

9 September 2016

Mr Geoff Willis
Chair
Energy Security Taskforce
c/- Department of State Growth
GPO Box 536
HOBART TAS 7001
Via email energysecuritytaskforce@stategrowth.tas.gov.au

Dear Mr Willis

We are pleased to be able to make a joint submission to the Energy Security Taskforce in response to the recently released Consultation Paper.

BOC Ltd (BOC) is a Member of The Linde Group that supplies compressed and bulk gases for domestic, commercial and industrial use. LNG Refuellers Pty Ltd (LNGR) is a Tasmanian owned company that supplies LNG to the Tasmanian road transport sector.

In Tasmania, BOC owns and operates a range of facilities including an LNG plant at Westbury and Air Separation Unit at Lutana that provides important health gases like oxygen. LNGR owns and operates the largest network of LNG refuelling stations in Australia.

The substantial investment by BOC in the Westbury plant and LNGR in the refuelling network, was in response to a demand for LNG from Tasmanian customers who increasingly want to use cleaner, cheaper, natural gas for stationary and transport energy needs. At the time, the Tasmanian Government noted that LNG offers significant environment and economic benefits over diesel fuel and that because gas is sourced from Australia, it offers security of supply.

The Westbury plant currently supplies 25 tonnes per day of cleaner natural gas fuel to a range of customers across several industries including agriculture, transport, and forestry. We also have a range of major export sectors as customers, who have chosen to use LNG because of the environmental benefits, therefore making Tasmanian exports cleaner through the entire supply chain.

BOC is an energy supplier and is a significant user of electricity in Australia, with large amounts of electricity used to power gas liquefaction plants including the Westbury LNG and Lutana Air Separation plants.

Our submission to the Taskforce notes the importance of diversification in energy sources and that Government actions should align with the Tasmanian community's desire for cleaner locally produced fuels.

Indeed diversified energy sources not only mitigate risk but is likely to be more cost effective than the proposed second Basslink interconnector. Not only is a second Basslink interconnector expensive, but it is highly vulnerable to policy changes around the commitment to reduce carbon emissions.

While the Consultation Paper raises concerns about the short term supply of domestic gas; compared to the cost of Basslink and its vulnerabilities, we believe that the issues of domestic gas supply are largely transient ones and that the east coast market will settle by virtue of the range of processes and policies in place.

If natural gas is considered as one of the lower emitting technologies, and does not face a cost disadvantage from the unintended consequences of other Government policy settings, BOC and other suppliers would be in a better position to discuss commercial arrangements for improved gas production, gas storage and potentially co-generation of electricity that might assist with both demand management and additional electricity supply.

LNG offers a range of benefits as a fuel source including producing up to 25% fewer greenhouse gas emissions, almost complete elimination of toxic emissions and as a transport fuel can extend the life of a vehicle and reduce engine noise.

As noted in the 2015 Tasmanian Energy Strategy gaseous fuels are an important part of Tasmania's energy mix and its introduction to Tasmania has "enabled a number of large businesses to switch away from the use of significantly more greenhouse gas emissions intensive coal combustion".

Not only is Tasmania an early adopter of the role of gas, but gaseous fuels, including LNG, can contribute to a long term solution to managing carbon emissions, as outlined in the Tasmanian Energy Strategy as the community continues to desire a lower emission future. Not only is this cost effective way to mitigate Tasmania's energy security risk, but policy support would complement the leadership of a range of investors and operators in Tasmania who seek to demonstrate Tasmania as a cleaner exporter of goods and services.

We would welcome the opportunity to discuss with the Taskforce how we can assist to improve Tasmania's energy security.

Yours sincerely



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Tasmanian Energy Security Taskforce

Consultation paper

Submission Form

This document provides a form which respondents may find helpful in providing answers to the questions presented in the Taskforce's consultation paper. The Taskforce recommends that you read the consultation paper to understand the context in which the Taskforce has posed the questions. The Taskforce will also welcome submissions in other formats should respondents prefer not to use this form.

Should you wish to claim confidentiality in relation to all or part of your submission, please clearly indicate the reasons for your claim. If only parts of your submission are requested to be confidential, please attach the confidential parts separately to the remainder of your submission that is suitable for publication.

Submission details	
Name:	Alex Dronoff, Business Development Manager and Alvaro Ascui, CEO
Organisation (if applicable):	BOC Ltd and LNG Refuellers Pty Ltd
Contact (optional and not to be published):	

1. What are the specific risks to Tasmanian energy security that you think the Taskforce should consider?

The Tasmanian Government faces a unique problem in that it has an energy supply network that is dependent on potentially unreliable supplies and a small population that limits the economics of investment in expensive energy and duplicated infrastructure. This means that built redundancy without significant taxpayer assistance is unviable.

In accordance with the Consultation Paper suggesting options for 'limited' government assistance, we believe that the risks are best approached by better utilisation of a range of existing resources and increased diversification within Tasmania's array of energy sources.

The other risk is that some of the solutions on offer – such as duplication of Basslink to use more brown coal fired electricity and/or higher emitting diesel generation undermines Tasmania's desire for transition to cleaner energy sources. Such short term solutions are also vulnerable to future disruption as mainland generation and emissions policy settings shift away from coal and other higher emitting sources.

The Tasmanian Energy Strategy correct points out that "gas has also given some consumers the choice of an alternative fuel source".

The Taskforce should consider the best way to mitigate disruption through diversification while also best utilising existing energy sources that already operate in Tasmania including gaseous fuels.

It is worth noting that gaseous fuels including LNG and LPG can easily be transported by truck, instead of an expensive physical pipeline network. This is often a faster and cheaper alternative, creating a 'virtual pipeline'. Virtual pipelines can change their route or destination immediately depending on community or business needs, making gaseous fuels an ideal option when considering energy security or short term supply problems.

2. What risks are acceptable to you or your business in terms of energy security and the risk/cost trade off? How well are you or your business able to manage energy supply disruptions?

BOC's predominant business in Tasmania is the Westbury LNG plant and as such we are able to offer security of supply to our customers, as well as a cleaner and cheaper fuel for transport and baseload power.

It does require reliable and competitively priced electricity from the grid. However, consistent with the objective of diversification of energy and more utilisation of existing infrastructure; BOC could consider co-generation as part of a commercial arrangement with Hydro Tasmania to reduce demand on other sources while providing additional capacity of lower emitting power for wider use.

We place a great importance on the reliability of energy supply and in cases of local temporary disruption, have the capacity to bring alternative supply of LNG from Victoria by virtual pipeline.

In addition to the Westbury LNG plant, BOC also supplies oxygen to hospitals and aquaculture customers from our Air Separation Unit (ASU) at Lutana. Given the importance of oxygen for hospitals and aquaculture, BOC and its customers place a very high importance on energy supply and security for the ASU in particular.

3. What level of reliable electricity supply is required by customers? Do customers consider reliability should be as close as possible to 100 per cent at all times, or would, for example, reliable supply closer to 99 per cent of the time be acceptable if the cost is significantly less?

BOC, LNGR and our downstream customers do require reliable supply – noting we have the capacity for some backup alternative supplies, particularly if the right commercial structures are in place to avoid short term price shocks as part of the abovementioned alternative supply option. As stated in our response to Question 1, the Tasmanian Energy Strategy notes that gas has provided consumers with an additional energy source and contributes to better energy security.

Along with the right commercial structures in place to mitigate the need for reliable power, BOC via the Westbury LNG plant, can reconsider the provision of co-generation and feed-in power assistance to the Government for better energy security for both our facility and the grid, with additional benefits of producing cleaner gaseous fuels that will take the load off other energy demands.

See also our comments in relation to the Tamar Valley Power Station at Question 6.

As a significant energy user in Tasmania and therefore a customer as well as provider, BOC has concerns about the dual problem of high costs and lack of reliability. We support the Government's aims, as per the Tasmanian Energy Strategy, to improve the reliability, security and cost of power in Tasmania.

4. How well are Tasmania's energy security risks understood and communicated to the community?

As a company with energy infrastructure and off-take customers in Tasmania and a provider of another resource as part of a diversified energy future, we believe there could be high value in improved dialogue with the Government and Hydro Tasmania to ensure that we, and indeed our customers, can better respond to and assist with issues in the future.

At the time of the energy crisis, BOC was managing a maintenance matter. With more notice, BOC may have been able to more actively support demand management processes.

In terms of community awareness, the availability of alternative supplies of lower emitting gas from Westbury (and indeed any future commercial co-generation options) can form part of a policy and communications response with and by the Government.

5. What existing frameworks for assessing and monitoring energy security might the Taskforce wish to consider?

Tasmania is in a unique position in that it has immediate and local access to a range of lower emitting energy sources. The Taskforce should ensure that the Government is aware of all energy sources and alternatives that are readily available, including the capabilities of facilities like the BOC Westbury LNG plant, for when concerns about energy security arise.

6. Which potential energy security solutions should the Taskforce consider?

Rather than increased future reliance on higher emitting brown coal (from Victoria) and diesel as backup energy sources, the Taskforce and Tasmanian Government should look towards diversification including locally produced natural gas supplies, which have the additional advantage of being up to 25% cleaner than other fuel sources.

The BOC LNG plant at Westbury is currently operating below maximum capacity. While not specifically relevant to the Basslink crisis, in another energy crisis across the country, BOC was able to use its technological advances – specifically its innovative LNG tanker – to convert LNG into natural gas and feed directly into gas networks.

As mentioned in our response to Question 2, we place a great importance on the reliability of energy supply. Where there is more consistent demand for gas as part of a diversified energy response, BOC and other gas providers can mitigate the risk of temporary disruptions through:

1. Increased local storage capacity; and
2. The capacity to bring supplies of LNG from Victoria through virtual pipeline.

The Government should also better utilise existing natural gas infrastructure such as the Tamar Valley Power Station as part of a diversified generating capacity.

Currently BOC's Dandenong facility has enough storage capacity for one month's supply, which is able to be shipped over to Westbury via LNG tanker, effectively creating a virtual pipeline. If gaseous fuels are formalised as part of Tasmania's future energy policy settings and with greater notice, BOC can look at increasing the storage capacity on site at Westbury, as well as increasing the storage capacity at Dandenong.

It is worth noting that Basslink interconnector(s) expose Tasmanian users to the Victorian energy market that is itself vulnerable to changes in carbon emission reduction policies and additionally, faces other increased demands on its energy from other states such as South Australia.

The Consultation Paper asks about considerations around issues of domestic gas supply. Firstly, in terms of local customers, as pointed out above, BOC can mitigate fluctuations in that market through the production of and potentially storage of LNG.

In relation to the broader east coast supply market, we consider those to be largely transient and importantly likely to have less long term impact than the cost and other risks associated with proposals such as an additional Basslink interconnector, which as we have noted is vulnerable to changing costs and policy settings as well as increased demand from mainland offtake destinations such as South Australia.

7. What international examples of water storage management practices should be considered by the Taskforce when reviewing Hydro Tasmania's approach?

No comment to make on this section.

8. What governance arrangements might be useful to consider in strengthening water storage management in Tasmania?

No comment to make on this section.

9. What economic opportunities and risks are there for Tasmania associated with a second Bass Strait interconnector, and how would it improve Tasmania's energy security?

The best way to mitigate against future energy disruptions is to ensure that Tasmania uses a range of energy options.

As addressed at Question 11 regarding limiting the costs to taxpayers and consumers, a second Bass Strait interconnector would come at significant expense to the Government and in our view isn't necessary, given the range of other low emitting and cost efficient energy options, like natural gas, available in Tasmania.

Noting the emerging policy considerations that may affect the future availability of cheaper, higher emitting brown coal fired power from the mainland. Additionally, as demonstrated with South Australia, there are other demands and pressures on the reliability of Victorian generation. Basslink interconnections are already facing policy risks around emissions policies and competing demands for power on the mainland.

Any strategy for mitigating energy security risks in Tasmania should firstly look to better diversity and utilisation of available sources of energy in Tasmania.

10. How might the Taskforce consider the role for gas generation in Tasmania relative to other options to maintain energy security and the associated costs and risks?

As mentioned earlier, BOC currently operates an LNG plant at Westbury and looks forward to continuing to expand its range of customers and consumers in the Tasmanian energy market.

Natural gas, including LNG, is up to 25% cleaner than diesel, produces less toxic emissions and can be transported by virtual pipeline without the need for expensive refuelling infrastructure. We support Gas Energy Australia's submission on the role that virtual pipelines can play.

The recent energy crisis would have been even more acute had it not been for the role of gas in the Tasmanian energy market.

Gas has replaced electricity in certain applications that would otherwise have used electricity and created greater demand on Tasmania's electricity supply.

The Tasmanian Gas Pipeline functions as a virtual interconnector by displacing electricity consumption in Tasmania.

The electricity displaced by gas can potentially be available for export through Basslink

LNGR and BOC are willing to be part of the solution by increasing energy diversification by growing the use of gas in Tasmania, but that this requires Government to also continue to use gas at TVPS.

It is also worth noting that the Tasmanian Energy Strategy, encourages the use of gas – specifically LNG and CNG – as a transport fuel. This will not only help to reduce emissions, but free up other energy sources for reallocation to other applications. While this Taskforce isn't specifically investigating transport fuel security, the Tasmanian Energy Strategy does agree that the Westbury LNG plant provides a viable alternative fuel for the transport sector and does improve Tasmania's energy security and reliance on imported fuels. In our view, the capacity of Westbury can also address a diversified energy strategy and with consistent and certain policy settings this facility can be potentially expanded.

11. What can be done to strengthen the Tasmanian gas market without significant subsidy from Government and costs on taxpayers or consumers?

The Government should continue to work with the Federal Government on the development of a domestic gas hub.

BOC notes that if gas is a formalised part of Tasmania's future energy policy settings, planning for future demand and the development of longer term upstream gas supply contracts (rather than simply relying on the spot market) will provide more economies of scale.

While this is largely about stationary energy not transport, it should be noted that Tasmania was an early adopter and first mover in gaseous fuels which underpinned investments like the Westbury plant, LNG Refuellers, Tasmanian Dairy Products and SeaRoad. It should be noted, that later this year, that SeaRoad Shipping will begin operating an LNG fuelled ship between

Tasmania and Victoria and that this investment was arguably made because of the leading role Tasmania takes in supporting cleaner gas fuels.

The Government should also ensure that programs and policies, such as the Tasmanian Energy Efficiency Loan Scheme, applies to a range all lower emitting technologies and not just renewables.

We would note that reasonable Government support for gas as part of a diversified energy policy is likely to be more cost effective for taxpayers than a second Basslink interconnector.

12. How could the potential expansion of renewable energy generation in Tasmania help long term energy security without creating increased costs for consumers?

A policy setting that is based on the expansion of renewables, rather than the best and most cost effective lower emitting option for particular tasks, is likely to add to costs for consumers rather than diminish it.

Important, from our perspective, it is not a case of renewables OR other fuels, but rather renewables AND other fuels. Diversity will ensure that the most cost effective lower emitting technology for the right application is used.

We note the comments within the Consultation Paper about the risks for over reliance on renewables within the Tasmanian context.

A 2015 report from the Institute for Energy Research estimates that the levelised cost of electricity from hydro and wind generators is \$116.80 and \$112.80 per MWh respectively, compared to \$73.40 for gas generators. As such, these renewable energy options would impose higher energy costs directly on consumers or indirectly on taxpayers if supported by governments.

13. Which renewable energy technologies and products present the best opportunity for Tasmania and why?

Renewables do not have baseload capacity and as such can't increase Tasmania's energy security at scale.

As mentioned previously, renewable energy doesn't have the capacity for all applications and in some situations are part of a hybrid system. Rather than diesel renewable hybrids, hybrid gas renewable generators are much cleaner and also cost effective.

Government policy does not have to be about promoting renewables or gas, but rather supporting the best lower emitting fuel for the right application.

14. Is there a limit on the level of intermittent renewable generation that Tasmania can sustain without affecting the reliability of the network, or requiring significant cost to strengthen the network?

As we have indicated in several areas above, we believe that Tasmania's future energy security is best served through diversification and not over reliance on one particular form of generation.

15. Are there material barriers to the take up of emerging energy products and services in Tasmania?

It isn't unique to Tasmania, but there is a risk in Government prescribing specific technologies which often act to deter other emerging or suitable technology. Indeed, some 'green schemes' quite often create perverse outcomes.

We are aware that ARENA (a Commonwealth program) has supported otherwise higher cost and high emitting options such as solar diesel hybrid generators, rather than other lower emitting and low cost gas generation options. We believe a policy setting that favours diversification of energy sources including the range of sources available to Tasmania currently including gas, would provide more policy certainty that would allow for better planning of capacity and mitigation measures along the lines the Taskforce is hoping to achieve.

16. Is there a timeframe where renewable energy developments could be more favoured in Tasmania than elsewhere?

No comment to make on this section.

17. What impact will the national commitment to reduce carbon emissions have on renewable energy development in Tasmania and in the wider NEM?

Consistent with other comments in this submission, we note two things. Firstly, gaseous fuels are also lower emitting technologies that can support baseload electricity generation as well as diversify energy supplies. Secondly, one of the proposed solutions in this paper – a second Basslink interconnector – is not only expensive now, but highly vulnerable to policy changes around the national commitment to reduce carbon emissions.

18. Are there other climate change related implications for energy security in Tasmania?

The Tasmanian Energy Strategy notes challenges for Tasmania's energy future include finding a long term solution to reducing carbon emissions and securing lower cost energy. Using diesel generators and coal fired power stations as a back-up energy source as occurred during the recent energy crisis isn't in line with the expectations and desire of Tasmanians to have a clean energy future.

Gaseous fuels are up to 25% cleaner than diesel, produces less toxic emissions and can be transported by virtual pipeline without the need for expensive refuelling infrastructure.

Our submission reinforces that with facilities like BOC's Westbury plant, Tasmania does have the ability to produce transportable natural gas fuels and with the right policy settings and demand certainty, energy security can be improved through increased storage.

19. Are there other scenarios with energy security implications in Tasmania that the Taskforce should be considering?

The current Victorian electricity situation is vulnerable to changes as a result of carbon emission reduction policies and the increased dependence on other states such as South Australia and as such, Tasmania should not rely on that as anything other than a back-up. To that extent, the value of a second Basslink interconnector as a primary response to energy security is not a feasible option.

Are there any other comments or input that you would like to provide to the Taskforce?

In order to best protect Tasmania against any future energy security implications, the Government should look to strengthen each of its existing energy resources as both core and back up energy providers.

The Government should aim to get the most out of existing local resources, noting that existing supplies of hydro and gas are consistent with Tasmania's desire to be part of lower emitting future. With this cleaner ambition in mind, the Government should only rely on higher emitting fuels in extreme circumstances.

BOC would welcome the opportunity to further discuss with the Taskforce how they can assist in Tasmania's cleaner energy future.

Do you wish to claim confidentiality for all or part of your submission? Please explain your reasons for seeking confidentiality.

No.

