime, including the ineffectiveness of light handed regulation in Tasmania on small business. As indicated, the ACCC has recommended a major overhaul of the regime. We support the need for such an overhaul and it would be timely to review how well light handed regulation of pipelines has worked in Tasmania and whether it should be strengthened. The ACCC's proposals, the implementations of which it has recommended the AEMC investigate further, would provide a useful way forward.

There is also limited transparency in Tasmanian gas pipeline costs and pricing. TGP provide very little information about its costs, charges, pricing policies and the reasons for price changes. Its website is also

[20] ACCC, *Inquiry into the East Coast Gas Market,* April, 2016, p. 144

[21] Whilst TGP's attempt to substantially increase its charges for these shippers did not succeed, the example still illustrates its ability to lever off its monopoly position.

devoid of information about its prices, which is normally a requirement of light handed regulation of pipelines.

Similarly, TGN's website contains no information about its costs and prices. However, as mentioned before, its retail arm TGR, does publish retail prices on its website with some limited information about price changes. However, there is no specific information or explanation about pipeline charges or price changes.

This amounts to a very opaque framework for pipeline charges and one that is not working in the interests of Tasmanian small business or the further development of the Tasmanian gas market. Gas consumers, retailers (existing and potential new entrants) and shippers are essentially left in the dark about these critical matters.

3.2.3 Retail Charges and Competition

We estimate the retail component of TGR's 2016 business tariff at $6.70 per GJ. Using the annual price increases estimated for the other components of small business tariffs referred to above, the residual equates to an increase of $0.86 per GJ, or 15 per cent, for the retail component compared to 2015.[22] Retail price increases therefore appear to account for one-third of the overall increase in TGR's 2016 gas prices. An increase of this magnitude, in a market with very little competition, should be of concern to small businesses. Moreover, as far as we are aware, TGR has provided no explanation or justification for the increase in its retail tariffs for 2016. Aurora's decision not to increase its tariffs for small consumers raises further concerns about TGR's increases. As mentioned previously, there is no evidence of published discounting to smaller gas customers in Tasmania. Published small customer tariffs are effectively equivalent to 'standing offer' prices and are not discounted. They also reflect current regulations, which require gas retailers to offer small consumers a fixed tariff, or price.

However, in all other eastern Australian jurisdictions there is active and published discounting of gas prices to smaller customers, including in the smaller markets of South Australia and the ACT. According to the AER, discounts in offers range from 10 per cent in the ACT to 25 per cent in Victoria. The number of offers available for smaller customers to choose from ranged from 8 in the ACT and Queensland to 25 in New South Wales.[23],[24]

Discounting is also prevalent in smaller markets. For example, in the ACT, the AEMC found that three active retailers were providing 11 different offers to small business customers. It reported conditional and unconditional discounts, contracts with and without fixed terms and offers with and without termination fees, for both residential and small business customers.[25]

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[22] The retail component is often calculated as a residual after the other components of the customer bill have been calculated as it is generally not directly observable. It includes retail operating costs, customer acquisition and retention costs and the retail margin. As a result, it also may contain any errors (positive or negative) in the other components of the customer bill.

[23] Australian Energy Regulator, *State of the Energy Market, 2015 Edition,* Table 5.3, p. 137.

[24] Discounts may be offered for prompt or prepayment of bills, or for direct debit payments. Offers may vary depending on the length of a contract. There is no evidence of such terms in Tasmania.

[25] Australian Energy Market Commission, *2015 Retail Competition Review*, Final Report, AEMC, 30 June 2015, Sydney, pp 147-8.

These data are indicative of the benefits that smaller consumers can gain from active retail competition in gas, even in smaller markets. By contrast, small business in Tasmania has no access to a similar range of discounts.

Aurora's breaking of ranks in its 2016 pricing is welcome, but as mentioned earlier, to date Aurora has not marketed its lower gas price.[26]

There are several factors that militate against effective retail competition in Tasmanian gas:

- The small size of the market, which increases retail costs and does not allow retailers to reduce costs through economies of scale or scope, although the competition that exists in other smaller gas markets suggests that this is not an insurmountable issue.
- The small market makes shippers and retailers price takers for commodity and transportation costs – which account for over 80 per cent of charges.
- The vertically integrated nature of Tas Gas' operations, which combine retail with distribution functions, may, to some extent, reflect the small market, but also blunts any incentive for TGR – the dominate retailer – to seek to reduce the large distribution component of gas prices.
- The lack of competition in the smaller end of the Tasmanian electricity retail market makes participation in gas retailing less compelling for potential new entrants.

3.3 Tamar Valley Power Station Gas Contract

As outlined in Section 2.7.1, electricity generation has historically been a major consumer of gas in Tasmania, although its use has fluctuated widely. The 'take or pay' nature of the contract covering the TVPS, the major source of gas fired generation in Tasmania, has allowed fixed pipeline costs to be spread more widely, helping to keep transmission charges lower than they otherwise would be.

With the end of the recent energy security issues in Tasmania, the TVPS has been placed in dry lay-up in case it is needed again in future.

As the current TVPS gas contract expires in December 2017, its owner, Hydro Tasmania, will need to make a decision about future gas supply arrangements for the plant after this. It is too early to say definitively how this important issue for the Tasmanian gas market will develop. One possibility is that Hydro Tasmania will seek agreement to reserve capacity on the TGP at a fixed price to cover times when the TVPS needs to run. This would minimise its exposure to potentially high gas prices during an electricity supply emergency. On the other hand, they may want to carry the risk of such exposure.

As far as other gas consumers are concerned, the preferable outcome would be for a fixed price contract as this would allow some of the TGP's fixed costs to be covered by this contract.

Given these considerations, the TSBC and small business gas consumers should monitor, as closely as possible, developments in the lead up to and during the contract renegotiations and advocate for an outcome that benefits small business gas consumers. However, their task will be made more difficult by the commercial nature of the negotiations and a lack of transparency in transmission charges, which for small

[26] Its website merely states that its gas prices "are the lowest in the state" and "competitively priced".

consumers are also bundled together with their other gas charges. The interests of small business gas consumers may also not align with those of Hydro Tasmania.

The TSBC should therefore seek to be kept informed of the impact of the contract negotiations on the future transmission charges small business will pay. This could be done by approaching the Tasmanian Government and the TGP about the matter and seeking their agreement to keep them informed of any impacts on small business gas consumers.

3.4 Gas Substitution

An important consideration in the establishment of the Tasmanian gas market were gas substitution possibilities, with the relative prices of gas and electricity intended to stimulate the uptake of gas and contain any market power in the gas market, thus allowing gas prices to remain unregulated. Whilst this has helped to keep prices in the uncompetitive gas market under some control, it is our view that it has fallen short of expectations because:

- Electricity tariffs for heating and hot water – key uses for gas in the household and small business sectors – are kept artificially low through the continued existence of cross-subsidies and this has prevented fuel switching;
- The existing stock of appliances, which are relatively expensive to replace, has been a drag on fuel switching, especially with limited incentives in place that make it more economic for consumers to switch from electricity to gas;
- Electricity prices increased substantially around the turn of the last decade, creating scope for gas prices to also increase but not necessarily in a way related to costs;
- Since then, electricity prices have moderated (or even fallen in some years) but gas prices have been under upward pressure; and
- LPG prices are currently lower than natural gas prices, which is creating LPG substitution incentives.

A new and opposite risk to gas consumption has also emerged in recent years. To this end, it appears that households, in particular, are now switching from gas to electricity for purposes such as space heating and (to a lesser extent) hot water, as the running costs of the latter decline. This is certainly the case in jurisdictions such as NSW, Victoria, SA and the ACT, where gas consumption per household is declining as a result. Whilst there is no equivalent data available for Tasmania, the same forces would likely be at play. However, in Tasmania there is pressure to phase out cheap electricity heating tariffs, which would have an offsetting impact.

3.5 Non-price Issues

There is limited non-price competition in Tasmanian gas retailing. This is partly due to the homogeneous and commodity nature of the gas product, which focuses competition on price, but also to the absence of any real competition in the Tasmanian gas market. In gas markets with effective competition, there is more evidence of non-price competition, such as dedicated account management and assistance with reducing gas bills.

TGR does provide some advice on how to save on gas use, on gas safety, on how to read a gas account (with a related video missing from its website) and provides online connection information and applications for

small business customers. We could find no public evidence of it offering services such as energy efficiency advice directly to small businesses.

Aurora offers a similar range of services and also provides a combined electricity and gas account free of charge.

Online services and information are also provided for matters such as payments, late payments, payment options, payment difficulties and complaints.

A range of other set fees are charged to small business customers, including connection, disconnection (supplier initiated), reconnection, meter testing, special meter reads and late fees. Individual fees apply to new connections and supply pressure alterations.

3.6 Concluding Remarks

The chapter discussed several aspects relevant to gas prices in Tasmania, namely the current gas prices, components of a small business gas bill, the TVPS Gas Contract, gas substitution and non-price competition. This has shown how competition in the market is hampered by the size of the market, in terms of the number of customers and the limited gas network. Moreover, standing offer gas prices paid by small businesses in Tasmania are above the national average. Significant and prevalent discounting of standing offers in other jurisdictions, which is absent in Tasmania, would add to this price disadvantage.

Gas commodity charges for small business are above those in Victoria and transportation charges are well above the national average. TGR's retail charges appear to have increased significantly in 2016. Gas prices are likely to be affected by the end of the TVPS gas contract in December 2017. This raises significant uncertainties about gas prices, especially future gas transmission charges. Gas substitution seems unlikely whilst low electric heating tariffs remain and LPG prices are lower than natural gas prices. Non-price competition is limited with both retailers offering similar services.

The next chapter will look at network expansion and supply issues.

4

Network Expansion, More connections & Supply Issues

- Government support and intervention crucial for growing size of Tasmanian gas market
- Lack of incentives hamper market growth
- Single pipeline supply exposes Tasmania to risk of major disruption

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4 Expanding the Network, More Connections & Gas Supply Issues

This section examines the important gas supply issues of availability of gas, incentives to connect to gas, security of supply and the reliability of the gas network from a small business perspective.

4.1 Availability of Gas

The Tasmanian Government originally contributed $56 million to encourage the take up of natural gas. This played a major role in allowing some Tasmanians to be connected to natural gas. The then Government's original commitment was to assist with the roll out of the network so that it passed 100,000 potential connections, but it withdrew support after the network had only reached some 40,000 properties. This significantly limited the size of the gas market.

Following the cessation of Government support, the roll out of the gas network has all but stalled.[27]

TGN has stated that it has no plans to extend the network substantially further without financial assistance from the Tasmanian Government. However, it also says that it may undertake extensions if a source of demand emerged. For example, the network was expanded in recent years due to the construction of a cogeneration facility at Simplot's frozen food facility at Ulverstone, with some customers in Ulverstone now also having access to natural gas as a result.

These are essentially once-off expansions of the network in response to emerging gas supply opportunities, rather than strategic ones intended to create additional demand and grow the gas market. Given an immature market of small size, we believe that a case can be made to undertake additional expansions, especially if incentives to connect and competitive pricing are offered.

Coverage of Tasmania's natural gas network has the potential to expand significantly given the right conditions. The existing pipeline infrastructure offers the potential to do this with relative ease. Key gaps to investigate would include:

- In-fill opportunities in Launceston and its northern and eastern suburbs;
- Extension to Launceston's airport precinct;
- Extension to East Devonport;

[27] We understand that Government support was tied to the number of properties passed by the gas network, with the cut-off for funding being 40,000. We also understand that the current Tasmanian Government has been approached to extend its funding but has so far not done so.

- Extension to other parts of Ulverstone;
- In-fill of Burnie and Wynyard;
- Extension to Smithton, which has industries that would be potential gas users, such as dairy and food processing; and
- Extension to Hobart's eastern shore suburbs, Kingston and the Cambridge industrial park adjacent to the airport.

There would appear to be scope for connection to mid-sized industries, small businesses and households in these areas, as well as possibilities for new industries to develop.

By way of contrast, the Victorian Government is actively funding and promoting the use of gas in key areas of the State. Its Regional Gas Infrastructure Program provides a total of $85 million (jointly funded with the Federal Government) to supply reticulated natural gas to communities across regional and rural Victoria. The Program specifically supports new business opportunities and investment in regional communities.[28]

It should be a matter of concern to the TSBC that, notwithstanding an offer of $6 million in Federal Government funding, a recent proposal to extend the gas network from Port Latta to Smithton has not proceeded.[29] One of the main reasons, according information provided by shippers to the ACCC's east coast gas market inquiry, is that the TGP proposed to charge them a 200 per cent premium on their existing charges to make use of the extension.[30,31] This provides an example of how attempted excessive charging by the TGP, which has a monopoly position, has contributed to thwarting a worthwhile extension to the Tasmanian gas network. Tasmanian businesses and households, especially those who could have connected to the extension, have been detrimentally impacted.

The aborted Port Latta to Smithton extension provides an example of how attempted excessive charging by the TGP, which has a monopoly position, has contributed to thwarting a worthwhile extension to the Tasmanian gas market.

4.2 INCENTIVES TO CONNECT

In a small and relatively immature gas market such as Tasmania's, providing potential customers with an incentive to connect can play an important role in growing the market and allowing it to reach critical mass. The Tasmanian market is not yet at this point.

[28]Seven towns will be connected to Victoria's existing natural gas network under agreements with gas distribution businesses. Eleven towns will be connected using a compressed natural gas (CNG) delivery solution.

[29] According to Circular Head Council, the total project would have cost $14 million and supported economic growth, enhanced liveability and facilitated economic diversification of the local economy away from the declining forestry industry. Potential beneficiaries mentioned included Tasmanian Dairy Products, McCain, Emerton Park Aged Care, Smithton Hospital and Murray Goulburn, which support 170 jobs in the region. See Circular Head Council, *Connecting Gas to Smithton*, 9 December 2011.

[30] ACCC, *Inquiry into the East Coast Gas Market*, April 2016, p. 118.

[31] It was reported in the Circular Head Chronicle, *Gas Still an Option* (undated), that the CEO of Tas Gas had said that the reason the project has not proceeded is that his company "was not able to obtain acceptable commercial terms with Tasmanian Gas Pipeline Pty Ltd" at http://www.chchronicle.com.au/gas-still-an-option-19481/.

In the early years of the Tasmanian natural gas market Tas Gas provided attractive incentives to connect to natural gas, including appliance rebates. The Tasmanian Government's financial support made this easier. By all accounts, the incentives were popular and helped to get many households connected to the new gas network. However, the rebate was not available to small business and this would help to explain the lower take up of gas by small business compared to households.

Notwithstanding the cessation of Government support, there are rebates still available to households through TGR for connecting to natural gas, as well as limited and narrowly focused business incentives.[32] Aurora does not appear to offer any incentives to connect to natural gas.

Hobart City Council has also offered a $250 rebate to rate payers (households only) for connecting to natural gas.[33]

The limited nature of existing incentives to connect to natural gas, including for businesses, would be hampering market growth and holding back the sector from reaching critical mass.

4.3 Security of Supply, Emergencies and Reliability

As mentioned earlier, Tasmania is connected to natural gas from Victoria via a gas transmission pipeline, the TGP. This is a single pipeline. If something disrupted the pipeline or the supply of gas feeding into it, there would be impacts on gas users, and possibly electricity supply, in Tasmania. These could potentially be serious and/or prolonged.

In 2010, Engineers Australia found that the single transmission pipeline exposes the State to a risk of major disruption in gas supply (and also electricity generated from gas) and assessed this as a negative in its rating of Tasmania's gas infrastructure.[34] Small businesses, especially those that rely on gas, could be significantly disrupted by any security of supply issues with costly implications.

The small size of the Tasmanian gas market and the low capacity utilisation of the TGP are factors that would make the economics of pipeline duplication questionable. At the same time, however, the lack of growth in demand for gas, the lack of expansion in the distribution network and large fluctuations in the use of gas due to the intermittent nature of gas generation, act to cement this vulnerability. In addition, the susceptibility of electricity supplies to low rainfall or events such as the failure of Basslink, with backup provided by gas generators, highlight that there could also be impacts on the electricity system should gas supplies be disrupted.

Tasmania may have other options to reduce gas vulnerability, such as gas storage, line pack (which is already being pursued by TGP), and gas exploration and development within Tasmania or offshore. However, the small size of the gas market and its slow growth make even these options problematic.

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[32] If you apply for a natural gas connection and connect two major appliances (hot water and flued heating), you can receive a $500 rebate. If you are an existing customer that connects an additional major appliance (hot water or flued heating), you can receive a $500 rebate. If you are a new or existing customer that connects central heating (ducted heating or hydronic heating) you can receive a $1,000 rebate. TGR is also looking to partner with up to 10 businesses in Tasmania that can assist in promoting a natural gas flame effect fire in key natural gas locations. They are offering customers up to $5,000 towards purchase and installation.

[33] This was confined to the first 525 eligible applications.

[34] Engineers Australia, *Infrastructure Report Card 2010: Tasmania*, 2010, p. 141.

The Department of State Growth has plans that set out how to manage sustained and severe shortfalls in natural gas supply, including the need for State intervention. The Government has powers to ration access to gas through the Gas Act. However, this plan is not published on the Department's web site.

Its gas emergency procedures should also be reviewed to ensure they adequately take account of gas vulnerability risk and they should be made more transparent.

Tas Gas Networks (TGN) reports on a number of reliability measures. These include frequency and duration of both planned and unplanned interruptions to supply. This is common practice for gas distribution entities across Australia. The number of unplanned interruptions reported by TGN increased significantly from 215 in 2010-11 to 433 in 2013/14, before declining to 265 in 2014/15. The duration of interruptions (SAIDI) also increased significantly from 1.31 minutes per customer in 2010/11 to 2.65 in 2013/14, whilst the frequency of interruptions (SAIFI) rose from 0.023 to 0.036 per customer over the same period. No reasons are published by OTTER for the increases.

These reliability criteria afford some protections to smaller customers, including small business, about the gas service they receive. Nevertheless, the reductions in reliability seen in some recent years should be of some concern to Tasmanian small businesses either connected, or with the potential to connect, to the gas distribution system, especially given that the TGN distribution system is only a decade old. A deterioration in network reliability can also adversely impact customers' decisions to connect to natural gas.

4.4 Concluding Remarks

The availability of gas in Tasmania reaches approximately 43,000 properties, which is less than half of the Tasmanian Government's original coverage objective. This low coverage has limited the size of the market. Without government support TGN has commented that it will only expand their network when a demand calls for it, e.g. Simplot's frozen food facility in Ulverstone. This is clearly limiting opportunities for strategic network expansions. Moreover, a proposed extension of the TGP from Port Latta to Smithton has not proceeded, even with a $6 million Federal Government funding.

Incentives to connect to gas have also been discussed. However, limited connection incentives, especially for small businesses, has hampered market growth and has held the sector back from reaching a critical mass of customers and underlying consumption.

The supply of gas through a single pipeline exposes the state to a risk of major disruption in gas supply and in electricity generated by gas. Pipeline duplication has not been feasible due to the low capacity infrastructure of the TGP, lack of growth and demand, lack of network expansion and large fluctuations in gas usage. Gas vulnerability could be reduced by gas storage, line pack and gas exploration within Tasmania and offshore but the small market makes even these options problematic. The chapter concludes with a discussion on reliability, where recent reductions in reliability measures are a concern, given the TGN distribution system is only a decade old. Such reductions can also reduce the attraction of gas connection.

The next chapter discusses gas regulation and policy.

5

Gas Regulation & Policy

- 'Light Handed' Regulation of gas supply
- A change in existing policy is required to support gas market development
- Tasmanian Energy strategy needs to address gaps, missing opportunities, reconsider existing policies

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5 Gas Regulation and Policy

Government regulation and policy can play an important role in the development and growth of the Tasmanian gas network. Both are considered below in the context of small business as gas consumers. They can be either supportive to gas market growth or detrimental to it.

5.1 REGULATION

Regulation of the Tasmanian gas industry is via a number of legislative, regulatory and administrative instruments. Legislative instruments include:

- The National Gas Law and National Gas Code, which came into effect in 2008; and
- The *National Gas (Tasmania) Act, 2008.*

The Office of the Tasmanian Economic Regulator (OTTER) is responsible for:

- The Gas Distribution Code, which sets the minimum standards for the operation of the distribution system and the terms and conditions under which distribution services are to be provided to gas retail customers;
- The Gas Retail Code, which establishes the minimum terms on which a retailer must sell gas to small customers;
- The Gas Customer Transfer and Reconciliation Code, which sets out obligations concerning the provision of information, the customer transfer process, standards for metering and the process for allocating and reconciling of gas quantities between retailers; and
- Licensing of gas entities.

This regime requires licenced gas networks to report certain performance criteria to OTTER, including interruptions to supply, unaccounted for gas losses, number of customers connected and complaints.

Retailers' regulatory obligations extent to reporting numbers of customers, disconnections, reconnections, payment plans, payment plans defaulted, late payment fees (numbers and revenue) and complaints from customers. These are separated into residential and business customers.

OTTER has pointed out that most of the responsibility for developing and implementing gas regulatory regimes lies with the licensees and commented that:

> *… the Regulator is 'light handed' in its regulation of the gas supply industry and does not intervene in the day-to-day management of the licensed gas entities. Rather, the Regulator seeks to ensure that all stakeholders are provided with sufficient information to properly assess the extent to which the entities meet their respective regulatory obligations. The primary emphasis is on transparency and disclosure with investigations and sanctions used when and if appropriate.*[35]

As reported above, there is no regulation of gas prices in Tasmania.

The then Government's intent in creating a 'light handed' regulatory regime for natural gas in Tasmania was to allow the price of electricity to determine the price of gas. This relied on:

- Electricity being an effective substitute for gas, thus providing a 'competitive' ceiling on gas prices. But this is not always the case, given imperfect substitution between the two.
- As a new energy source, natural gas was not seen as an essential service. However, it has now been available for over a decade and provides energy to around 12,000 Tasmanians for cooking, heating, hot water and industrial processes, which they would find difficult to do without. In addition, vulnerable customers are now connected to gas.

This regulatory regime was designed to encourage investment in and maintain the financial viability of the natural gas industry, particularly in its early years. It was also intended to reflect the small penetration of gas, such that the industry cannot influence prices of the overall energy market and, as such, did not need heavy-handed regulation. However, with 12,000 connections, the industry may now have reached a stage where it can more easily influence gas prices, as least for those Tasmanians connected to natural gas which many gas consumers would have difficulty doing without.

The threat of potential regulation was to act as a deterrent to inappropriate transportation pricing.

Most other Australian States more heavily regulate their gas distribution networks and in some cases their transmission networks. For example, in Victoria the principal transmission pipeline from Longford into Melbourne is regulated as are all three distribution networks. However, newer transmission pipelines, such as the SEA Gas pipeline from the Otway Basin to South Australia, are unregulated.

As discussed in Section 3.2.2, in its recent inquiry report into the eastern gas market, the ACCC has highlighted concerns about the present way that gas pipelines are regulated. To recap briefly, having found evidence of monopoly pricing by unregulated pipelines, which is having detrimental impacts on gas consumers, the ACCC has called for a range of reforms to pipeline regulation, including:

- A strengthening of the existing coverage test for regulation of pipelines so that they become covered (i.e., regulated) if the relevant Minister, upon recommendation from the National Competition Council (NCC), is satisfied that the pipeline in question has substantial market power and is likely to continue to do so, and coverage will contribute to the furtherance of the National Gas Objective (NGO).[36]

[35]Office of the Tasmanian Economic Regulator, *Energy in Tasmania – Performance Report, 2013-14,* January 2015, p. 166.

[36] Essentially that regulation is in the long-term interests of consumers of gas.

- The COAG Energy Council should ask the AEMC to review Parts 8–12 of the NGR and to make any amendments that may be required to address the concern that pipelines subject to full regulation may still be able to exercise market power to the detriment of consumers and economic efficiency.

The ACCC will also be considering whether the availability or pricing of capacity on regional pipelines raises any concerns as a possible contravention of the misuse of market power or the exclusive dealing provisions of the *Competition and Consumer Act* (*CCA*).

With the existing regulation having been in place for more than a decade without review, the Tasmanian gas market having undergone a number of changes in the interim, the ACCC calling for reform of pipeline regulation and TGR indicating that higher pipeline charges will be a major cause of gas price increases for smaller customers over the next few years, it would be timely to review the existing light handed approach to pipeline charges in Tasmania, including the matter of coverage.

5.1.1 CHANGING THE UNREGULATED STATUS OF TASMANIA'S TRANSMISSION AND DISTRIBUTION PIPELINES

Earlier on in this report (see Sections 3.2.2 and in the previous section), we expressed some misgivings about the unregulated status of Tasmania's transmission and distribution pipelines and the impact this could be having on gas consumers and gas transportation charges. It is therefore worth noting that under national gas access arrangements it is possible to change the unregulated status of the TGP and TGN pipelines. Gas consumers, or other affected parties, are able to seek to do this as outlined below.

Declaration is a pathway available under Part IIIA of the *CCA* for third parties to share the use of certain infrastructure facilities of national significance (i.e., to have a service provided by a facility declared). If a service is declared, access seekers acquire a legal right to:

- negotiate access to the service with the service provider; and
- if necessary, have their request for access determined through arbitration by the ACCC.

A party wanting access to a particular service may apply to the NCC to have the service 'declared'. Having considered the application, the Council then makes a recommendation to the designated Minister for a decision.

Alternatively, a party may apply to the Council to have a transmission or distribution pipeline 'covered' under the National Gas Law. Coverage provides for the pipeline concerned to be subject to either 'full' or 'light' regulation. As the name implies, 'full' regulation means that the pipeline's charges are subject to AER determination, whilst 'light' regulation provides for the voluntary submission of a limited access regime (largely dealing with non-price terms of access) and, if necessary, *ex post* determination of access prices through a negotiate/arbitrate process. As with declarations, the Council makes a recommendation to the relevant Minister for decision.

It is beyond the scope of this report to provide firm and detailed guidance on how these procedures might be applied to Tasmania's gas pipelines, or if this would be beneficial to Tasmanian gas consumers, including small business. However, the matter could warrant further investigation by the TSBC and/or other Tasmanian gas consumers, especially in light of some of the issues raised in this report regarding Tasmania's monopoly pipelines and their charges, and the concerns expressed about existing pipeline regulation by the ACCC in its recent east coast gas inquiry report. However, any further investigation would need to consider

the ACCC's misgivings about the existing coverage test[37] and progress with implementing their proposed changes to it.

5.2 GOVERNMENT POLICY

The Tasmanian Government's gas policy objectives have included introducing natural gas into the State as a way of diversifying energy sources and ensuring that the natural gas industry is "efficient and competitive". Although the industry remains unregulated and potentially open to competition, the way the industry has developed to date cannot be described as "competitive". Obstacles include its small size, failure to keep pace with the initial target for expansion, limited opportunities to increase gas demand through industrial growth, reliance on a few large gas users and vulnerability to loss of one of more of these, comparatively high gas prices, a lack of retail competition and the stagnant size of the network.

Since the original gas policy objectives were set, there has been comparatively little said about how relevant these objectives remain, how they are tracking or whether they continue to support the development of the Tasmanian Government's gas policies. In fact, as mentioned earlier in relation to Tasmanian gas market regulation (Section 5.1), the Government has tended to keep at arm's length from the market.

More recently, the current Government has developed a range of policy actions as part of its *Tasmanian Energy Strategy*.[38] Under this Strategy it is intended that energy should work to the advantage of the Tasmanian people and strategically for investment attraction and job creation.

Table 4 below lists the original gas policy objectives and the main outcomes sought from the *Tasmanian Energy Strategy* that has implications for natural gas, especially in relation to small business. We also comment on each in terms of how it is tracking now and is likely to track in future with existing policies in place. The overall impression is one of significant gaps, missing opportunities and a need to reconsider existing policy settings if the original gas market and *Tasmanian Energy Strategy* objectives are to be met.

[37] One impact is that the likelihood of success could be adversely impacted by an apparent predisposition in the existing criteria towards non-coverage, the balance of which would be changed under the ACCC's proposals. In one recent example, KCC, a South Australian paper manufacturer applied to have the South East Pipeline covered but this was rejected as some of the criteria were not satisfied.

[38] Tasmanian Government, *Tasmanian Energy Strategy: Restoring Tasmania's energy advantage*, Department of State Growth, 2105.

Table 4: Assessment of Tasmanian Gas Policy Objectives

Outcome/Objective	Goanna Energy Comments
Natural gas available to 100,000 premises with network to be rolled out in two stages	Only stage 1 was completed with Government financial support then withdrawn. Currently gas only available to 43,000 properties with little expansion of the network so attainment of the original objective in any reasonable timeframe is very unlikely. This also raises an equity issue regarding Tasmanians who can, versus those who cannot, connect to natural gas. Limited gas coverage has made Tasmanian consumers more exposed to the large electricity price increases of recent years. The *Energy Strategy* mentions, without being specific, that "there are opportunities that could assist with improving the utilisation of the electricity and gas networks, ultimately assisting in lowering network costs for consumers."
Electricity prices to be used to keep gas prices competitive	Significant electricity price increases in recent years have lifted the effective ceiling on gas prices. Gas prices for households are comparable to other states, but small business gas prices are amongst the highest in Australia.
Light handed regulation is appropriate	Price regulation was not implemented as gas was a new form of energy, had limited market penetration, needed to expand organically and would be subject to competitive discipline by electricity. Each of these objectives needs to be reviewed on the basis of gas market developments to date and those in prospect.
Consumers will have greater choice about how to meet their energy supply needs and will pay competitive, fair and predictable prices for those choices.	Consumers have limited ability to choose gas due to its non-availability to many and the limited competition for those that can connect. For small business, price is also an issue given their gas charges are among the highest in Australia.
Consumers' energy needs will be met through a safe, secure, and reliable supply, supported by the minimum necessary regulatory arrangements.	Gas supply is, in the main safe, secure and reliable. Minimum regulation is applied but it would be timely to review this. However, a major point of vulnerability is that Tasmanian gas consumers are reliant on a single pipeline into the State. If there is a failure in the gas supply chain, the consequences could be significant.
Tasmania will be attractive for energy intensive industry through the provision of competitive, predictable long term power offerings.	This also applies to gas. But gaps in the availability of gas and its relatively high price for small business have hindered the take up of gas and make this objective more difficult to attain.

Source: Goanna Energy Consulting

There are a series of 43 Actions listed in the *Tasmanian Energy Strategy,* although only two directly address gas. Table 5 lists those that relate to gas (or should do so), directly and indirectly, especially from a small business perspective (together with their implementation timeframe) and we comment on each in terms of its relevance to gas. It would be helpful to small business if more were known about how these actions are being progressed.

Our strong impression from this discussion of policy issues is that there is an absence of a strategic approach to gas in Tasmania and the need for a Government gas policy review. Neither the original gas policy objectives nor the *Tasmanian Energy Strategy* specifically address key gaps in the Tasmanian gas market emerging from this Report, such as the lack of network expansion, lack of competition, price pressures, the impact of gas fired generation being used only for emergencies and gas network regulation.

Neither the original gas policy objectives nor the Tasmanian Energy Strategy specifically address key gaps in the Tasmanian gas market.

Table 5: Key Tasmanian Energy Strategy *Actions Relevant to Gas*

Action (time line)	Goanna Energy Comments
Monitor the level of competition in the small customer segment of the Tasmanian electricity retail market and where necessary facilitate further development of a competitive market (ongoing).	This should be extended to gas given the limited competition that also exists in gas supply to smaller customers and the significance of gas to their activities.
Improve customer information to assist customers in understanding what drives their energy bills (2015/16).	This should be applied to both electricity and gas. In gas, it could facilitate lower costs to customers and improve their awareness of the gas market. TSBC should ensure that its members are included. Progress with the implementation of this action is unclear.
Ensure customers have the basic information required to evaluate retail product options (2016/17).	Gas retail product options are relatively simple but competitive offers are limited. Consumers should be made aware of these limitations. TSBC should ensure that its members are included.
Advocate for greater efficiency in the national regulatory arrangements to improve outcomes and reduce costs for consumers and taxpayers (ongoing).	TSBC should support Tasmanian Government advocacy on gas matters with a focus on consumers. Small business could benefit as a result. Information on Tasmanian Government advocacy efforts should be published regularly.

Table 5: Key Tasmanian Energy Strategy *Actions Relevant to Gas (Cont.)*

Action (time line)	Goanna Energy Comments
Advocate for Tasmania's interests in national reform processes, principally through the COAG Energy Council (CEC) (ongoing).	TSBC should support Tasmanian Government advocacy on such matters. Small business could benefit as a result. Gas commodity price risks, pipeline access arrangements, retail competition and gas market reviews by the AEMC, ACCC and AER are examples. The Tasmanian Government should develop positions on the AEMC or ACCC gas market reviews.
Advocate for national reforms in areas Tas considers reform needed (ongoing).	Our comments immediately above also refer to this action.
Provide information on the efficient management of energy for businesses and households (2015/16).	This should be applied to both electricity and gas. In gas, it could help to lower costs and support greater use of gas, especially where it provides a more efficient fuel. TSBC should ensure that its members are involved. Progress with the implementation of this action is unclear.
Investigate mechanisms for facilitating investment in business energy efficiency, including the case for introducing Environmental Upgrade Agreements to enable commercial building owners and tenants to improve productivity through energy (and water) savings (2015/16).	This should be applied to both electricity and gas. In gas, it could be used to lower costs and support greater use of gas, especially where it provides a more efficient fuel. Progress with the implementation of this action is unclear.
Monitor gas market developments and their impacts and work with the Australian Government and other jurisdictions to ensure supply constraints are addressed as quickly as possible, including through promoting capacity trading and price transparency in the market, to ameliorate forecast commodity price increases (ongoing).	TSBC should support the Tasmanian Government taking an active advocacy role on gas market developments. Small business could benefit as a result. Gas commodity price and supply risks should be of significant concerns to Tasmanian small businesses, particularly where they use gas. The Tasmanian Government should develop positions, advocating for Tasmania's interests, on the AEMC or ACCC gas market reviews, including on the AEMC's proposed changes to the Victorian gas spot market.

Table 5: Key Tasmanian Energy Strategy Actions Relevant to Gas (Cont.)

Action (time line)	Goanna Energy Comments
Undertake a review of gas legislation in Tasmania to ensure it is contemporary with market conditions and ensures administrative overlaps are removed. As part of this review, evaluate the effectiveness of gas customer protections and consider the costs and benefits of regulatory and non-regulatory approaches to address any identified gaps (2015/16).	TSBC should support a public review with open consultation. As we have argued elsewhere in this report, it is now timely to undertake and assessment of Tasmanian gas market regulatory arrangements. This should extend to the economic regulatory regime. We are unclear about progress with the implementation of this action. The review should also consider matters such as the fixed nature of gas retail tariffs, as well as the lack of price discounting.
Ensure that Government Departmental arrangements allow for effective, efficient and consistent development and delivery of energy policy (2016/17).	TSBC should support this action. We note that these arrangements can play a significant role in the effective development of energy policy. The interests of small business should be considered.
Identify target industries for load growth and develop a prospectus for each industry which includes provision of all key information in regard to energy (and other required services) and optimal site locations (2015/16).	This action should include gas as an important form of energy to assist industry expansion in Tasmania and whether the existing policy framework is effective in supporting this. Small business prospects for greater use of gas should be included. We are unclear about progress with the implementation of this action.
Ensure Government has a contemporary retention of major businesses strategy, which includes evaluating the merits of Government activity aimed at attracting new businesses versus retaining existing ones (2015/16).	Major industrial gas users are important to the Tasmanian gas market and small business can benefit from their presence. The ability of small business to make greater use of gas as a means of attracting new business to Tasmania should also be included in this strategy. Progress with the implementation of this action is unclear.
Monitor Tasmania's level of energy security in regard to current and projected demand scenarios, considering all forms of energy supply and their existing and projected capacities (ongoing).	This needs to include key aspects of gas supply, such as supply constraints, supply vulnerabilities, the single point of supply risk, limited availability of gas to Tasmanian consumers, gas emergency procedures and the use of gas fired generation for electricity supply.
Develop key performance indicators for the Energy Strategy to measure progress against the outcomes, to be reported for the first review of the Strategy (2018/19).	These should include KPIs that relate to the gas market in Tasmania and how effectively it serves consumers, including small business. KPI's should be developed and reported on well before 2018/19, so consumers can see what progress is being made in the meantime.

Source: Goanna Energy Consulting

5.3 Concluding Remarks

The chapter outlined the background legislative instruments applicable to the Tasmanian gas market. The gas supply industry has a 'light handed' approach to regulation, both for pipelines and its retail market. This was intended to allow the price of electricity to determine the price of gas. However, 10 years on and with some 12,000 connections, the industry has reached a stage where it can more easily influence gas prices on its own, suggesting it would be timely to review regulation.

Supporting this, the ACCC have recently found evidence of monopoly pricing by pipelines under light handed regulation (though they have not named the specific pipelines) which has detrimental impacts on gas consumers; and it has therefore called for reforms to pipeline regulation.

The call for a review of Tasmanian regulation is further substantiated by the fact that TGR has indicated that higher pipeline charges will be a major factor in gas price increases until at least 2018 and by an example cited by the ACCC where the TGP attempted to increase its charges for shippers by 200 per cent for a proposed gas network extension to Smithton.

Also discussed were how the unregulated status of the TGP and TGN pipelines could be changed by having a service 'declared' or 'covered' under national laws. These actions may be initiated by gas consumers and should be investigated by the TSBC. However, account should be taken of the ACCC's recommended changes and their likely implementation.

The Tasmanian government's gas policy should consider that the industry has developed and changed since inception well over ten years ago and is being held back by its small size, failure to keep pace with expansions, vulnerability to loss of a few major gas users, its limited opportunities for industrial growth, its high transportation charges and its comparatively high gas prices (particularly for small business).

Our evaluation of the *Tasmanian Energy Strategy* and Tasmanian gas policy objectives showed that neither has addressed all the gaps in the gas market, including the lack of network expansion, lack of competition, price pressures and network regulation.

The following chapter discusses the small business perspectives on the Tasmanian Gas Market.

6

Perspectives of Small Business

- Online survey results of small business and large gas users
- All respondents reported gas price increase over past 3 years
- Lower gas prices, competition and network expansions – most important factors impacting gas use

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6 Perspectives of Small Business

To assist in the preparation of this report, the views and perspectives of Tasmanian businesses were sought via an online survey. The majority of respondents were from small businesses, though some larger gas users also responded to the survey. Small business respondents included both existing gas consumers and businesses currently not connected to natural gas in Tasmania.

The survey covered the following main areas:

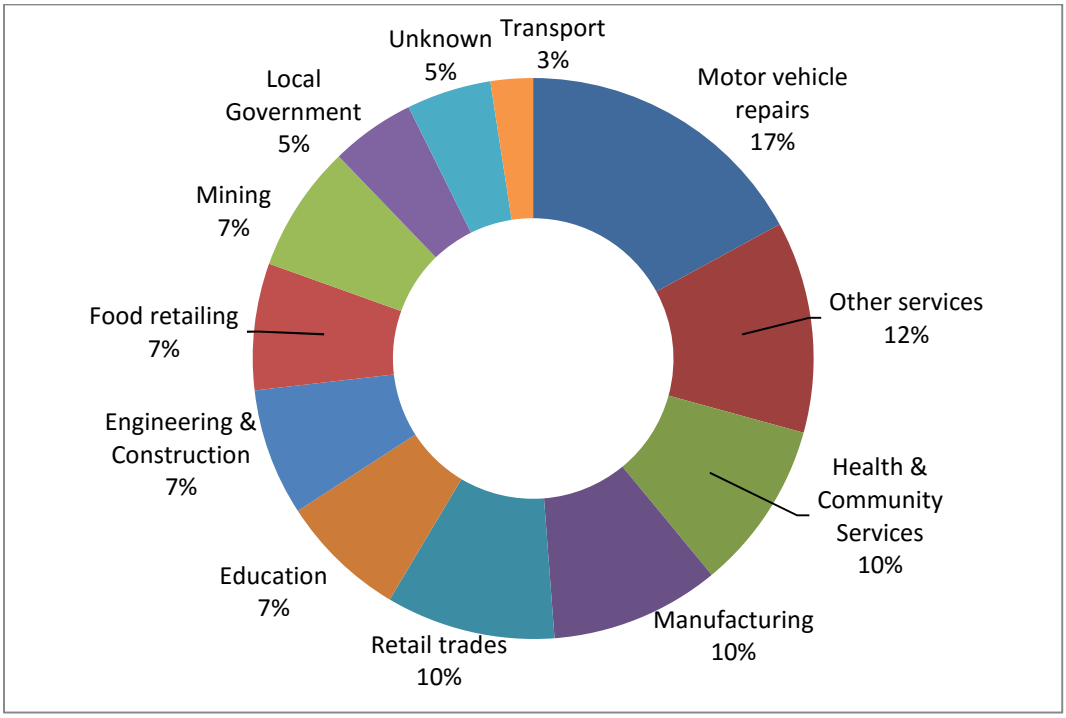
- Information about the business responding;
- Information about its gas use (if applicable);
- Information about recent gas price changes;
- Information about the businesses' scope to increase gas consumption;
- Familiarity with gas retailers;
- Perceptions and views on the Tasmanian gas market; and
- Perceptions and views on factors that would enhance the ability of the business to make use of natural gas.

Respondents provided important practical and commercial business insights. This adds a real world dimension to our own assessment of the Tasmanian gas market and its impacts on small businesses (covered in Chapters 2, 3, 4 and 5). It also adds value to the analytical parts of the report.

6.1 The Respondents

A total of 41 responses to the survey were received. This is a small sample and therefore the statistical significance of the results obtained may be impacted. This should be kept in mind when reading this section of the report and in drawing any inferences from the survey results. Nevertheless, the results are still useful. Figure 13 below shows the share of respondents by different types of business activity. Most respondents were from service related activities with 17 per cent from manufacturing and mining.

Figure 13: Survey Respondents by Business Activity



Source: Goanna Energy Consulting survey

6.2 Size of Business and Gas Use

Table 6 below presents key information about respondents' businesses and their use of gas. It covers only those respondents who currently use natural gas. As would be expected, there is a significant drop off in annual sales, employment, and gas use as the size of the business decreases. We have kept respondents' annual gas expenditure and prices paid for gas confidential. However, expenditure on gas increased substantially with the size of the business. The opposite is the case for unit prices, which increased steeply as the size of the business decreased.

6.3 GAS RETAILER

We asked the survey respondents to tell us who their gas retailer was. In all, 76 per cent said TGR, only 12 per cent said Aurora Energy and 12 per cent said they were buying gas from someone else. For the SME and Commercial Tariff Customers, all had TGR as their retailer. This suggests a lack of competition or exercise of choice at this end of the commercial market.

Table 6: Annual Sales, Employment and Gas Use of Survey Respondents

	Gas Consumer Respondents	SME Gas Consumers[39]	Commercial Gas Tariff Customers[40]
Sample (nos)[41]	25	21	5
Average Annual Sales	$86.9 million	$5.1 million	$1.9 million
Average employment nos	223	53	26
Average Annual Gas Use	204,730 GJ	22,204 GJ	580 GJ

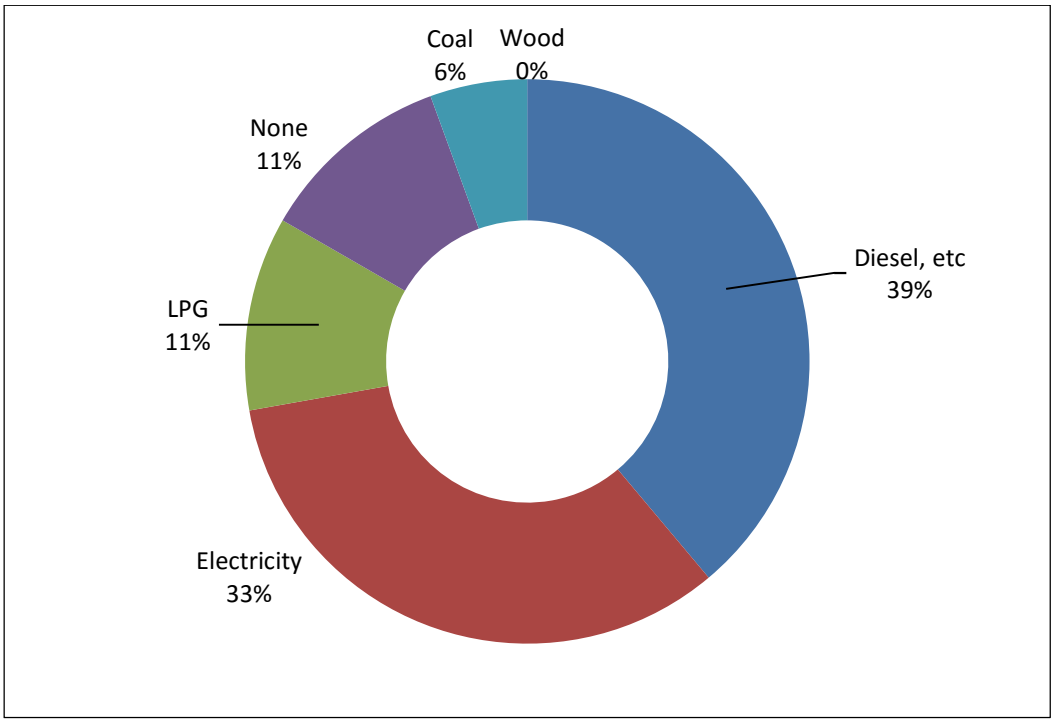
Source: Goanna Energy Consulting survey

[39] We adopted the ABS definition of 200 or fewer employees.
[40] Customers who would normally be placed on the posted Commercial Gas Tariffs of Aurora Energy or TGR, which cuts out above an annual gas consumption of 1,000 GJ (expenditure of approximately $35,000).
[41] The numbers on this row are not additive. They relate to a sub-set of all the survey respondents, i.e., those respondents that are current gas consumers.

6.4 Gas Induced Fuel Switching

Respondents were asked what type of fuel they had been using before connection to natural gas. Their responses are shown in Figure 14. Gas has most commonly displaced Diesel and other liquid fuels (in 39 per cent of cases), followed by electricity (33%). In some cases (11 per cent), gas has been used for new activities and has stimulated additional energy use. In 56 per cent of cases, gas has been used as a cleaner type of fuel compared to what it displaced, but in one-third of cases it has supplanted mainly renewable hydro electric power.

Figure 14: Type of Fuel Displaced by Gas

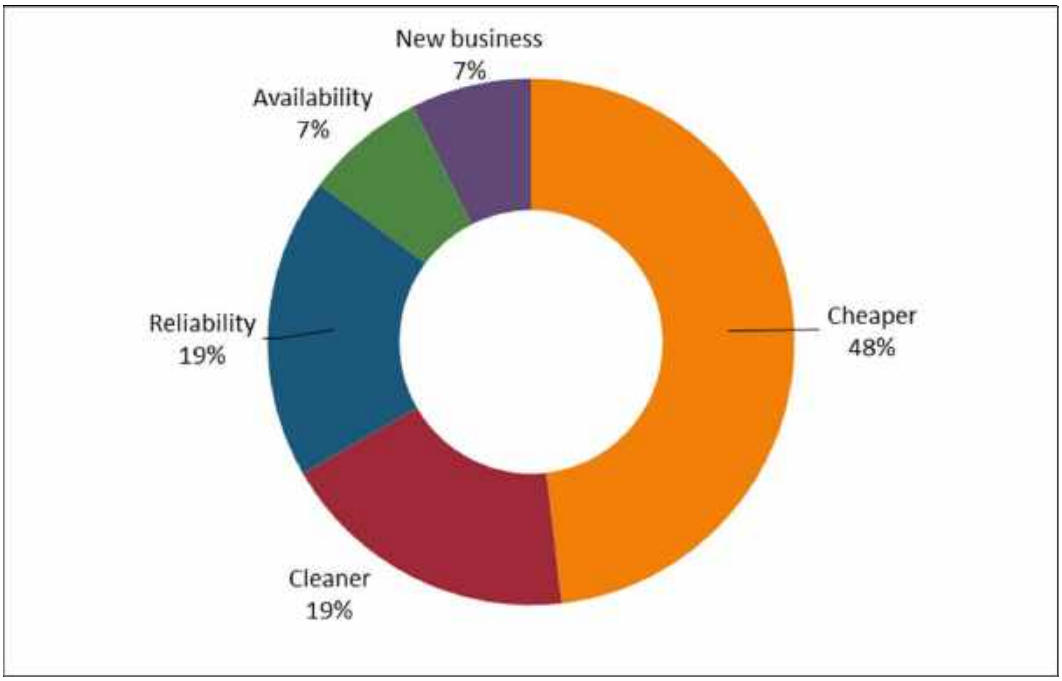


Source: Goanna Energy Consulting survey

6.5 Reasons for Connecting to Gas

The survey also asked people the main reason they had connected to natural gas. The results are shown in Figure 15. By far the most common reason for connecting to gas was its cheaper cost, with nearly half of the survey respondents nominating this as their reason. This supports the view that businesses are most attracted to gas due to it being cheaper than alternative fuels. It should be kept in mind, however, that most switching occurred from fuels that would be more expensive than gas (at least at the time of conversion), such as liquid fuels, LPG and electricity. Other important considerations in the business' decision to connect to gas were that it was cleaner and more reliable (both registering with 19 per cent of responses).

Figure 15: Main Reason for Connecting to Gas



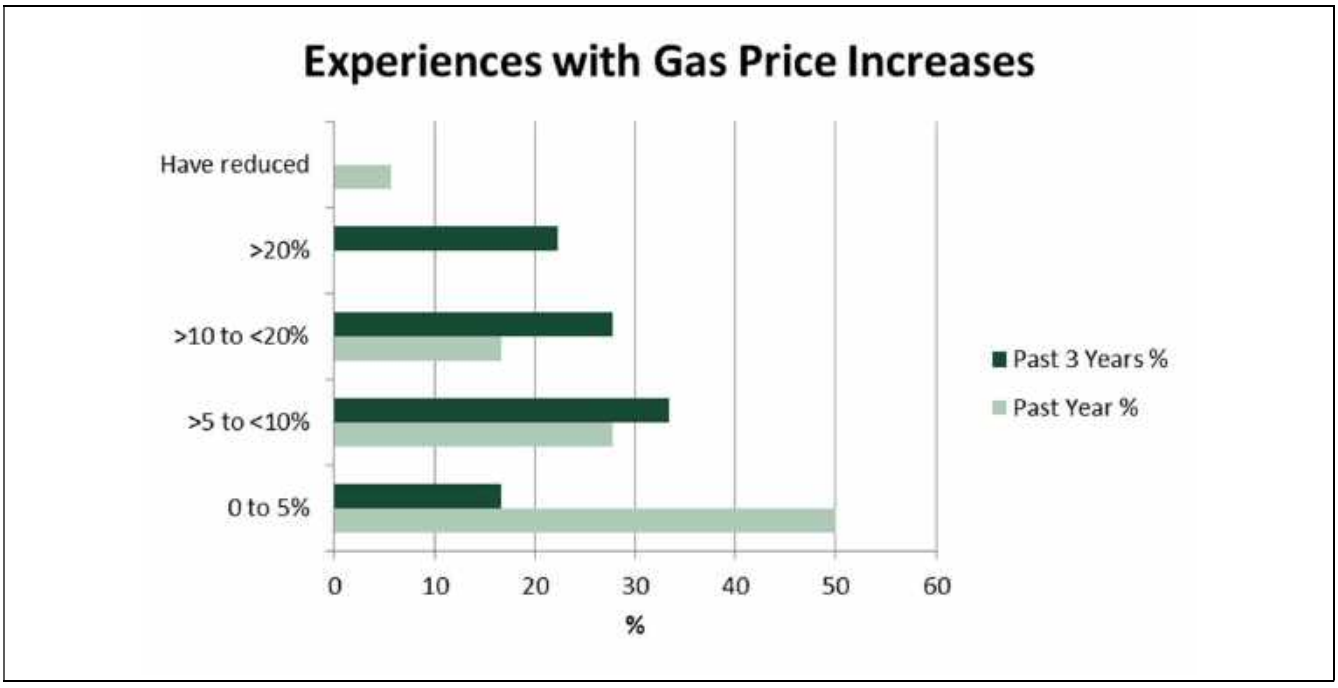
Source: Goanna Energy Consulting survey

6.6 Gas Price Increases

The survey sought information from Tasmanian businesses about the gas price increases they had experienced in recent years. Respondents provided information on their experiences with gas price increases over the past year and past three years.[42] The results are displayed in Figure 16.

Over the past year, 94 per cent of respondents have experienced price increases, with all respondents seeing price increases over the past three years. Half of the respondents experienced price increases of up to 5 per cent in the past year, with a further 28 per cent seeing prices rise by between 5 and 10 per cent. For 17 per cent, prices had risen by up to 20 per cent. Looking over the past three years, one-third of people had seen prices rise by between 5 and 10 per cent, for 28 per cent they had risen by between 10 and 20 per cent, whilst for 22 per cent they had risen by more than 20 per cent. These are significant price increases.

Figure 16: Experiences with Gas Price Increases



Source: Goanna Energy Consulting survey

[42] The survey was conducted in November and December 2015, prior to the 2016 gas prices announced by TGR and Aurora Energy.

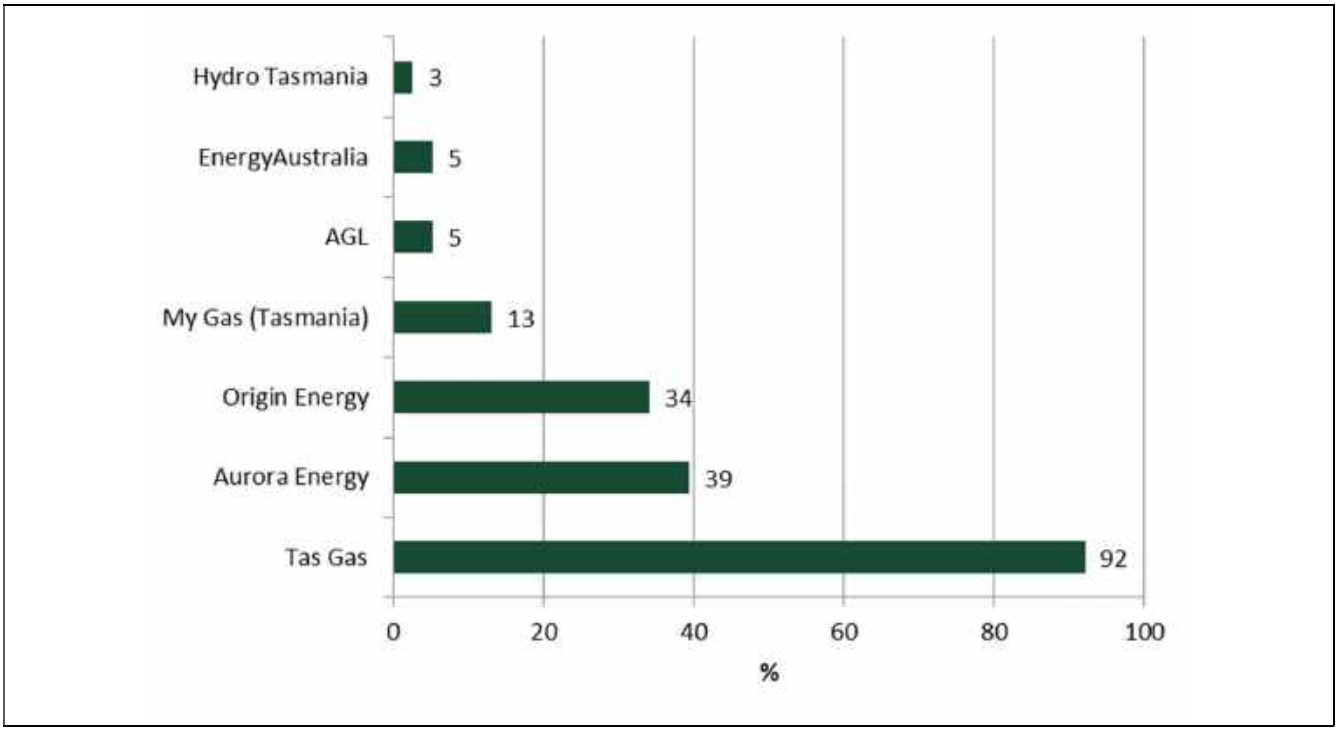
6.7 Customer Recognition of Gas Retailers

We asked those responding to the survey to identify firms they recognised as gas retailers from a pre-determined list. Their responses are show in Figure 17. TGR was clearly the most recognisable. Over 90 per cent of people knew of its presence as a gas retailer. Aurora Energy, Tasmania's second gas retailer, was well behind with only 39 per cent of respondents nominating it as a gas retailer.

This suggests that Aurora could significantly boost its presence in Tasmania as a gas retailer. Doing so could improve its market share among small businesses, especially considering few respondents presently use Aurora Energy as a gas retailer.

A significant number of respondents (60 per cent) also nominated companies that do not take part in the natural gas market as Tasmanian gas retailers. This suggests that knowledge of gas retailers among small business customers is limited. Origin Energy, which was nominated as a natural gas retailer by 34 per cent of those responding, does have a presence but as a supplier of LPG in Tasmania.

Figure 17: Recognition of Gas Retailers



Source: Goanna Energy Consulting survey

6.8 VIEWS ON THE TASMANIAN GAS MARKET

Respondents were also asked a series of questions about their knowledge of, views on and perceptions of the Tasmanian gas market covering key areas such as prices, competition, reliability, comparisons to electricity, availability and connection. They were asked whether they *Strongly Agreed, Agreed, Neither Agreed nor Disagreed, Disagreed* or *Strongly Disagreed* with a series of propositions about the gas market. The results are shown in Figure 18. Their responses are ranked from the bottom up in terms of the level of agreement.

The most commonly agreed view was that gas should be more available in Tasmania, with 82 per cent of respondents strongly agreeing or agreeing with this. Only 3 per cent disagreed. This shows the depth of support amongst Tasmanian businesses for a wider coverage of gas across the State.

Next, 77 per cent felt that gas prices were too high, whilst 64 per cent felt that there was not enough competition in the supply of gas. Only 3 per cent disagreed. Clearly, there is a strong appetite within the Tasmanian business community for lower prices and more competition.

Moreover, 64 per cent said that the Government should provide incentives to connect to natural gas, with only 8 percent disagreeing. Clearly, incentives to connect to gas would be very popular with Tasmanian businesses. Associated with this, 59 per cent said they would connect if gas were available. There were also indications that more use would be made of gas by businesses, with 39 per cent saying they would connect if gas was available and one-third saying they would increase their current use if gas was cheaper.

Looking at competition between gas and electricity, positions on this were relatively even, with 36 per cent of businesses saying gas is cheaper than electricity, but 29 per cent disagreeing. Meanwhile, 24 per cent said they felt that gas competed well with electricity, but 29 per cent said it did not. Nearly half of respondents neither agreed nor disagreed with this.

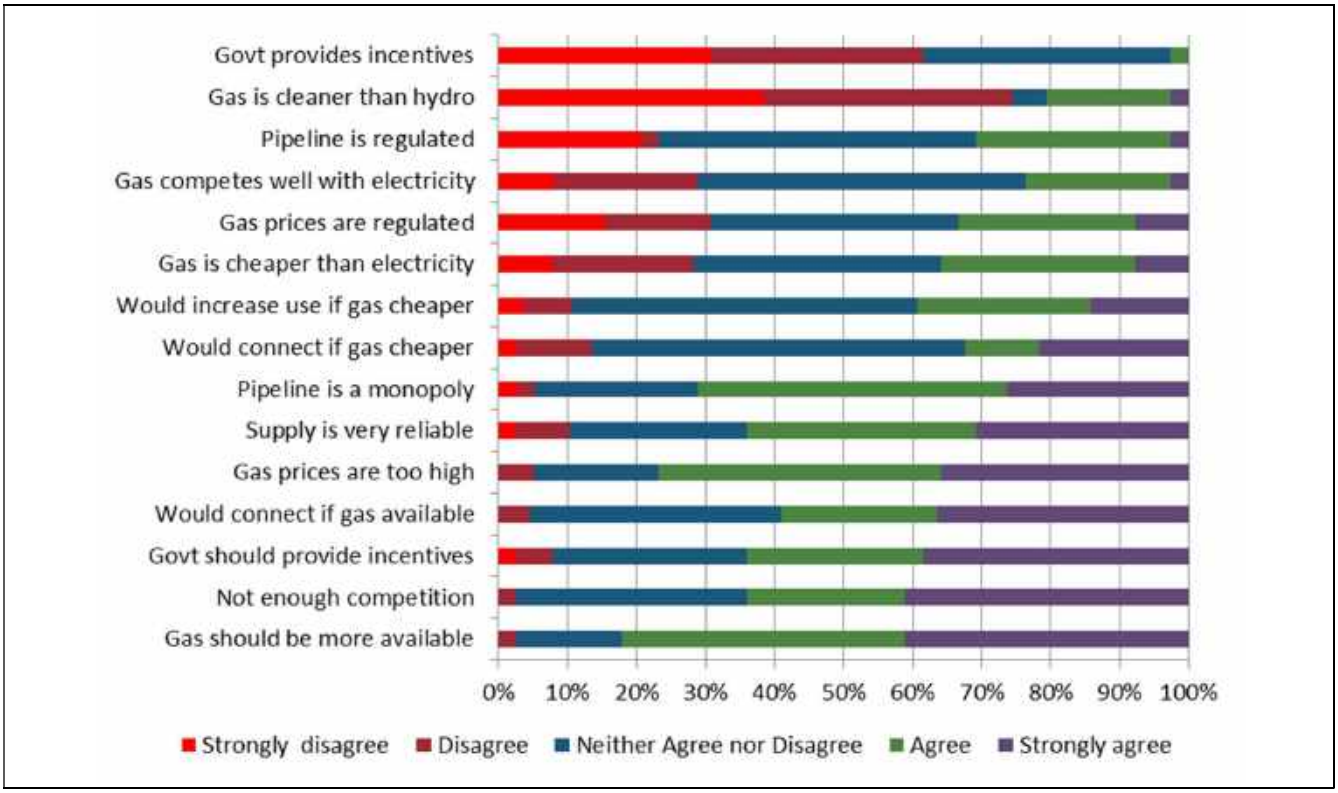
In relation to reliability, 64 per cent of respondents felt that gas supply was reliable, whilst 11 per cent said it was not.

There was strong disagreement with the proposition that gas was a cleaner fuel than hydro, with 74 per cent of businesses either disagreeing or strongly disagreeing with this.

Turning now to the questions intended to test respondents' knowledge of existing gas arrangements in Tasmania, 71 per cent knew that the pipeline was a monopoly, but 34 per cent said that gas prices were regulated (which they are not) and 31 per cent that the pipeline was regulated (which it is not). Moreover, there was also a large proportion responding that they neither agreed nor disagreed with these two propositions (46 and 36 per cent respectively), perhaps indicating they did not know. On the other hand, 62 per cent were aware that the Government did not provide incentives to connect to natural gas.

These responses suggest a basic knowledge amongst small business in Tasmania about current gas market arrangements but also a lack of depth in that knowledge. The lack of knowledge about gas industry arrangements, price regulation and pipeline regulation is interesting, given the significant impact of these on small business as current or potential gas consumers.

Figure 18: Knowledge of, Views on and Perceptions of the Tasmanian Gas Market

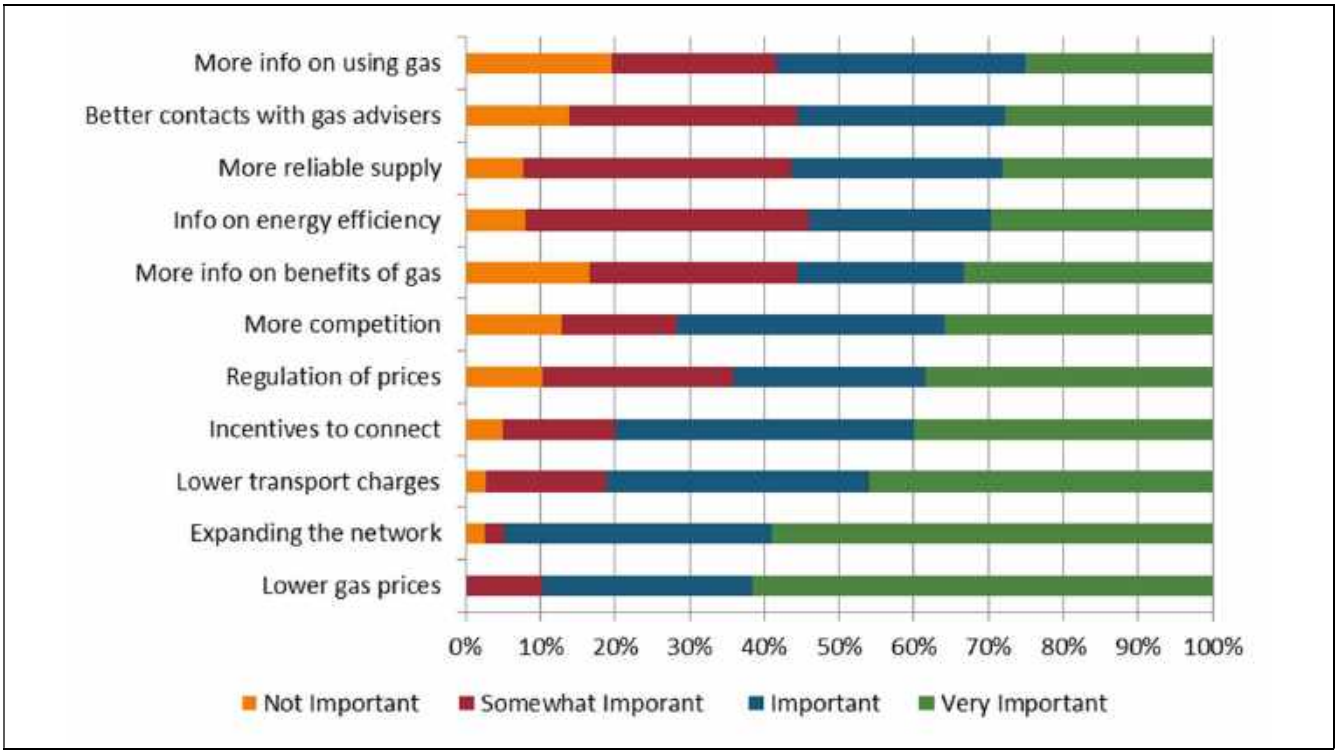


Source: Goanna Energy Consulting survey

6.9 Factors Impacting Use of Gas By Small Businesses

Respondents were asked to say how important they thought a range of factors were in terms of the ability of small businesses to use natural gas. They were asked to rate these as being *Very Important, Important, Somewhat Important* or *Not Important*. Their responses are shown in Figure 19 below. The most important factor is shown at the bottom of the chart and the least important at the top.

Figure 19: Factors Affecting the Use of Gas by Small Businesses



Source: Goanna Energy Consulting survey

The respondents were strongly of the view that lower gas prices and expanding the network were the two most important factors affecting gas use, with 62 per cent and 59 per cent respectively nominating these as very important. In fact, 90 per cent or more of responses nominated these as either important or very important. Next in importance were lower transport charges and incentives to connect, which were seen as very important to small business by 46 per cent and 40 per cent of respondents respectively. Over eighty per cent saw them as either important or very important to small business. The regulation of prices and more competition were seen as either very important or important by about 70 per cent of responses.

Informational type issues (benefits of gas, energy efficiency in gas use, use of gas and better contact with gas specialists) were seen as less important but, nevertheless, more than half of respondents still saw these as either very important or important.

Greater reliability was seen as important by more than half of the respondents.

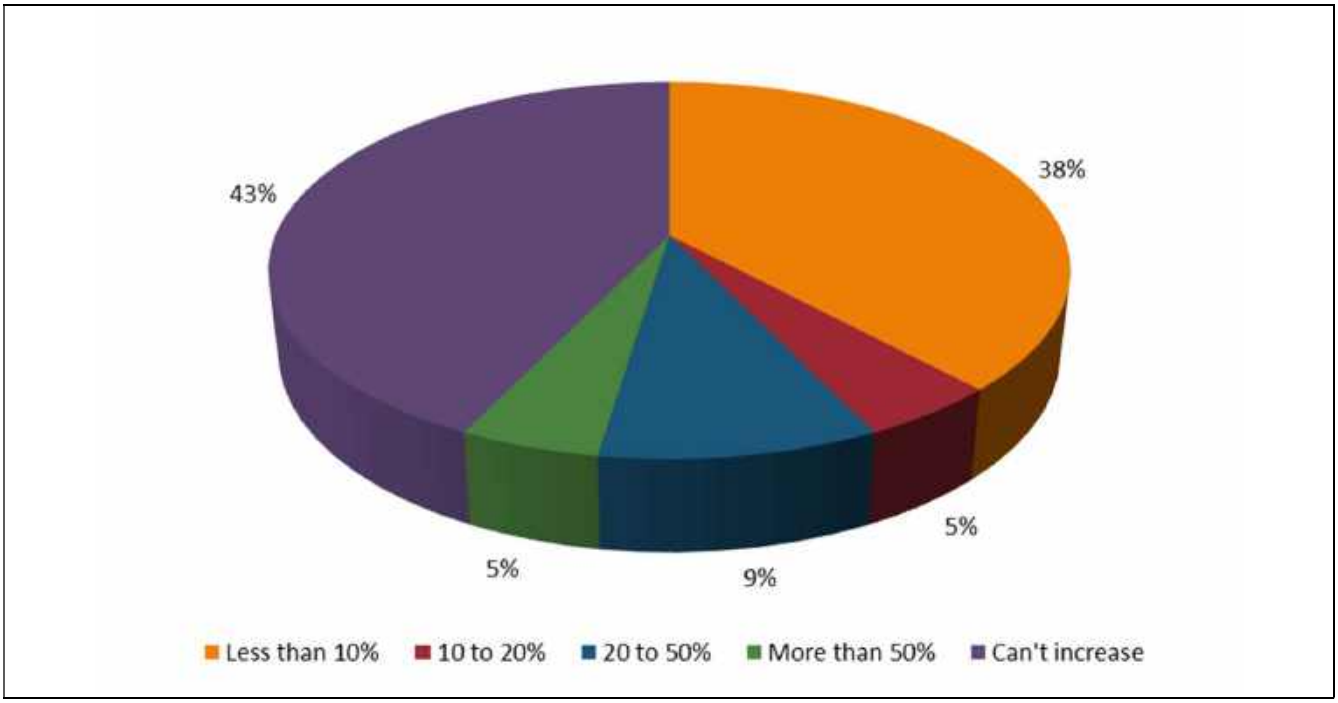
These results suggest that the Tasmanian gas market, gas policy and regulation are not currently meeting business customers' expectations in a number of important areas.

6.10 Ability of Businesses to Increase Gas Use

The survey included questions designed to help determine the ability of businesses to make more use of gas. The results are set out in Figure 20 and Figure 21 below.

Businesses already connected to natural gas were asked about their ability to increase gas consumption (Figure 20). The bulk of businesses already connected to gas felt that they either have no ability to increase their consumption or can do so but by less than 10 per cent. However, 19 per cent indicated an ability to increase consumption by 10% or more and overall 57 per cent had some ability to increase their consumption. All in all, there appears to be an ability to increase gas use amongst existing business users that is not being tapped into at the moment. Presumably, the issues identified in Section 0 play some role in this.

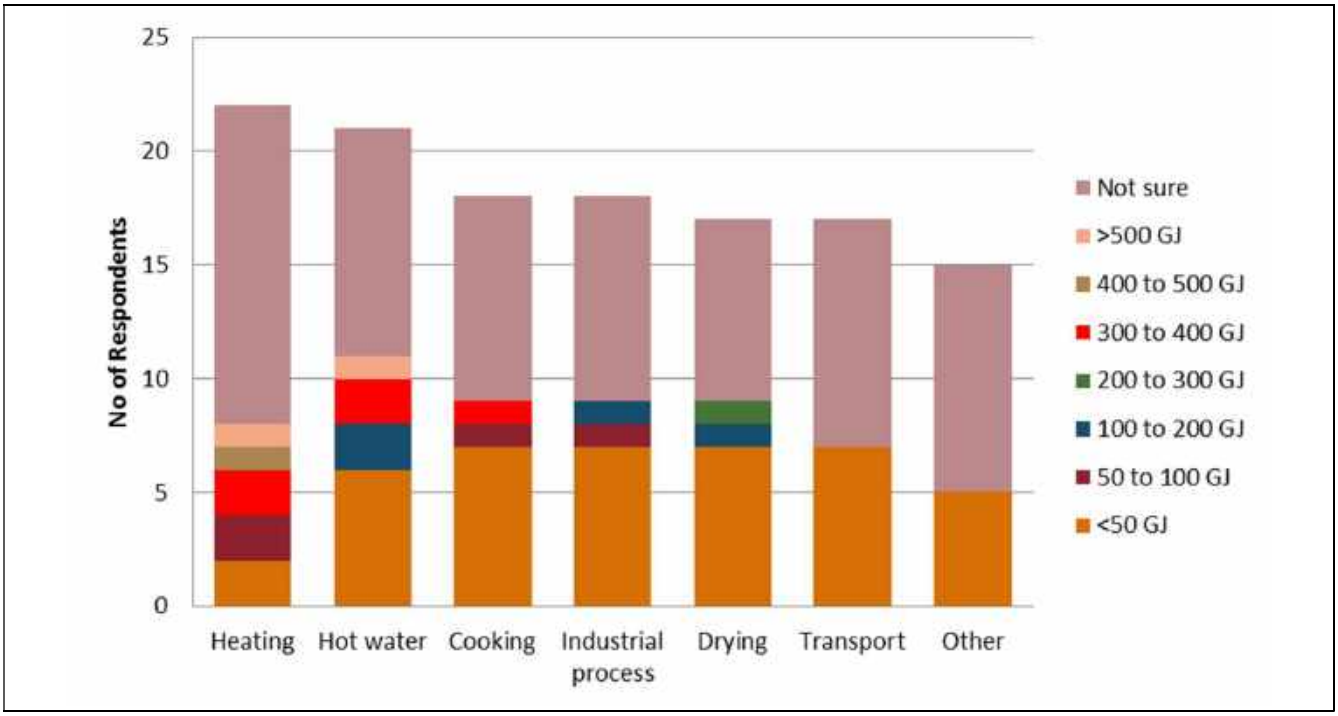
Figure 20: Ability to Increase Gas Use (Amongst Existing Gas Users)



Source: Goanna Energy Consulting survey

The survey asked potential new gas consumers how they could use gas and how much they could use. The results are displayed in Figure 21. There appears to be an ability to use gas for different types of uses with heating and hot water offering the most potential. Heating and hot water also have larger potential for high use. Among the other categories shown, the potential for use tends to be more at the lower end of the consumption scale. Many respondents (perhaps not surprisingly) said they did not know how much they could increase their use by. These results point towards an untapped potential for additional gas use in Tasmania among businesses not yet connected to gas.

Figure 21: Ability to Use Gas (New Users), per annum



Source: Goanna Energy Consulting survey

6.11 Other Views of Respondents

Respondents were also asked if they wished to provide any other comments. We have summarised these below.

- There were concerns expressed about the gas 'monopoly' in Tasmania and the need to break this up. For example, one respondent commented that:

  The gas market in Tasmania is a monopoly, with the pipeline, network and retail arms competing against no other suppliers. The price was cheap to hook up initially to NG [natural gas] but then once connected the price rises occurred and we cannot transfer out of gas. The only option left for us is to look for an alternative fuel. (Our parenthesis)

- Concerns were also expressed about the limited availability of gas. One comment was that:

  Latrobe is not connected to NATURAL GAS which is so archaic.

- Another point of concern expressed in respondents' comments was about gas prices. One noted that:

  All I hear on the *street is that gas prices are on a steep upward trend?*

6.12 Concluding Remarks

The majority of survey respondents were connected to TGR and its brand was the most recognised. A large majority of respondents reported that their main reason for connecting to gas was related to cost, and all respondents experienced price increases over the past 3 years. The two most important factors impacting gas use were lower gas prices and network expansion. A significant majority of respondents felt that gas should be more available in Tasmania, and that gas prices were too high.

The following chapter considers the perspectives of other stakeholders utilising gas.

7

Perspectives Of Other Stakeholders

- Some calls for AER to regulate pipeline revenues and value of TGP
- LNG export prices impact gas prices in Tasmania
- Outcome of changes to existing Victoria Spot Market important for Tasmanian gas market

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7 Perspectives of Other Stakeholders

We also sought the views of a range of other stakeholders with an interest in the Tasmanian gas market. Their comments are presented in this Chapter. Whilst the focus of this report is on gas consumers, in particular small business, the responses of these stakeholders provide another important dimension to the report and the issues affecting the Tasmanian gas market.

We obtained only a limited number of responses and a detailed assessment would be required to provide a more representative range of stakeholder views.

All stakeholders requested that their comments remain anonymous, so we have provided a consolidated summary of their responses in this Chapter without attribution to particular stakeholders.

7.1 Consolidated Views of Stakeholders

Set out below is a summary of the views expressed by those stakeholders who responded to our request for them to participate in the study.

7.1.1 Small size of the gas market and expansion possibilities

Stakeholders felt that the small size of the gas market in Tasmania is a hindrance to further growth, means that there is little capacity to influence wholesale prices and will make it more difficult to negotiate commodity supply in future. This is likely to be felt in the negotiation of gas commodity supply contracts from the end of 2017, when current contracts expire.

They also expressed the view that the limited coverage of gas distribution mains hinders further penetration of gas and noted that capital contributions are often required for new connections, making them less attractive to potential customers. According to one, the low hanging fruit had been picked early on and further expansion is more costly. It was also noted that following the initial roll out, new connections are now mainly for renovation and replacement of failed equipment.

One stakeholder noted that there are opportunities to review existing asset plans and opportunities for potential government funding of economic expansions, noting that SMEs would be beneficiaries. They mentioned areas such as Cambridge, parts of Launceston and Devonport. They suggested that two key roles for government were subsidising both network extensions and new connections.

7.1.2 TRANSMISSION

A commonly held view amongst stakeholders was that reduced contract volume after 31 December 2017, when the contracts to supply TVPS gas generation expire, would mean a marked increase in capacity charges, which would flow through to significant increases in consumer prices.[43]

One stakeholder expressed the view that the single transmission pipeline produces limitations on the competitive dynamics of the Tasmanian gas market, but this is to the case in all mainland gas markets subject to a single source of supply and transportation.

Another noted that the TGP will be seeking to retain revenue post 2017 and have the benefit of flexible pricing. They added the following:

> *There is an adequate regulatory response for the AER to regulate revenues and the value of the TGP (i.e., write down its asset value) if they seek to abuse their monopoly power, so any entity could apply to see if the TGP should be bought under the national gas code and a third party gas access regime. Customers probably should be more aware that they don't have to accept market pricing and that legislation always sits there where they could apply for regulated access.*

It was also noted that, at current market growth levels, there was "unlikely to be a TGP capacity issue for decades."

7.1.3 UPSTREAM GAS MARKET AND LNG EXPORT PRICING

It was pointed out that issues affecting the Victorian gas market directly impact on Tasmania. The open access arrangements in Victoria mean that, subject to appropriate transportation arrangements, there is no unique advantage or disadvantage for Tasmanian gas users in regards to the upstream market.

Stakeholders commented that LNG export prices will impact gas prices in Tasmania due to the increased interconnectedness of the eastern seaboard gas market. One commented that this "dynamic presents an unprecedented level of volatility and uncertainty in the gas supply and demand balance." Others observed that these price pressures have abated due to the depressed level of world oil prices.

7.1.4 RETAIL COMPETITION AND PRICES

One stakeholder expressed the view that the small number of wholesale providers in the Tasmanian gas market limits retail competition with uniform pricing to both household and business retail customers. Another noted that the uncertainty about upstream gas pricing, combined with the small market size, makes it difficult to attract competition in the Tasmanian gas market.

There was also a view expressed that market pricing is working, for example, the nexus between LNG and natural gas pricing, as well as between residential gas pricing and electricity pricing.

One stakeholder pointed out that future changes to regulated electricity tariffs would impact the current nexus between electricity prices and gas prices for both residential and small business customers.

[43] It should be pointed out that these comments preceded the recent electricity supply problems which restored operation of the TVPS for the duration of these problems.

7.1.5 REGULATION

Given reviews of the eastern gas market by the ACCC and AEMC, including a review of Victorian wholesale gas market arrangements, a number of stakeholders commented that the outcome of these would be important to the future of the Tasmanian gas market.

One stakeholder recalled that the reason for the adoption of light handed regulation was because gas was originally rolled out for large industry benefits and that it was seen as a fuel of choice for customers. However, with the further development of the market, circumstances may have changed. They noted that issues for vulnerable customers have arisen, such as the lack of any obligation to supply (unlike electricity) and the connection of government housing.

7.1.6 CHANGES TO THE VICTORIAN GAS SPOT MARKET

As mentioned earlier, the AEMC has recently outlined plans for changes to the existing Victorian gas spot market. This would involve abandoning the current arrangements and replacing them with a consistent set of wholesale market arrangements for the entire eastern seaboard. A number of stakeholders commented on this noting its importance to the Tasmanian gas market.

One observed that:

> *Given the direct connection to and reliance of the Tasmanian gas market on the efficient operation of the Victorian market, the outcome of these reviews will be important in considering appropriate regulatory instruments for Tasmania.*

One unnamed east coast gas market participant was concerned that the changes could significantly erode the scope for competition in the Tasmanian gas market. Their views are reproduced in Box 2 below. As mentioned previously, it appears that the Tasmanian Government is yet to outline its position to the AEMC on the latter's gas market reforms, including changes to the Victorian arrangements. It would be helpful if it did so.

Box 2: Unnamed East Coast Gas Market Participant's Views on the Impact of Changes in the Victorian Gas Spot Market on Tasmania

Changes to the Victorian gas market arrangements proposed by the AEMC as part of its East Coast Gas Market Review (Stage 2 Report released in December 2015) are likely to create barriers to entry and reduce competition in the Victorian gas retail market, with potential flow on impacts on the Tasmanian gas market.

Currently the Declared Wholesale Gas Market ("DWGM") of Victoria, which is the spot market for wholesale gas, provides a transparent mechanism by which retailers can source competitively priced supply.

The AEMC has proposed to remove the existing spot market arrangements, replacing them with a voluntary trading platform and a balancing market. Under such a model, it will be essential to have access to physical gas supply contracts, as there will no longer be a pool (where certainty of liquidity is currently enabled by the requirement on all participants to submit bids and offers). The proposed market design also imposes disproportionate risks on small participants, who are less likely to have access to flexible supplies to manage balancing risks.

Our long term view is that this will mean fewer new entrants in Victoria, and this may impact on new entrants in Tasmania.

Established/larger players are likely to have a different view.

The proposed changes increase barriers to entry in other respects. For example, under the current market carriage arrangements, if you want to pull gas out of Victoria you just need to have a contract with the facility at the interconnect and bid into the spot market accordingly to ensure that you are scheduled to withdraw.

In contrast, under the AEMC proposal, you will need to secure and commit to exit capacity rights at a fixed cost.

In summary, the changes make it harder for new entrants to get a foot in the door.

Getting rid of Victorian gas pool also removes the ability for consumers to benchmark firm offers. For example, the Wallumbilla Gas Supply Hub is a voluntary exchange based market, where participants can post offers to buy or sell gas. This is the same model that the AEMC is proposing to implement in Victoria. In such a voluntary market, daily published prices may not be indicative of where real business is being done, noting that on some days, there may be no or just a handful of trades.

In contrast, in Victoria, participants have an incentive to submit competitively priced bids and offers to ensure they are scheduled to withdraw or supply gas, to the extent it is economic for them to do so, and price is transparently determined at the point at which demand meets supply.

Importantly, the AEMC has also not provided any cost-benefit analysis to demonstrate that the changes proposed are warranted. The changes proposed will involve significant design and implementation costs. Further, if the changes lead to reduced competition, gas consumers both in Victoria and in adjacent/interconnected markets, will bear increased costs.

On the positive side, AEMC have put forward a raft of changes for transparency and to capture more facilities. For example, the LNG gas trains in Gladstone are currently not obliged to furnish outage information (which can have an impact on the demand/supply balance and gas prices). The AEMC proposed changes would oblige disclosure of this information, which is important for competition.

7.2 Concluding Remarks

Other stakeholders who participated in the study made important points which tended to cement a number of earlier points in the report, but also brought up some of their own perspectives on transmission charges, the upstream gas market, LNG export pricing and the impact on Tasmania of proposed changes to the Victorian spot market. There were also some calls for the AER to regulate pipeline revenues and the value of TGP (e.g. write down its asset value).

The next chapter is a discussion of key issues and findings from sections 1 to 7. Actions or recommendations are presented for each issue.

8

Our Key Issues, Findings & Actions

- Increase gas penetration rate in Tasmania
- Gas market needs competition
- Government involvement required
- TGP important for gas prices

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8 Our Key Issues, Findings & Actions

In this Chapter we set out our key issues, findings and actions needed to address these.

As foreshadowed in Section 1.5, we believe that timely development of the Tasmanian gas market and the stimulation of competition will only be achieved through an approach that mixes competition with a limited number of targeted government interventions. We do not see an inconsistency in this. As explained earlier, a combination of competition and intervention has been used successfully in the past to stimulate new or emerging markets including the introduction of natural gas in Tasmania. Without intervention, in these markets competition, access to new products or services and market growth would have been significantly delayed with attendant economic costs. The trick is to target the intervention to assist these other objectives and limit its application. This Chapter outlines such an approach for the Tasmanian gas market.

ISSUE #1

"There is a lot of potential for growth in Tasmanian gas consumption"

FINDINGS

There is substantial potential for growth in gas consumption in Tasmania but this potential is not being fully realised. Gas has a low penetration rate (around 25 per cent of premises which can connect to the existing network and 10 per cent of small businesses which can connect are connected). Moreover, the overall penetration rate of natural gas into Tasmanian premises is only about 5 per cent and a mere 2 per cent for small businesses. Consequently, natural gas accounts for only 7 per cent of energy consumed in Tasmania, compared to over 30 per cent in the rest of Australia. As a result, the significant investment in Tasmania's gas infrastructure is not being fully exploited and the network is greatly underutilised. In short, it is a wasted resource at present, albeit with considerable upside potential.

Large new industrial or power generation loads can expand consumption in significant lumps but are dependent on infrequent opportunities, which are uncertain. There is also the risk of loss of

existing large load, be it industrial or gas generation. Small to medium business and household loads offer more predictable growth opportunities and whilst they may be relatively small individually, taken together, they could usefully expand gas consumption.

The results of our survey of Tasmanian businesses also suggest that scope to increase gas consumption among both existing and new users. Furthermore, comments from stakeholders were also supportive of the ability to expand gas use.

ACTIONS

Existing gas policy settings in Tasmania have tended to be passive and have largely ignored the potential for growth in gas consumption. Following an initial show of support, the Government retreated and by-and-large left the gas market to the gas industry. Policy should be tilted more aggressively and deliberately at expanding gas consumption across the board, including by small businesses and households. A number of our actions are aimed at pursuing this strategy, including making greater use of competitive markets, more competitive prices, incentives for household and small businesses to connect and an expanded gas network. Individual actions are set out in other parts of this Chapter.

ISSUE #2

“Expanding the network would help to increase gas consumption”

FINDINGS

Expansion of the existing gas network would help to increase gas consumption in Tasmania, grow the market and help to open the door to more competition. There appears to be strong support for this among Tasmanian businesses, with 82 per cent of responses to our survey supporting it. A number of stakeholders also supported expansion and noted the need for Government involvement.

We have identified seven parts of the State with the potential to expand the network and boost gas consumption based on a combination of in-fill of the existing network and logical extensions to it. This focuses on areas of economic activity and population amendable to natural gas use. These were listed in Section CHAPTER 4and we believe they should be investigated more thoroughly to better determine their suitability and cost-benefits.

ACTIONS

As TGN is unlikely to undertake expansions of its own accord, the Tasmanian Government should develop a scheme similar to the Victorian Government’s Regional Gas Infrastructure Program. As with the Victorian program, Federal Government (or Infrastructure Australia) support could be sought. Expansion should be subject to a rigorous cost-benefit analysis which should include the dynamic benefits of an expanded gas network and its positive impact on the much underused State gas infrastructure. TGN could be a co-contributor or alternatively a separate equity partner (or partners) could be found to participate in the expansions. Alternatively, the Government

could consider a contestable framework for expansions.

TSBC should also consider the need for development of a detailed business case supporting an expanded gas network to present to the Tasmanian and Federal Governments, and Infrastructure Australia. It could seek to do this jointly with potential gas users, representatives of gas users and/or the gas industry.

ISSUE #3

"The incomplete gas network means that some Tasmanians are connected to gas but others not, raising equity issues"

FINDINGS

The gas network currently covers 43,000 potential connections. As such, over 80 per cent of Tasmanian energy consumers are not able to connect to natural gas. For some, especially in areas remote from the network, it would not be economic to extend the network, but there others where network expansion could well be economic but is not occurring at the moment due to a number of factors, including an impasse in responsibility for expansion and the low rate of connection to the existing network. This raises equity issues, as some Tasmanians have the option of an additional energy source but the majority do not.

ACTIONS

Expansion of the natural gas network to other areas, where it is economic to do so, would allow more Tasmanians to connect to gas and reduce the inequities inherent in the existing network. The previous Issue contained Actions to achieve this.

ISSUE #4

"More connections will also help to increase gas consumption"

FINDINGS

More connections to the existing gas network would help to increase gas consumption in Tasmania, would help to grow the market and open the door to more competition. The low gas penetration rates compared to other jurisdictions

with reticulated gas, suggests that there remains considerable scope for expansion to occur, including amongst both small businesses and households.

At present, the existing natural gas network is a greatly underutilised resource that is not reaching its potential. If allowed to do so, it could make a far greater contribution to Tasmania's economy and small business activity.

Our survey responses, taken as a whole, confirm that the Tasmanian gas market, gas policy and regulation are not meeting business customers' expectations in a number of important areas. The Government needs to develop policies and the industry commercial approaches that better meet the needs of small businesses. A number of stakeholders also supported a need for more government involvement to increase gas penetration.

Responses to our survey confirmed that cost is the main factor in business decisions about whether to connect to natural gas or not.

More connections should help to make greater competition in the Tasmanian gas market more attractive and thereby to make gas prices more competitive. Given the strong link between gas and electricity retailing and the far larger size of the Tasmanian electricity market, policies that create a more attractive environment for retail competition in electricity than presently exists, will also help to stimulate retail competition in gas.

In turn, greater retail competition and more competitive gas prices would stimulate connection further.

Accelerating the removal of distortionary and inefficient cross-subsidies in electricity heating tariffs would also help to make gas more attractive as a form of heating and hot water for households and small businesses, a major use of natural gas in cooler mainland jurisdictions.

There is also scope to provide more powerful incentives for new connections, including for small and medium sized businesses. The lack of incentives is one important reason why businesses have been slow to connect to gas.

Nearly two-thirds of survey respondents supported the use of connection incentives.

ACTIONS

TGR, Aurora and TGN should consider the commercial benefit of providing more attracting incentives for people and businesses to connect to natural gas. Options could include increasing existing rebates, extending these to other areas (including small business connections), interest free loans or gas equipment discounts.

The Tasmanian Government should also consider supporting incentives to connect, e.g., subsidies to consumers, interest free loans, or taxation offsets to small business. Government support could be as a supplement to gas industry incentives. The specifics of these incentives require a more detailed assessment.

The Tasmanian Government can also take other important steps to stimulate gas competition, including examining the competitive impact of gas market regulations, stimulating electricity market competition and accelerating the removal of cross-subsidies in electricity heating tariffs.

TSBC should also consider the development of a detailed business case supporting the need for connection incentives to present to the Tasmanian and Federal Governments and possibly Infrastructure Australia. It could also seek to do this jointly with potential gas users, representatives of gas users or even the gas industry.

ISSUE #5

"Small business still has a very low gas penetration rate but appears to have an appetite to increase this if the conditions support it"

FINDINGS

Only about 2 per cent of Tasmanian small businesses and 10 per cent of those with an existing ability to connect are connected to natural gas. This is well below the levels in other states and a disappointing outcome after more than a decade of natural gas supply into Tasmania. Our report suggests several reasons for this:

- Gas prices in Tasmania for small business are among the highest in Australia and small businesses are generally cost conscious. Small business also holds a strong view that gas prices are high.
- Significant increases in gas prices in recent years, reflecting gas network and commodity price increases, are acting as a further disincentive to connect.
- Tasmanian small businesses are cross-subsidising electricity heating tariffs and this is affecting their gas prices given the nexus between gas and electricity pricing.
- Added to this, there are very few incentives for small business to connect to gas. This affected the initial low rate of small business take up and continues to limit take up.
- The lack of retail competition in gas and absence of price discounts also limits take up.
- With current LPG prices below those of natural gas, the incentive to switch is dampened.
- The existing stock of appliances and equipment is also a factor as replacement involves a potentially expensive outlay. Incentives to connect would change the economics of this.

In addition, the limited coverage of the existing network means that many small businesses are simply not able to connect regardless of any of the above factors. Eighty per cent of small businesses are in this predicament. Although some are in areas where roll out of the natural gas network is simply uneconomic, others would benefit from the network expansions put forward in our report.

On the other hand, small business consumes only around 350 TJ of gas annually, or 6.4 per cent of non gas fired generation consumption. As such, large increases in its consumption would be needed to make a material difference to the size of the Tasmanian gas market. A similar point can be made about households, which account for about 7 per cent of non gas fired generation consumption. This is challenging but not impossible.

ACTIONS

There are a number of actions that can be taken to address the issues limiting the take up of natural gas by Tasmanian small businesses. These include:

- Creating conditions in the gas market that will stimulate more retail competition and competitive offers and prices.
- Adopting policies that will create more retail competition in electricity and remove existing electricity cross-subsidies for heating tariffs.
- Ensuring that the current light handed regulation of the gas market and pipelines is not resulting in higher prices than necessary and is working for the benefit of gas consumers.
- Providing incentives for small business to connect to natural gas.
- Examining how and where the existing gas network can be extended and including small business in the consideration of this.
- Recognising that growing the gas market (connections and coverage) will benefit Tasmania and have flow on benefits in terms of how attractive the market is to new entrants, spreading the costs of gas infrastructure more broadly and improving leverage in price negotiations on gas supply.

ISSUE #6

"The single gas pipeline is a point of energy vulnerable in Tasmania"

FINDINGS

The TGP is a single gas transmission pipeline supplying all Tasmanian gas consumers. As such, it has no redundancy should gas supplies into Tasmania fail or suffer major disruption, e.g., pipeline outage, gas supply issues in Victoria. Some stakeholders also pointed out that the single transmission pipeline and source of supply is an energy vulnerability issue.

In some respects, such a situation would be more serious for gas consumers than the loss of Basslink is for electricity consumers, as Tasmania has other sources of electricity to make up for the latter's loss. It does not have alternative sources of gas and all supplies could be lost, or severely curtailed, in the event of a serious disruption. Whilst gas has far lower market penetration than electricity and therefore impacts fewer customers, gas consumers have no alternative supplies and in future the electricity system will also depend on gas-fired generation for significant backup supplies in emergencies. To illustrate the potential for impact, in the extreme, if there were a gas failure in conjunction with Basslink being unable to operate and low hydro storages, it would mean not only a loss of supply to gas customers but would put the electricity system under additional stress. Whilst this is a low probability occurrence, the impacts on small business would be very disruptive and costly.

ACTIONS

The Tasmanian Government should examine the current vulnerability of Tasmania's gas supplies to loss, or substantial curtailment, of supplies through the single transmission pipeline, what the cost of these risks are and how best to deal with them. The impacts on Tasmania's small businesses should be considered in such a review.

Recognising that it would not be economic to duplicate the transmission pipeline, other options

to reduce vulnerability could be examined such as gas storage, line pack (which is already being pursued by TGP), and gas exploration within Tasmania, or offshore. Growth in the gas market would ultimately support enhanced gas security. This should also consider the impact of gas disruption on Tasmania's electricity system.

Tasmania's gas emergency procedures should also be reviewed to ensure they adequately take account of the gas security risk, are contemporary and are made more transparent.

ISSUE #7

"The retail gas market suffers from a lack of competition"

FINDINGS

The retail gas market in Tasmania suffers from a lack of competition, which has a detrimental impact on consumers, including small business, the gas prices they pay and the range of offers and services they receive. Over 60 per cent of survey respondents expressed the view that there was not enough gas competition. Stakeholders also mentioned the lack of competition as an issue and tended to attribute this to factors such as the small size of the market.

TGR is a dominant retailer with a two-thirds market share of smaller gas consumers. Aurora has historically followed TGR's gas prices and behaviour. As a consequence of this, its lack of connection incentives and its limited market recognition, Aurora's market share has declined from 47 per cent in 2008 to 35 per cent nowadays. Gas competition has diminished as a result, rather than expanded (which was the Government's objective).

Moreover, with such a small market and one that has not grown as originally intended, the prospects of other retailers entering the gas market are slim. Added to this, additional competition in the electricity retail market has also failed to materialise, denying potential new entrant energy retailers economies of scale and scope in the already small Tasmanian market.

All in all, the lack of effective competition in Tasmania's gas market is a major factor holding back the market and is preventing competitive gas prices from being realised by small business.

Our survey also suggests that Aurora has a low level of recognition as a gas retailer among Tasmanian businesses, notwithstanding its dominance as an electricity retailer.

Its recent decision not to increase gas tariffs in 2016, effectively discounting its small business prices by 7.6 per cent compared to TGR, whilst welcome, has apparently thus far failed to create any notable customer switching. This reflects its lack of marketing of the discount, a decision that appears to be itself related to the small size of the market, making marketing more difficult to justify. The competitive impact of its price discount is also eroded by its lack of incentives for connection, which TGR offers, though principally to households.

Survey responses also indicate that small business suffers from a lack of knowledge of gas retailers.

ACTIONS

The Tasmanian Government should use competition as one of the foundations for kick starting a new growth phase in the Tasmanian gas market. Smaller consumers – small businesses and households – should be a key target in order to grow underlying demand for gas. Opportunities for medium sized gas users to locate in Tasmania should also be explored. Large industrial type users present infrequent opportunities for growing gas demand but should rightly also form part of this strategy as should retention of existing industrial users.

Steps to enhance competitive opportunities for newcomers to Tasmania's retail gas market could include:

- Enhanced electricity retail competition, which would flow through to gas. Whilst a path to achieve this is beyond the scope of this report, without effective retail competition in electricity the chances of it taking hold in gas are diminished.
- A larger and growing gas market will encourage more retailers to participate (as discussed earlier in this Chapter).
- Aurora Energy becoming a more active competitor in the gas market would help to increase competition, noting that its recent decision not to follow the price increases posted by TGR was a step in this direction. Nevertheless, more should be done to reinforce this decision, including improving its brand recognition.
- More competitive gas prices and connection incentives will encourage more people to connect to gas and improve the opportunities for new retailers.
- Access to equal information about customers (existing and potential) and their gas use should be provided to all retailers.
- Low barriers to entry/exit, including minimal regulatory barriers, for retailers are needed. This should be preceded by a sanity check on the steps needed for entry and their costs/benefits with a view to removing or reforming any regulations that act as barriers.
- The TSBC should work with gas retailers, including new entrants, as a means of encouraging competition and choice, increasing gas market information and retailer recognition among small businesses, and providing retailers with access to its members.
- Creating more retail competition should be a key matter for a review of Tasmanian gas policy.

ISSUE #8

"Small business gas prices are high and not competitive"

FINDINGS

There is compelling evidence that gas prices for Tasmanian small businesses are not competitive with other states. The extent of the difference is material. This works against the Government's

competitive gas prices and state growth objectives.

Moreover, gas prices for small business customers do not appear to reflect costs. Households pay lower fixed and variable charges, notwithstanding the higher volumes used by small business.

Small business and household gas prices are intended to reflect electricity prices, which are known to involve a substantial cross subsidy paid by small business essentially to help pay for very low electric heating tariffs in Tasmania. These subsidised heating tariffs are available to all residential consumers regardless of how well off they are.

This situation makes gas less competitive and reduces price incentives to switch to gas, even in cases where it is a more efficient fuel than electricity.

Our survey showed that gas prices have increased significantly, with half of respondents experiencing price increases of more than 10 per cent in the past three years. Nearly two-thirds of respondents expressed the view that gas prices were too high.

ACTIONS

Tasmania needs to reduce the uncompetitive status of its small business gas prices vis-à-vis other jurisdictions. Aurora's recent decision not to increase its 2016 commercial gas rates is a step in this direction but more needs to be done.

Measures to increase the size of the gas market and attract additional competing retailers, outlined elsewhere in this Report, would have beneficial effects.

We also note that TasNetworks currently has proposals before the AER aimed at restructuring its electricity distribution tariffs to make them more cost reflective, including phasing out its low heating tariffs. Aurora has proposed consequential changes in retail electricity tariffs to OTTER. Given the link between electricity and gas prices, this should help to make small business gas prices more competitive.

ISSUE #9

"The lack of retail competition means there is little price competition"

FINDINGS

There is almost a complete absence of price discounting in the Tasmanian gas market, yet it is a prominent feature of gas markets in other jurisdictions, including smaller ones such as the ACT and South Australia. Discounts to small business of between 10 and 25 per cent are readily available.

This disadvantages small business gas users in Tasmania and diminishes the incentive for other small businesses to connect to natural gas.

The small size of the gas market is a factor in the lack of retail price competition but the existence of competition in other small jurisdictions shows it is not an insurmountable issue. However, the small market, low gas penetration rate and a lack of retail competition in the electricity market,

combine to prevent price competition. Action on these issues is critical to enhancing gas retail competition, including for small business.

ACTIONS

If price competition and associated benefits, such as active price discounting, are to be part of the Tasmanian retail gas market, then measures are required to increase retail competition in both gas and electricity, increase gas penetration and increase the size of the gas network.

ISSUE #10

"Power generation is important to the Tasmania gas market but its future gas use is likely to diminish significantly"

FINDINGS

Gas fired power generation has had an important impact on the Tasmanian gas market. It can increase short term gas demand by three or four times its underlying levels, but is highly variable. Moreover, its presence in the market, the large gas demand it creates when it is present and the 'take or pay' nature of gas contracts mean that gas generation has lowered the fixed costs of the transmission pipeline, which has benefitted all gas consumers, including small business.

However, in future gas generation is likely to reduce its gas use significantly as it set to be used solely for emergencies and the existing gas supply contract end in December 2017. Whilst the terms of future gas supply to the TVPS are unknown at this stage, one possible outcome would be for a fixed price arrangement to cover emergency use. However, another is for Hydro Tasmania, owner of the plant, to assume the price and usage risks itself. Either way, there could be significant impacts on other gas users, including small business, if the new arrangements result in more of the fixed costs of the TGP being allocated to non gas fired generation load.

The impacts on large industrial gas users would reflect their higher proportion of transmission charges and trade exposure. Any associated loss of such load would deepen the problem.

For small business, 15 per cent of their gas bills are made up of transmission charges, so the impacts would be lessened by this, but they could still be significant.

ACTIONS

The TSBC and small business gas consumers should support future gas supply arrangements to the TSVP that are based on a fixed price for supply. They should also closely monitor developments with the TVPS gas contract renegotiations and seek Government and TGP cooperation in keeping them informed about the impacts on small business gas prices. They should be ready to advocate on any threat of gas price increases to small business.

ISSUE #11

The Tasmanian gas market is vulnerable to loss of major industrial load and opportunities for major new load are uncertain

FINDINGS

Large industrial type gas users are important to the Tasmanian gas market and help to spread the costs of the pipeline infrastructure across a larger gas load. They are also frequently trade exposed and vulnerable to gas price shocks. Any loss of such load would increase transportation costs for remaining gas users.

New major industrial gas load for Tasmania is possible but offers infrequent opportunities and none is currently in prospect. The attraction of such load is part of the State Government's *Tasmanian Energy Strategy* If new major industrial load is attracted to Tasmania, it could help small business by increasing gas consumption, increasing the use being made of existing gas infrastructure, or extending it, and lowering its unit costs.

The ongoing competitiveness of the Tasmanian gas market and gas prices will also be a factor in determining the continued operations of existing Major Industrial gas users, or attracting new ones.

ACTIONS

The Government's objective of retaining existing major industrial gas users and attracting new ones would be best pursued through measures such as network expansions, more connections, greater retail competition and access to competitive gas prices.

ISSUE #12

Gas commodity prices have increased and this poses challenges

FINDINGS

As with elsewhere in eastern Australia, gas commodity prices in Tasmania have been increasing and are expected them to continue to do so. This is posing major challenges for domestic gas users, including small businesses in Tasmania, which rely on gas for important aspects of their business. Australian gas commodity charges are increasingly subject to international gas market conditions with access to supply more difficult, contract renewals under pressure and prices on the rise.

Tasmanian gas prices are linked to these influences. Its gas shippers and users are price takers with limited price leverage and will need to rely increasingly on access to gas with a high export value, unless supplies directed at domestic use are forthcoming, or competition in domestic gas supply intensifies. Even then, prices are likely to rise, although recent developments such as low

world oil prices have led to abatement in these price pressures for the time being. One factor that works in favour of Tasmania is that its gas commodity prices are linked to Victorian prices, which still tend to be lower than in other States.

These will be factors in renegotiating Tasmanian gas supply prices post 2017.

A number of stakeholders also mentioned this as a challenge for the Tasmanian gas market. For example, the small size of the Tasmanian market was seen is a disadvantage when negotiating gas supply from the mainland and means that Tasmanian contracts have little ability to influence gas commodity prices.

ACTIONS

Tasmania cannot prevent gas commodity prices from increasing, but can seek to mitigate the impact on Tasmanian gas users, including small business. The following steps can be taken:

- The Tasmanian Government should implement the actions in the *Tasmanian Energy Strategy* regarding its active participation in the COAG Energy Council on these matters and ensure that Tasmanian gas consumer interests are considered. It could also align itself with other jurisdictions that have similar interests.
- Tasmania should actively participate in gas market reviews and use these as opportunities to promote the interests of Tasmanian gas users. At present the AEMC are conducting a review and ACCC has just completed one, but the Tasmanian Government does not appear to have set out its position to either review. Nevertheless, it should develop positions on both based on what is in Tasmania's interests, especially its gas consumers.
- The ACCC has proposed a number of reforms to enhance supply and competition in upstream eastern gas markets and the Tasmanian Government should consider supporting these.
- The AEMC is also proposing to abolish the current Victorian gas spot market and replace it with a new set of wholesale market arrangements. Some stakeholders have expressed concerns that this could lessen the competitive nature of the Victorian gas market, with implications for competition in Tasmania. The Tasmanian Government should consider this risk and develop a position on it based on what is in Tasmania's interests, especially its gas consumers.
- The Government could also look to promote options to increase supply, such as gas exploration and developing gas fields within Tasmania, making use of gas trading opportunities and gas storage.
- The Tasmanian Government should review the costs and benefits of its blanket moratorium on fracking and consider supporting the ACCC's preference for case-by-case consideration.
- TSBC should maintain an active interest in gas commodity markets, Tasmanian gas market developments and their impact on small business, and advocate based on this.

ISSUE #13

Tasmanian gas distribution charges are expensive and significant

FINDINGS

Tasmanian gas distribution charges are expensive and make up a high proportion of the delivered cost of gas to smaller customers. This reflects the small size of the market and its consequent lack of economies of scale, as well as its relatively recent construction, the costs of which is still being recovered, but could also be associated with cost inefficiencies and/or light handed regulation.

ACTIONS

There is a need to now consider how distribution charges can be made less expensive by, for example, getting enhancing capacity in the network via consumption growth, and looking at whether capital inefficiencies and monopoly pricing are contributing to high distribution prices. This should include consideration of the need for price regulation, as well as improving light handed regulation or other possible options (discussed under the next Key Issue below). These matters should be included in a review of the Tasmanian gas market.

ISSUE #14

The unregulated monopoly status of gas transportation charges should be reviewed

FINDINGS

Transportation charges make up over 60 per cent of commercial gas rates in Tasmania. Hence, they are of significant interest to small business and also in the context of expanding the use of gas in the State. Gas transportation in Tasmania is a monopoly and its charges are not regulated. Price regulation is applied to some transmission and nearly all distribution pipeline monopolies in other jurisdictions. It is even more common overseas.

Increases in gas transportation charges explain two-thirds of the increases in TGR's 2016 commercial gas rates. But details of and explanations for the increases are hard to find. This suggests a lack of transparency in these monopoly prices, which should be of concern to the TSBC and small business gas consumers, even more so in an environment of foreshadowed increases in gas transportation charges until at least 2018.

If these charges were regulated they would be subject to review by the AER, which involves a

higher level of transparency, disclosure and reasoning.

We also find the original reason not to subject gas to price regulation in need of review. Some circumstances have changed and others may no longer be relevant. For example, the market has developed and gas is now supplied to some 12,000 customers who rely on it. It is supplied to vulnerable customers, to government housing and there is no obligation to supply (unlike electricity). We have doubts that an implied threat of future regulation is a sufficient discipline on gas transportation charges in Tasmania.

ACTIONS

As a minimum, TGP and TGN should voluntarily improve the transparency of information about their costs and prices, and provide reasons for price changes. If needed, their obligation to do so could be clarified by legislation or regulation and OTTER given a prices oversight role.

As part of its announced review of Tasmanian gas market regulation, but preferably a broader gas market review, the Tasmanian Government should review the need to strengthen price regulation of monopoly pipelines in Tasmania. This should include using the national gas pipeline access arrangements, clarification of the need for greater transparency in transportation costs and charges, and use of direct negotiation of charges between pipeline users, final consumers and pipeline operators. It should also support the ACCC's proposed changes to pipeline regulation and their review of whether the availability or pricing of capacity on regional pipelines raises any concerns as a possible contravention of the CCA. The implications for Tasmania of the AEMC's proposed rule changes covering capacity trading mechanisms should also be considered.

TSBC should advocate for the implementation of the ACCC's reforms to pipeline regulation and their application to Tasmania.

It should also consider the option of seeking an access declaration or coverage for Tasmania's transmission and distribution pipelines. In the first instance, it should seek more detailed advice on both options and what benefits they would provide to Tasmanian gas users, including small business. The shortcomings in the existing coverage test highlighted by the ACCC and its recommendations to change the test should form part of this consideration, as should the substance and timing of implementing any associated reforms. It could also consider a broad approach to a coverage application involving gas users, other bodies representing gas users and supportive parts of the gas industry.

ISSUE #15

A major review of the gas market is needed

FINDINGS

The Tasmanian gas market has not developed as originally intended and has many shortcomings. It has also been in place for over a decade without its development ever having been assessed. It is a valuable resource for the State that is being wasted. Small business has the potential to make much greater use of natural gas, as have Tasmanian households.

The *Tasmanian Energy Strategy* provides a useful means of addressing some of the gaps we have identified in the State's gas market and its impacts

on small business. Some parts of the Strategy can and should also be extended to gas (or their coverage of gas should be clarified). In addition, more information is needed about how the Strategy is tracking.

However, there are other key Tasmanian gas market issues not covered in the Strategy that need to be reviewed.

ACTIONS

A major Tasmanian gas market review is needed. It should cover all aspects of the gas market and how it has developed, as well as, its future direction. Growing the market, expanding the network, introducing more competition, competitive gas prices, how to regulate the gas network and prices, the future of the market in the absence of significant gas consumption by electricity generation, gas market vulnerability and the role for government should be key themes for such a review. It should be public and involve open consultation.

The *Tasmanian Energy Strategy* is more focused on electricity than gas and its Actions, whilst useful, do not cover all aspects of the gas market in need of review.