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11 September 2020

The Hon Guy Barnett MP
Minister for Energy
Level 5, Salamanca Building
4 Salamanca Place
Hobart TAS 7001

Email: renewableenergy@stategrowth.tas.gov.au

Dear Minister Barnett

Re Tasmanian Renewable Energy Action Plan

Tasmanian Gas Pipeline Pty Ltd (TGP) welcomes the opportunity to provide feedback on the Department of State Growth's draft Tasmanian Renewable Energy Action Plan (the Plan). While the Plan is focused on growing Tasmania's already enviable level of renewable energy, TGP is encouraged to see that the essential role of natural gas in providing energy and security of supply to both industrial and domestic users is also recognised (on page 16 of the report).

TGP fully supports the Department's Renewable Action Plan and would like to highlight the role that gas plays in facilitating the growth of renewables and contributing to the Tasmanian economy as a whole. A recent report by Deloitte Access Economics found that natural gas delivered by the TGP directly supports 4,244 Tasmanian jobs and adds \$970m of value (GSP) to the Tasmanian economy every year. The report also highlighted multiple investment opportunities where gas and the TGP could contribute to rebuilding the Tasmanian economy post COVID-19. Gas and the TGP also supply the Tamar Valley Power Station (TVPS) which plays a crucial, back-up role in maintaining energy security for Tasmania and enabling further renewables growth.

The TGP

TGP is owned by Australian superannuation funds and is the only pipeline supplying natural gas to Tasmania. It transports six petajoules of natural gas per year from Longford in Victoria, under Bass Strait, to Bell Bay and beyond via two lateral pipelines to Hobart and Port Latta.

The TGP supplies the majority of the state's major energy users and around 1,000 commercial customers and 12,500 residential customers via Tas Gas Retail, Aurora Energy and Weston Energy. It is also the only supplier of gas to the TVPS at Bell Bay.

Economic Contribution

Natural gas plays an important role in providing a cost-efficient source of thermal energy to industrial users with low emissions compared to other fuels that provide heat. These



businesses require gas to generate process heat or to act as a feedstock to manufacture their products. The TGP has also invested in a connection to the Victorian Wholesale Gas Market which, when accessed in conjunction with gas storage services on the TGP, facilitates access to cheaper sources of delivered gas for its Tasmanian customers. The continued provision of competitively priced energy is vital to ensure the continued operation of these industrial users.

A 2020 study by Deloitte Access Economics (Executive Summary attached at Appendix A) identified that the top 20 industrial users of the TGP contribute:

- \$970m of Tasmania's GSP (3%) and \$670m of Northern Tasmania's GSP (4.5%)
- Direct employment of 4,244 and total employment (including indirect jobs) of 8,550 (3.4% of employment in the State)
- Revenue of \$3.2 to \$4.2 billion

There are also 1,000 commercial customers and 12,500 residential customers that rely on gas for a clean source of ambient heating and cooking.

Energy Security and Supporting Renewables Growth

TGP acknowledges the Department's Plan to achieve renewable generation of 200 per cent of current electricity needs by 2040 and to be the first Australian state to achieve 100 per cent renewable power generation. Consistent with this strategy is the continued role of TVPS as a source of back-up generation to maintain security of supply, even when 100% renewables can be achieved. The TVPS should remain on standby and operational in order to provide dispatchable, back-up generation in the case of extended dry periods, low wind and/or outages of Bass Strait transmission cables. The continued availability of the TVPS as a cheap insurance product actually provides the energy back up and security to facilitate the development of additional renewable generation.

The value of the TVPS was demonstrated during the 2015/6 energy crisis. An extended drought had reduced Tasmania's storage levels to just 12% in combination with a six month outage of the Basslink transmission cable. The state was literally only weeks away from rolling blackouts before the drought broke. Through the period the gas-fired TVPS operated at full capacity which conserved remaining water storages and prevented widespread, extended black outs. Without this, Tasmania's lights would have gone off.

It is important to note, since the 2015 Basslink cable outage, its operations have been limited to 500MW capacity as a precautionary measure. With no conclusive outcome of investigations into the outage's cause, there is ongoing uncertainty as to whether another serious outage could occur, with data suggesting on average an outage is expected every 10 years for high-voltage direct current off-shore transmission systems.

Subsequent to the Energy Crisis, the Tasmanian Energy Security Taskforce (reporting into the energy crisis) recommended as a Priority Action in its final report that:



“The TVPS, particularly the combined cycle gas turbine (CCGT), should be retained at least until there is a reliable alternative in place to mitigate against hydrological and Basslink failure risk.”

The report also noted:

“While retaining the TVPS on standby and increasing energy in storage does have a financial cost, the cost is very low for the energy security it provides when compared to other states.”

For example, in Western Australia, AEMO pays up to \$140,000 per MW of reserve capacity in order to maintain energy security. The TVPS provides approximately 380MW of reserve capacity, which would cost over \$50 million per year using this model which is considerably more than what it currently costs Tasmanians to maintain TVPS in a state of readiness.

Most recently, the TVPS CCGT operated at full capacity in early 2019 in order to support Tasmania’s hydro system and keep dams above Prudent Storage Levels.

With climate extremes and uncertainty regarding long-term trends increasing, if low rainfall does again occur, it is critical Tasmania is not left to rely on a demonstrably fallible single electricity cable in order to ensure energy supply security. The state needs the support of the reliable gas supply provided by the Tasmanian Gas Pipeline.

The proposed Marinus Link currently pencilled in for commissioning in 2028 will considerably alter the Tasmanian energy landscape.

Not only will the link act as a back-up for providing energy into Tasmania should energy supply be placed in doubt by low dam levels or Basslink cable failure, it is also expected to catalyse a significant amount of on-island renewable energy development

It is vital for Tasmania’s energy security and growth of renewables that the TVPS continues to operate as a back-up energy source. Once Marinus Link comes online, TVPS can continue to provide grid and energy security services to support ongoing renewables operations especially during periods of low water inflows and low wind.

Post COVID-19 Growth

As Tasmania moves to recover from the economic impacts of COVID-19, the need to diversify the state’s economy has been spotlighted.

The pandemic has also brought issues of domestic capability and self-sufficiency to the forefront of people’s minds.

In order to reduce public anxiety surrounding future potential interruptions to supply chains, there will be a greater need for governments around the world to guarantee domestic security for a number of essential products and services.



The supply of gas to enable on-island manufacturing is critical to ensuring self-sufficiency in Tasmania.

In addition to manufacturing, the Tasmanian Government's focus areas for the state's COVID-19 recovery include bringing forward infrastructure projects for construction, as well as agriculture, the visitor economy, aquaculture, renewable energy, skills and education, and trade.

The study conducted by Deloitte identified a number of industries heavily reliant on gas that offer significant opportunities for export growth in the coming years, many which align with the Government's focus areas.

This presents opportunities for the TGP to further support economic recovery in the state, particularly with a focus on advanced manufacturing, mining, hydrogen opportunities and dairy export.

Potential growth industries identified by Deloitte include:

- Advanced manufacturing
- Resources/mining
- Hydrogen
- Dairy export
- Spirit of Tasmania

The procurement of the new TT-Lines vessels provides an example of how the TGP can increase the competitiveness of Tasmanian based industry. LNG from BOC's LNG plant in Westbury (which is supplied by the TGP), will provide the TT-Lines vessels with a clean and competitively priced fuel and in doing so will provide ongoing jobs and growth to the Northern Tasmanian region.

Summary

TGP acknowledges and supports the Department's Plan to further develop Tasmania's renewables capability. TGP would also encourage the Department to continue to recognise and support the vital role that natural gas plays in the Tasmanian economy in enabling jobs and growth, providing security of energy supply to all Tasmanians and in providing a driver for economic recovery post COVID-19.

TGP would welcome an opportunity to further discuss with you the points raised in this letter.

Yours sincerely

A handwritten signature in black ink that reads 'L.J. Ward'.

Lindsay Ward
Chief Executive Officer



Tasmanian Gas Pipeline

Appendix A: Tasmanian Gas Pipeline Economic Analysis, Deloitte Access Economics, September 2020

Deloitte.

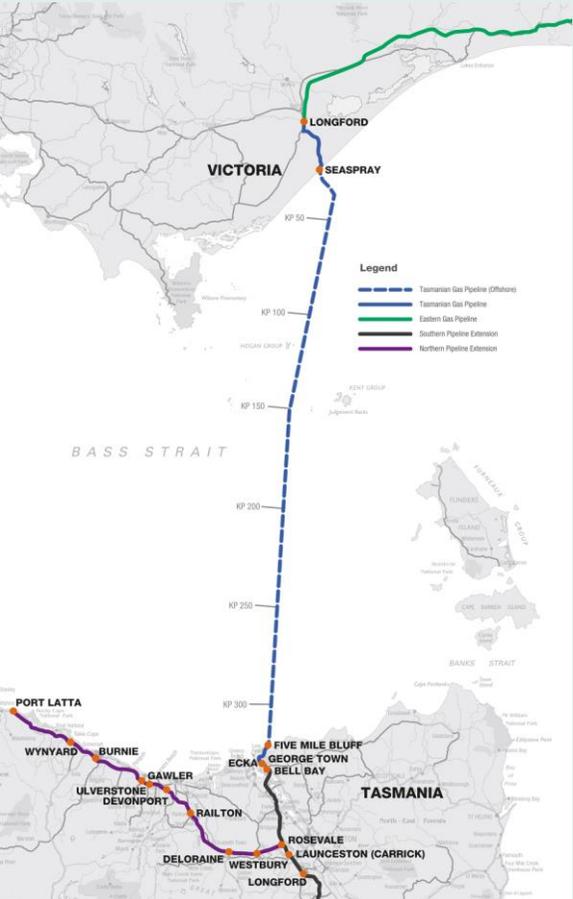


Tasmanian Gas Pipeline Economic Analysis
Executive Summary
11 September 2020

Deloitte
Access **Economics**

The Tasmanian Gas Pipeline (TGP) is a major contributor to the Tasmanian economy. It directly supports around \$1 billion of economic output and over 4,000 jobs.

The 20 main users of the TGP **contribute** the following to the Tasmanian economy:



<p>Value added: \$970 million 3% of Tasmania's GSP</p>	<p>Direct employment: 4,244 2% of employment in the state</p>	<p>Total employment including indirect:* 8,550 3.4% of employment in the state</p>

The TGP **services**:

<p>1,000 commercial customers</p>	<p>12,500 residential customers</p>

The TGP is particularly important for the **north of Tasmania**. The TGP underpins many large employers in the region, with 16 of the 20 major users of the TGP having operations in the north of the state.** These users account for:

<p>Value added: \$670 million 4.5% of GRP in the North</p>	<p>Direct employment: 3,320 4% of employment in the North</p>

*Indirect employment is estimated using input-output multipliers focusing on C&I users of the TGP.
**These 16 enterprises are geographically located in the north of Tasmania and contribute to the output of the north.

The TGP helps to 'maintain and sustain' Tasmania's manufacturing sector by providing a reliable and competitive source of clean energy. It also services residential customers and adds to energy security by supplying the Tamar Valley gas-fired power station.



Tasmania has a long history of **industrial and manufacturing** innovation and achievement. These industries are **underpinned by the TGP**.

Several large employers in Tasmania, such as Grange Resources and TEMCO are heavily dependent on competitively priced gas.



The TGP provides **energy security** in Tasmania by servicing the Tamar Valley gas-fired power station.



The TGP provides a clean source of fuel for **heating and cooking** for residential and commercial customers.



The TGP is well-placed to support the **post-COVID economic recovery** in Tasmania by providing a secure, affordable energy source for recovery-related projects.



Natural gas is a **clean source** of energy in terms of carbon emissions when compared with other fossil fuels. About 117 tCO₂ are released per million British thermal units (MMBtu) of gas, compared with 200 tCO₂ per MMBtu of coal and 160 for diesel.* Natural gas consumption also avoids the particulate emissions associated with burning wood.

There exists expansion and investment opportunities that could potentially be supported by the TGP:



Tin mining

There are tin mining projects in the pipeline for Tasmania worth at least \$100 million in capital spend.

Hydrogen Plan

The TGP could support Tasmania's hydrogen plan in multiple ways.

Dairy products

Tasmania has a strong dairy export industry that has potential to grow.

Iron ore

The Rogetta iron ore project is estimated to start production in 2023 (\$100 million in capital).

TT-Line vessels

Two new TT-Line vessels intend to utilise LNG as a fuel.

Advanced manufacturing

The State Government has indicated it will facilitate expansion of the advanced manufacturing sector.

* US Energy Information Administration, <https://www.eia.gov/energyexplained/natural-gas/natural-gas-and-the-environment.php#:~:text=Natural%20gas%20is%20a%20relatively,an%20equal%20amount%20of%20energy.>

TGP and natural gas are well-placed to take advantage of global trends and support the Tasmanian Government's COVID-19 recovery plan.

Increasing sustainability awareness

Businesses and individuals are becoming more empowered, demanding environmentally sustainable products and energy solutions.



Energy prices

Prior to the outbreak of COVID-19, LNG exports in Queensland had exposed Australian consumers to higher world gas prices. Gas prices were falling prior to COVID-19, and have fallen further subsequently. This presents short-term opportunities for industries that are more reliant on natural gas to reduce energy costs. However, LNG prices are expected to recover from below US\$3/MMbtu to US\$5-6 in 2022.*



Trends in commodity outlooks

The demand for Tasmania's commodities will impact on production levels and energy demand. The prices of many commodities are suppressed as a result of COVID-19, so Tasmanian manufacturers need to keep their energy costs down to remain competitive.



Tasmania's changing economy

The Tasmanian economy is undergoing structural changes, with the labour force moving from primary production into services sectors such as healthcare, tourism and renewables. However manufacturing remains a significant contributor to the economy.



COVID-19 impacts and opportunities

COVID-19 is having a significant impact on the Tasmanian and Australian economies. Tasmanian output is expected to be 3% lower over the year to June 2020.

Short-term impacts

Reduction in economic output across a range of industries and some investments will be deferred or cancelled.

Long-term opportunities

Opportunities for the TGP to support local economic recovery as well as infrastructure stimulus and industry demand.

The TGP, through supply of natural gas, can have a positive impact on the Tasmanian economy in the future by reducing energy costs for industry.

State Government's COVID-19 recovery plan

Like the Commonwealth, the Tasmanian Government has announced a public construction package to help stimulate the state's economy. Other stimulus focus areas include **agriculture**, tourism, **aquaculture**, renewable energy, **advanced manufacturing**, skills and education, and trade. The availability of competitively priced natural gas will support advanced manufacturing, construction activity and other pilot type projects that may need access to gas. This could help to facilitate or potentially fast track these activities.

The economic impact of the TT-Line vessels project is anticipated to be significant, increasing the size of Tasmania's economy by an estimated \$170 million in present value terms. The project will complement increased reliance on domestic tourism.

The opportunity exists to fuel future TT-Line vessels with LNG produced in Tasmania

The new TT-Line vessels project stands to provide economic stimulus into the Tasmanian economy in three main ways:

1. Capital expansion of the BOC Westbury LNG plant
2. Additional LNG production and related operations (including transport of LNG in B-Double tankers)
3. Additional **domestic tourism** and vessel maintenance (with tourism accounting for the majority, circa 90%).

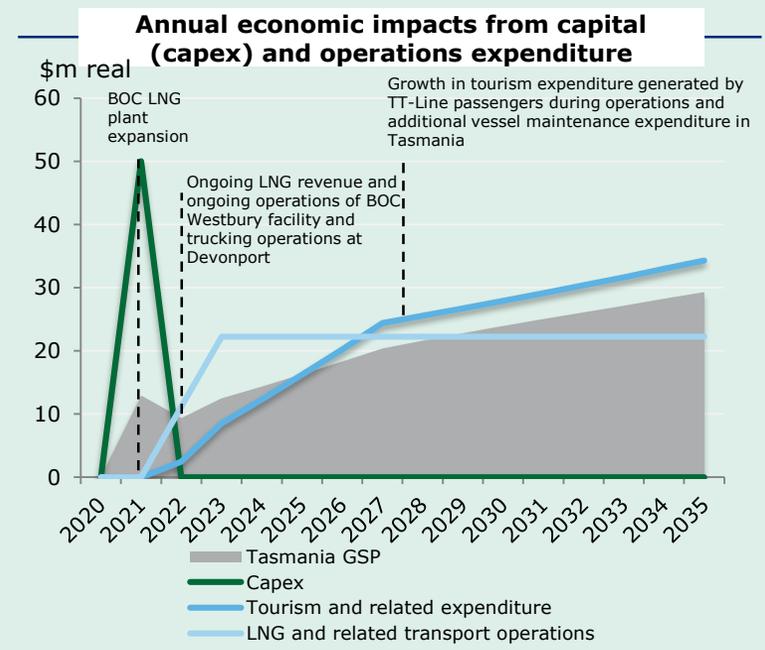
This would have a significant positive impact by creating jobs in a number of industries and supporting recovery post COVID-19.

Exploring local opportunities for new TT-Line vessels

The State Government has recently announced that they intend to explore **local opportunities** for procuring these vessels.* This will support local jobs both directly and indirectly.

Moving now on TT-Line with LNG refuelling opportunities through BOC in Tasmania will drive significant jobs and growth.

*http://www.premier.tas.gov.au/releases/exploring_local_opportunities_for_new_spirit_vessels



Total impacts (present value @ 7% real discount rate, 2020-35)

\$47m Total capital investment	\$172m Value of LNG and related operations
\$168m Value of TT-Line vessel related expenditure	\$171m Additional Tasmanian real GSP

* Based on economic modelling using DAE RGEM and assumptions developed for this economic analysis

Industry impacts, value added, present value @7% real 2020-35



Employment impacts FTE jobs (annual average) and peak

- An additional 70 FTE jobs per year on average between 2021 and 2035
- The number of FTE jobs peaks in 2035 generating around 100 FTE jobs

* All other industries is comprised of finance, insurance and business services; government and other services; agriculture; mining; and other manufacturing. DAE-RGEM is a model with resource constraints. As economic activity and investment increases in the Tasmanian economy it pushes up prices (e.g. the real wage). This has a 'crowding out' effect reducing value added in some of these industries. As a result, All other industries in aggregate experiences a reduction in value added.

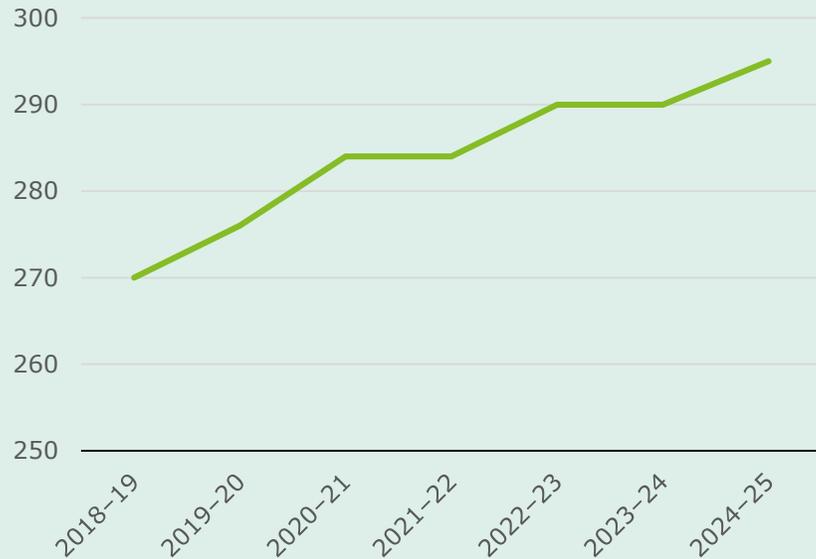
The TGP is an important enabler of potential growth industries in Tasmania. There is capacity to expand gas output to supply new customers and projects.

E Export industries - Including dairy products

Opportunity for Tasmania to take advantage of growing export industries

Some of Tasmania’s specialised industries, such as dairy products, have strong forecast export growth, and therefore potential to expand.

Forecast Australian butter and dairy product export values (\$m)

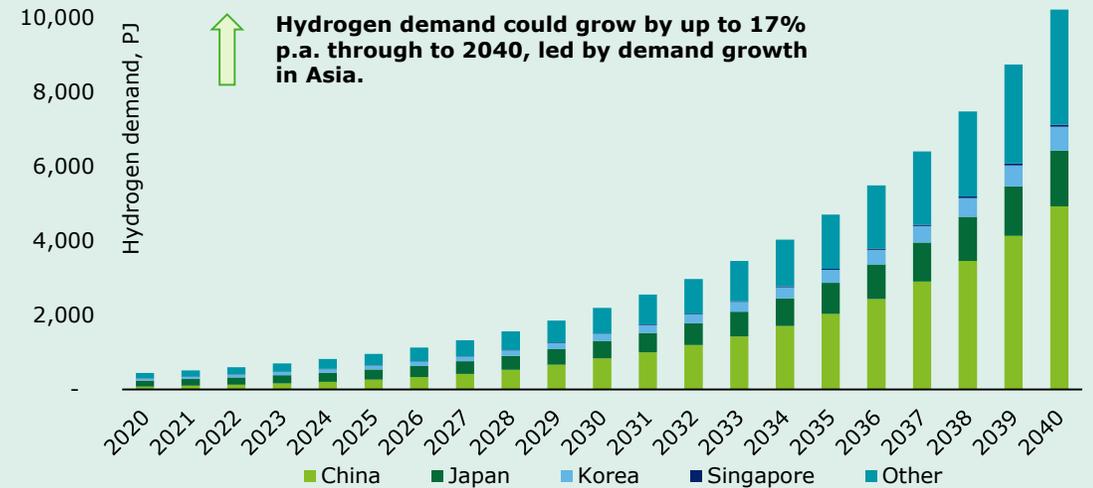


Utilisation is currently 12.2% on average (16 TJ/day out of a potential 129 TJ/day). This could **increase by up to 400%** to support new projects and growth opportunities in Tasmania, given contracted capacity.

H Hydrogen - Development of hydrogen facility

Potential to take advantage of global shifts toward hydrogen

The State Government has announced an ambitious Renewable Hydrogen Action Plan. The TGP could play a role in this plan by transporting hydrogen if it is further processed into syngas by using carbon emissions from Bell Bay industrial activity.



The State Government has an opportunity to support a **gas-led economic recovery**. A manufacturing taskforce has been set up to advise the national taskforce guiding Australia’s COVID-19 recovery. A part of the plan is to support the gas industry and potentially ‘underwriting gas’ prices, expanding networks and the addition of new gas fields. There could be an important collaborative role for TGP from a Tasmanian perspective.*

* <http://gandmmonitoring.com.au/reports/story.php?storyProfileID=414776>

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