

Environment Victoria submission on the Environmental Effects Statement, Draft Planning Scheme Amendments and Works Approval of the Crib Point Gas Import Jetty and Pipeline Project

Online submission at: <https://engage.vic.gov.au/crib-point-IAC>

To the Crib Point gas import jetty and gas pipeline project Inquiry and Advisory Committee,

Environment Victoria welcomes the opportunity to make a submission on the Crib Point gas import jetty and gas pipeline project (Project).

Environment Victoria (EV) is an independent and not for profit organisation that has been campaigning to look after Victoria's environment since 1969. With more than 40-grassroots member groups and 200,000 individual supporters, Environment Victoria is a growing community of Victorians standing up for a safe climate, healthy rivers, and a sustainable future.

The purpose of this submission is to highlight the rationale behind EV's opposition to the Project. We would like to further develop some of these issues by participating in the Inquiry and Advisory Committee (IAC) public hearing process.

Our view is that AGL's Environment Effects Statement (EES):

- Lacks methodological rigour in several technical chapters, which translates into an unfounded downplaying of the likelihood and/or impact of a range of risks;
- Fails to justify the need for the Project and to properly address existing and feasible alternatives to manage gas consumption or to source gas;
- Does not provide reliable proof that the Project's impact could be minimised or offset to acceptable levels, especially considering the special character of the Westernport Bay Ramsar Site.

Due to these flaws in the EES, we consider that it is not possible for the Panel to assess the real extent of the Project's impacts and whether they could (or would) be managed by AGL. As a result, we believe the Panel should recommend against this project.

AGL has failed to provide enough evidence to make it clear that its Project's impacts will not irreversibly damage local habitats, impact the viability of threatened species and reduce local biodiversity in the midst of a global biodiversity crisis. Further, AGL failed to properly assess the full impact of the Project on Victoria's greenhouse gas (GHG) emissions.

While we reserve the right to raise additional matters at the Public Hearings, including having regard to any further information subsequently provided by the proponents for the Projects or other interested parties, this submission will focus primarily on:

- Project Rationale and the adequacy, and appropriateness, of the project to address Victoria's energy security.
- The Project's greenhouse gas footprint and its impact on Victoria's emission reduction efforts;

We also provide comments on:

- Potential impacts on the marine environment of wastewater discharges;
- Stakeholder engagement and social impacts;
- Safety, hazards and risk.

Finally, in addition to this document, we submit a spreadsheet containing the full text of *more than 9,000 individual submissions* prepared by concerned members of the public using an online drafting tool that was developed by Environment Victoria in collaboration with Westernport Bay local residents. While we expect the vast majority of these submissions will have been lodged directly through the Engage Victoria website, we include them here as well to ensure their voices are heard, as we know some people had technical challenges lodging their submissions. An explanation of this tool is contained as an Appendix in this document.

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I. Response to AGL's Project Rationale

a. Overview

Chapter 2: Project Rationale of AGL's EES describes the status of gas supply and demand on the Australian east coast and tries to make the case for the Project on basis of energy security, efficiency and affordability.

AGL did not properly address Sections 3.3 and 3.4 of the Scoping requirements. Instead of providing hard evidence on the need for new sources of gas supply and how this Project would be the optimal solution to this eventual need, AGL resorted to rhetorical commonplaces ("gas is important for the energy transition") to legitimise their pursuit of developing a gas import terminal. Section 2.2 asserts that the Project is "*necessary to fill the shortfall in gas supply predicted from 2024 and to support essential energy supply to enable Victoria's energy security and continued economic development.*"

While AGL presents information highlighting a potential gas shortfall in Victoria by 2024, the EES: (1) fails to explain why the potential shortfall should be met with an increased supply instead of demand side measures; (2) does not present evidence on how much gas would be "essential to secure Victoria's energy security and continued economic development"; (3) fails to make the case that a gas import terminal is the best alternative to address Victoria's energy needs considering its economic, environmental and social impacts; (4) does not explain the rationale to develop the project even when a similar project has been approved in Port Kembla.

b. The Australian Energy Market Operator's forecasting approach is missing the big picture

One of the main sources on which AGL bases its claims about a potential gas shortfall are the Australian Energy Market Operator's (AEMO) forecasts in its Gas Statement of Opportunities (2019) and the Victorian Gas Planning Report (2019).

While AEMO's modelling is one of the most sophisticated in the country it is, like any other modelling, constrained by its objectives and assumptions. One of the key limitations of AEMO's forecasting approach is that their modelling does not seek to calculate the least-cost supply of energy (electricity can replace gas at a lower cost for many uses such as space and water heating) **but to find the cheapest way to supply consumers with more gas.**

In fact, according to AEMO's Gas Supply Adequacy Methodology Information Paper, "*the model uses linear programming techniques **to calculate the least-cost supplies of gas** to enable delivery to demand centres, subject to different infrastructure and operational constraints*"¹ (emphasis added). As a consequence, it

¹ https://aemo.com.au/-/media/files/gas/national_planning_and_forecasting/gsoo/2020/gas-supply-adequacy-methodology.pdf?la=en

should not come as a surprise that either AEMO's Gas Statement of Opportunities or Victorian Gas Planning Report arrive at the conclusion that we need new sources of gas supply.

AEMO's modelling has been designed to seek solutions to the wrong problem. The sophistication of the model does not change the fact that AEMO will ultimately reach the same conclusion as the gas industry does in these reports. It is not well-suited to provide us with the optimal path towards energy security as its modelling is bounded to look for new sources of gas supplies and fails to evaluate other low-cost alternatives such as large-scale adoption of energy efficiency measures and fuel-switching from gas to electricity, each of which could increase energy security without the need to develop new fossil fuel projects.

c. We need to re-evaluate our reliance on gas

Before trying to address potential gas shortfalls by procuring gas at high costs for our environment and communities, we must evaluate whether it is sensible to maintain Victoria's reliance on gas. Since Eastern Australia started exporting LNG from Queensland, linking our domestic gas markets with the international gas markets, Australian gas prices have increased by two to three times their historical prices. This increase has severely affected households and the industrial sector. With little sign of domestic gas prices ever returning to prices equivalent to pre-LNG-export times, it can be argued (even from a purely economic perspective) that gas is a sub-optimal solution to the energy security challenge, and we should be assessing our alternatives.

Further, increased penetration of renewables in the National Energy Market (NEM) is forecast to reduce electricity prices in the next decades. As an increasing share of the services provided by gas in the residential, commercial and industrial sector can be cost-effectively replaced by more efficient electric alternatives, we have an opportunity to plan a phase-out of gas consumption as a better approach to guarantee energy security, benefit consumers and address climate concerns.

AGL tries to frame the potential shortfall as a supply-side problem in a clear effort to establish the need for more gas. They are not alone in focusing on supply-side solutions, but this does not make it the smartest approach. While AGL's EES does mention the energy efficiency, its report willfully minimises the potential impacts of demand-side efforts in section 2.2.9 Security and Stability of Supply - *"AGL also recognises the need to improve energy efficiency and reduce gas demand"* - characterising demand-side alternatives as a side note to their proposed solution of a gas import terminal.

Despite claims of seeking to reduce gas demand, there is evidence in AGL's plans to use this project to further increase the East Coast reliance on gas (see image below) and that it has already entered in conversations with other gas industry actors like the Australian Pipeline Association (APA).

In fact, APA when pitching the pipeline that would connect Crib Point and Pakenham if the project goes ahead, has stated *"this creates further opportunities for the supply of gas to residential and industrial*

growth areas along the pipeline route **and the potential for future power generation opportunities across the design life of the pipeline**² (emphasis added).

We are restructuring our gas book after generating strong returns from contracts that are now maturing

Margin pressure from previously identified supply cost headwinds crystallizing from FY21 as legacy contracts mature

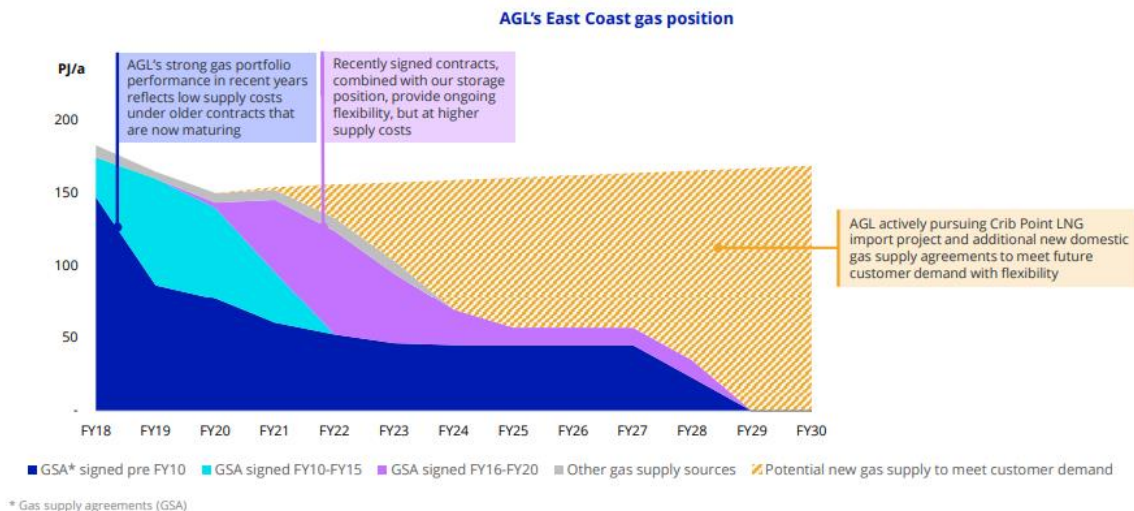


Figure 1

Source: AGL Energy FY20 Full-Year Results

APA's "potential future power generation opportunities" are not hypothetical: APA has an advanced proposal for a 220 MW gas generator in Dandenong³ whose development would become more likely if Crib Point goes ahead.

Further, AGL's has its own projects that might become to fruition if Crib Point goes ahead. This includes AGL's proposal for the 500 to 600 MW Tarrone gas power station on rural grazing land in Macarthur. There is also an unusual reference in the EES documents to a potential gas power station in Tyabb. While we understand that AGL does not currently intend to pursue this Tyabb power station option, it is referred to in the EES documents and has not been publicly ruled out.

² https://www.apa.com.au/globalassets/documents/our-current-projects/crib-point-to-pakenham/crib-point-to-pakenham-infosheet_030_w.pdf

³ <https://www.energymagazine.com.au/two-gas-generator-projects-progress-to-key-initial-support-terms-agreement/>

d. Demand reduction is the missing piece of AGL's rationale and our energy policy

As previously stated, existing constraints in AEMO's modelling and the vested interest of gas industry actors have enshrined the idea that supply and demand imbalances can only be addressed by increased supply.

This approach is extremely narrow and reduces energy policy to a search for new sources of supply without ever questioning whether it would be strategic to promote fuel-switching to increase energy security or whether increasing energy efficiency could deliver greater benefits than increasing energy consumption.

Energy efficiency must not merely be an afterthought for policy makers as it clearly is for a company like AGL. Decision makers aiming to increase energy security and enable emission reductions cannot overlook the benefits of energy efficiency measures and fuel switching. In words of the International Energy Agency:

"Energy efficiency can bolster regional or national energy security. By reducing overall energy demand, efficiency can reduce reliance on imports of oil, gas and coal. Energy efficiency can therefore play a crucial role in ensuring both long- and short-term energy security in a cost-effective manner."

*Energy efficiency also reduces the likelihood of supply interruptions; **the only energy source that cannot be interrupted is the energy that is not used.** Also, in the event of a disruption, efficiency measures can work with emergency conservation measures to reduce demand. This was demonstrated effectively in the wake of the Great East Japan Earthquake of 2011."*⁴(emphasis added)

Further, relative inaction from state and federal governments have left Australia severely lagging when it comes to energy efficiency. According to the American Council for an Energy-Efficient Economy (ACEEE) Australia ranks as the worst-performing major developed economy among the 25 largest energy users in the world.

⁴ <https://www.iea.org/reports/multiple-benefits-of-energy-efficiency/energy-security>

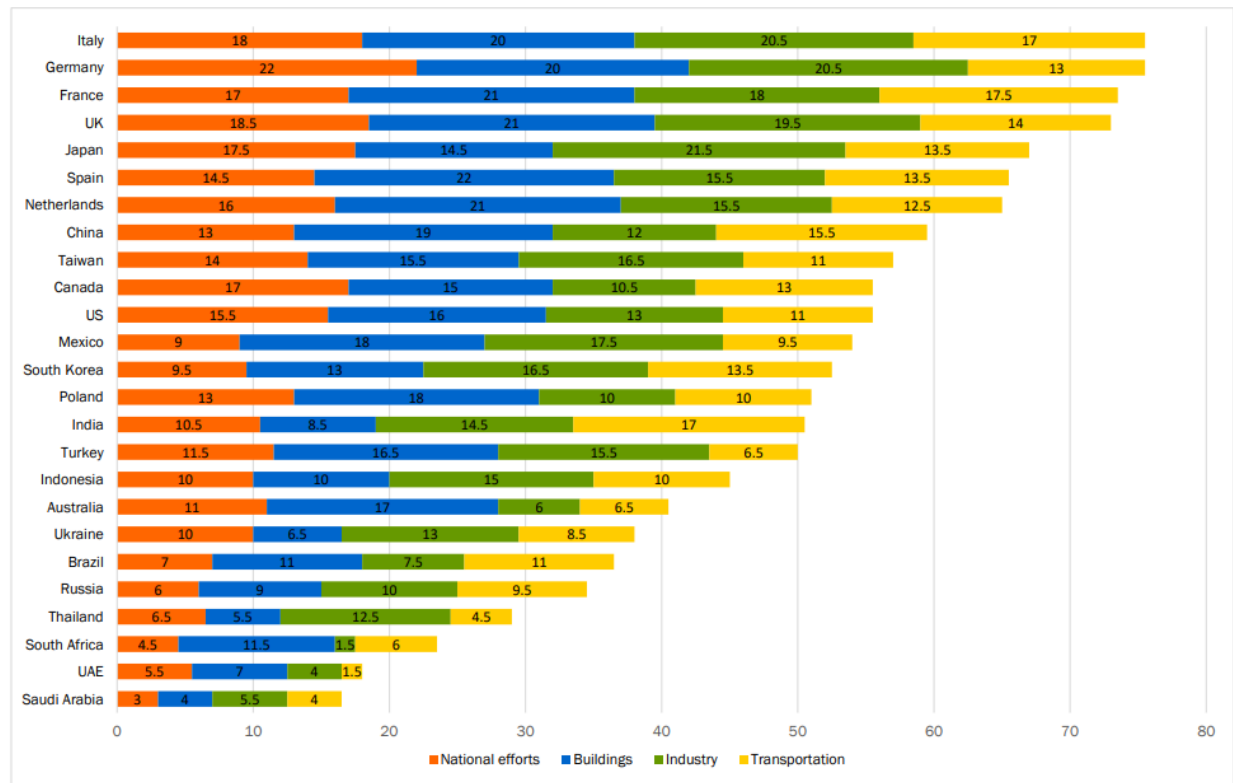


Figure 2

2018 International Efficiency Scorecard (American Council for an Energy-Efficient Economy 2018)

e. Demand reduction capacity to increase energy security in Victoria

The aforementioned forecast gas shortfall has fuelled calls for immediate government action. This pressure has resulted in the Victorian government lifting the conventional onshore gas moratorium, a renewed push for the approval for Narrabri gas field in New South Wales, and a number of proposed gas import terminals including the approved Port Kembla in NSW and this proposal at Crib Point in Victoria.

Commentators have notably ignored the potential for measures that reduce gas demand to serve as a solution to the forecast gas shortfall despite the existing evidence on the benefits of energy efficiency, and the enormous potential that it could have in Australia.

According to analysis by energy efficiency specialists Northmore Gordon (2019), commissioned by Environment Victoria, the state of **Victoria could reduce its gas consumption by 98 to 113 PJ by 2030**

using existing technology and targeted economic support.⁵ This would benefit households, commercial users and industry, tested against criteria relating to ease of implementation, cost and applicability.

#	Technology	Sector	Ease of implementation	Cost	Applicability	Anticipated gas reduction (PJ/annum)
1	Replace ageing ducted gas heating systems	Residential	Easy	Low-Moderate	Broad	48 PJ
2	Improving building insulation ⁸	Residential	Easy	Low	Broad	> 10 PJ
3	Use existing air-conditioners for space heating	Residential	Very easy	Zero cost	Some	5-15 PJ
4	Heat pump hot water	Residential	Easy	Low	Broad	10 PJ
5	Heat pump space heating	Commercial	Moderate	Moderate	Broad	7.75 PJ
6	Industrial gas efficiency	Industrial	Easy	Low	Broad	2.5 PJ to 5.5 PJ
7	Renewable process heating	Industrial	Moderate to hard	High	Some	13.6 PJ
8	High temperature heat pumps	Industrial	Moderate	Moderate	Some	1 PJ to 3.5 PJ
9	Induction cooktops	Residential	Easy	Moderate	Some	0.5 PJ
Total gas demand reduction					98.35 PJ to 113.85 PJ	

Figure 3

Summary of gas demand reduction measures. (Northmore Gordon 2020)

On an annual basis, the potential avoided gas consumption created by the proposed measures would be enough to balance Victoria's gas demand and supply even without considering potential interstate gas imports.

⁵ <https://environmentvictoria.org.au/2020/06/03/victorian-gas-market-demand-side-measures-to-avoid-forecast-supply-shortfall/>

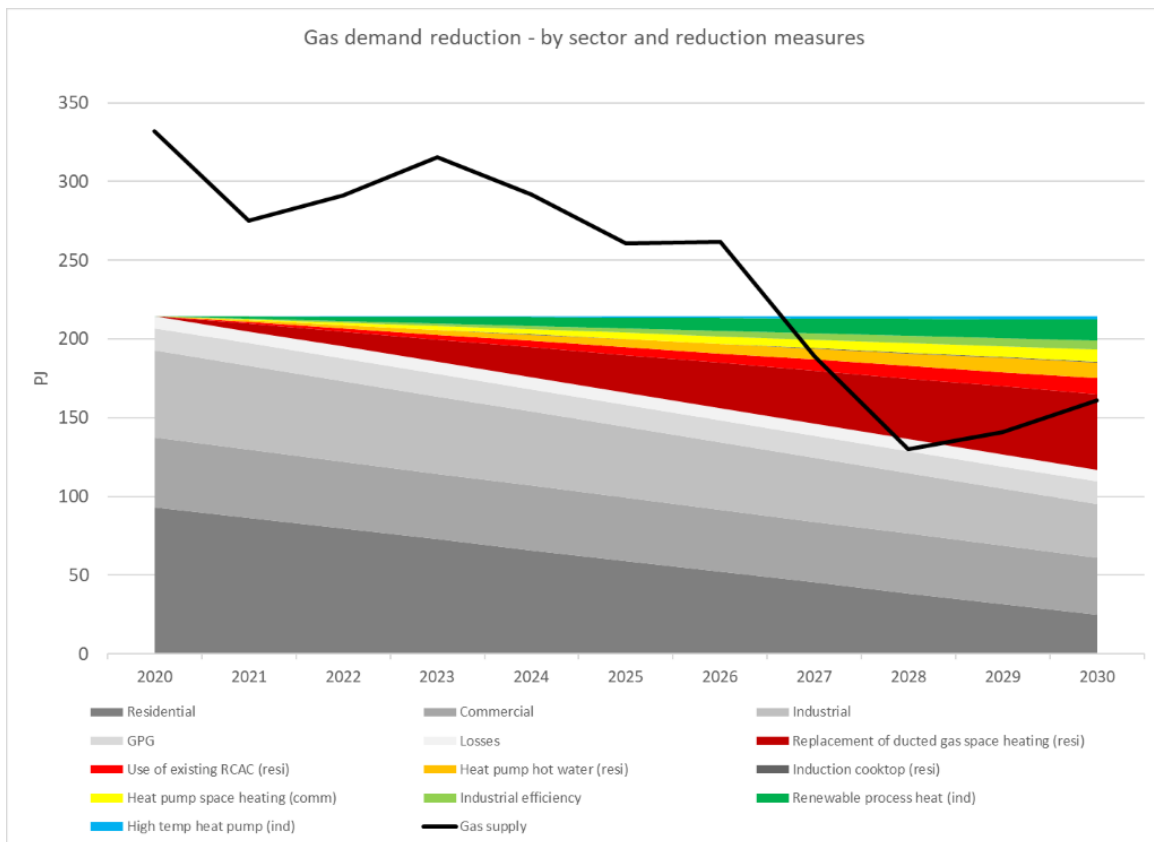


Figure 4

Gas Demand reduction by sector and reduction measures (Northmore Gordon, 2019)

This analysis shows that under the right policy scenario, **Victoria could balance its energy supply requirements without the need of new gas fields or the development of gas import terminals.** Further, promoting energy efficiency and fuel-switching delivers other benefits on top of increasing energy security.

Demand measures would provide several co-benefits such as reduced energy costs for Victorians households, increased competitiveness for the Victorian Industry and would reduce our greenhouse gas emissions by decreasing our reliance on gas. Further, pursuing demand side measures instead of AGL's gas import terminal would also preserve the ecological character of Westernport Bay Ramsar site and prevent amenity and health impacts to the local community which has fiercely opposed the project.

These claims are supported by existing literature. There is a mounting body of evidence that supporting energy efficiency and fuel-switching from gas to electricity lowers energy costs for consumers⁶ and

⁶ https://renew.org.au/wp-content/uploads/2018/08/Household_fuel_choice_in_the_NEM_Revised_June_2018.pdf

reduces GHG emissions under most scenarios even when the electricity grid is heavily reliant on fossil fuels.^{7 8}

While AGL claims that their gas import terminal is flexible and the FSRU could sail away if its gas is “no longer needed” the reality is that fossil fuel projects like AGL’s gas import terminal have an anchoring effect and for a vertically integrated company such as AGL the temptation to create synergies might be too strong to pass up. Proof of this are APA’s and AGL’s projects to increase their gas-powered generation portfolios previously mentioned.

f. The energy transition is making gas obsolete

Decades ago, when we knew less about the global warming potential of methane, our climate models were less accurate, and renewables could not compete on price with fossil fuels, gas was touted as a bridge fuel.

Times have changed. There is now sufficient evidence that gas consumption should already be starting to decrease, to allow Australia to stay within a carbon budget consistent with a below 2-degrees global warming scenario⁹ (let alone 1.5 degrees scenario¹⁰). Further, the reduction in the cost of wind, solar and batteries has radically changed the electricity markets, and even in the absence of policy levers, gas is in its way out.

The electricity generation sector is primed to become one of the first to successfully transition away from fossil fuels. According to the Australian Energy Market Operator (AEMO) and CSIRO renewables have become the cheapest alternative for new power production. This holds true even when accounting for the storage requirements to ensure renewable energy from solar and wind can be stored for up to six hours to guarantee the energy is available at the time it is needed.

And the Australian energy markets trends are part of a global phenomenon. In the United States alone utilities in Arizona, Colorado, Florida and New Mexico are planning to replace coal fired power stations without adding any new gas power stations. This shows that even under scenarios where gas is affordable, renewables are becoming able to outcompete it for new generation.

The fact that renewables will displace gas is becoming increasingly part of the new consensus on energy markets. In fact, this year AEMO adjusted its Victorian gas-powered generation annual consumption forecast for the 2014-2039 period, assuming that gas consumption will be dramatically below what was previously thought. This is because of a higher penetration of renewables than previously forecast. If we

^{7 10} <https://rmi.org/fossil-gas-has-no-future-in-low-carbon-buildings/>

⁸ <https://renew.org.au/renew-magazine/efficient-homes/emissions-intensity-of-household-electricity-vs-gas/>

⁹ http://www.cfr.org/content/publications/attachments/Levi_CH4CC_%20Archived.pdf

¹⁰ https://www.ipcc.ch/site/assets/uploads/sites/2/2019/02/SR15_Chapter2_Low_Res.pdf

take into account that AEMO only forecasts existing policies and trends it is likely that gas powered generation will be phased out even faster as the interest in accelerating the energy transition grows.

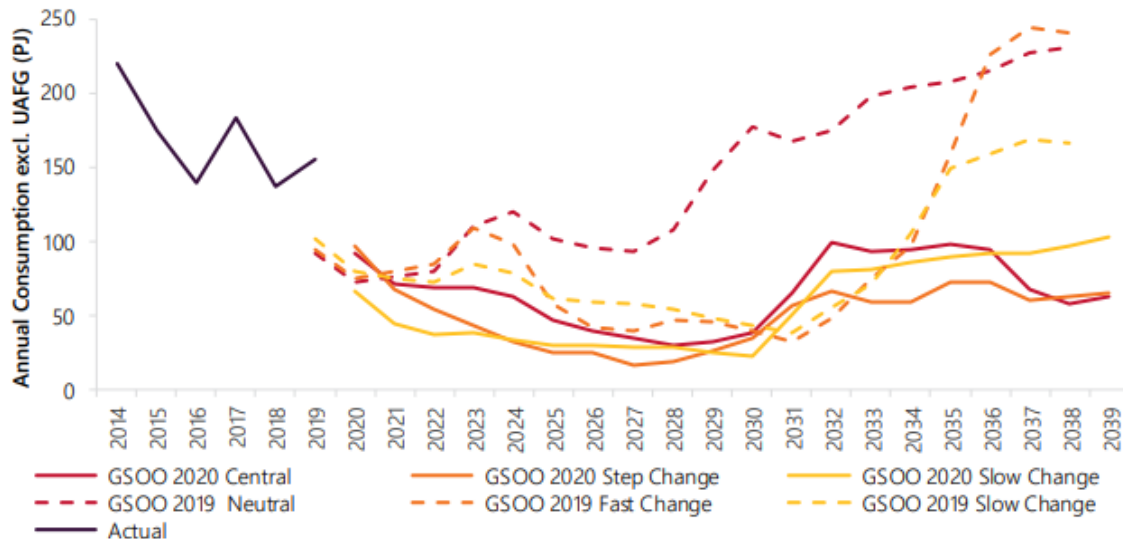


Figure 5

Forecast of gas consumption for gas-powered electricity generation (AEMO 2020)

Further, AEMO's recently published 2020 Integrated System Plan (ISP)¹¹, the country's most sophisticated modelling effort to analyse the cheapest way to develop our National Electricity Market (NEM), confirms this trend. This is particularly remarkable as AEMO's ISP is not focused on promoting the energy transition but only analysing alternatives from least-cost approach.

The Integrated System Plan forecasts that, contrary to AGL's claims, as coal power stations retire, they will be replaced with renewables because the cost of wind and solar technology are the cheapest and obvious replacement. While existing gas power stations would still play a role, the window of opportunity for new gas-powered generation is extremely small according to the regulator "New flexible gas generators could play a greater role if gas prices remained low at \$4 to \$6 per GJ over the outlook period".

¹¹ <https://aemo.com.au/en/energy-systems/major-publications/integrated-system-plan-isp/2020-integrated-system-plan-isp>

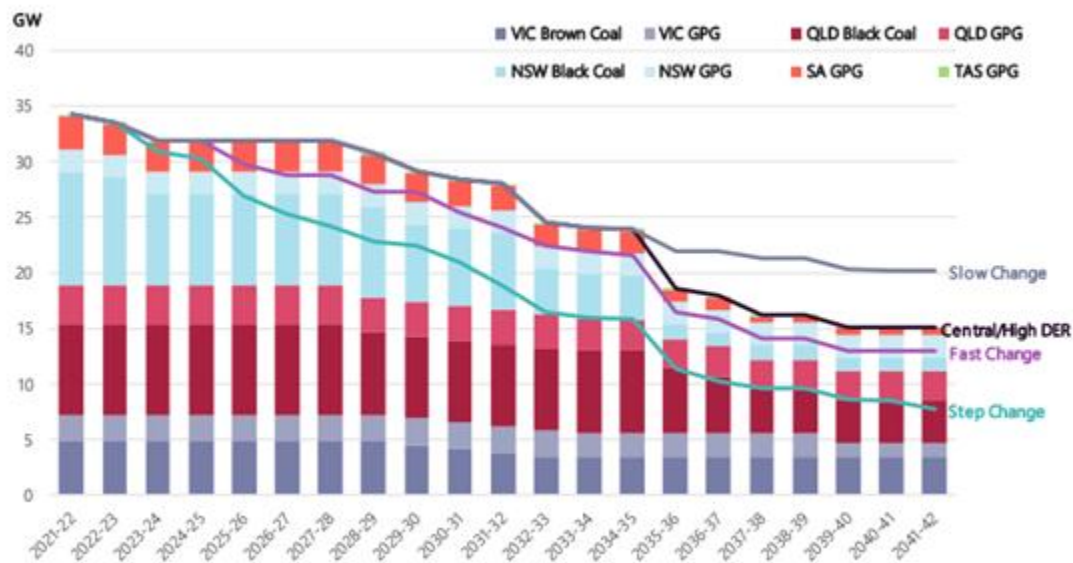


Figure 6

Coal-fired generation and GPG capacity (AEMO, 2020)

g. AGL failed to consider an already approved alternative

Finally, even if one acknowledges that AGL, a company which considers gas operations its core business, is adamant about gas being essential, it is hard to understand why AGL did not properly address the possibility of sourcing gas from the Port Kembla LNG import terminal, a project that was approved in April 2019.¹²

While AGL addresses Port Kembla as a shortlisted potential location for their Project and acknowledged that Australian Industrial Energy (AIE) is planning to develop a gas import terminal in the location, it failed to (1) acknowledge that Port Kembla LNG has already been approved by the New South Wales Government and that it has already signed contracts to supply gas in South-East Australia; and (2) recognise the real potential of Port Kembla LNG to supply gas to south-eastern Australia.

AGL hastily discarded Port Kembla LNG import terminal by stating *“It is noted that Australian Industrial Energy (AIE) is planning to develop a gas import terminal at Port Kembla to service the New South Wales market. AIE also considered Port Botany and Port of Newcastle in its assessment of sites. Of these locations, the Port Kembla site was considered to be preferred during the AIE assessment of alternatives noting that the AIE proposal is focused on meeting the gas needs of the New South Wales market and is proposing to dredge a new berth pocket in the Inner Harbour.”* (Chapter 2, Project Rationale p.29).

¹² <https://jemena.com.au/about/newsroom/media-release/2020/jemena-takes-significant-step-towards-easing-east>

AGL did not mention that Port Kembla LNG has been already approved (the original project was approved in April 2019 and a capacity increase was approved one year later). AIE did not explicitly mention their intention to supply gas to Victoria when they submitted in **November 2019** a proposal to expand the capacity of their gas import terminal to **100 PJ**, they did acknowledge their intention to connect their gas import terminal to the Eastern Gas Pipeline (EGP) at Cringila¹³ and mentioned that Jemena was preparing an application for this modification.

In June of this year Jemena submitted plans to the New South Wales Government to connect Port Kembla LNG import terminal to the EGP and stated *“This project is the best way of enabling new gas from Port Kembla to reach areas of demand in Victoria and New South Wales”* making clear that the parties involved in the Port Kembla project are confident in their capacity to supply gas to Victoria and New South Wales with the current after solving existing constraints in the gas transmission system.

While Environment Victoria does not condone the development of any fossil fuel project such as gas import terminals, it is important to point out that Port Kembla’s LNG import terminal has not faced a similar level of community opposition as AGL’s project have, receiving a total of only 41 submissions during its original application and its further modification. Further, Port Kembla LNG is not going to be developed within the boundaries of a Ramsar Site but a heavily industrialised zone.

AGL’s failure to properly evaluate sourcing gas from Port Kembla LNG import terminal cannot be overlooked, as it goes against section 3.4 Project Alternatives of the Scoping requirements for the Gas Import Jetty and Crib Point to Pakenham Gas Pipeline EES - *“The EES should document the proponent’s consideration of feasible alternatives and include an explanation of how specific alternatives were shortlisted for evaluation within the EES. The EES should investigate and document the likely environmental, social and economic effects of the alternatives, particularly where these offer a potential to achieve beneficial environmental, social and economic outcomes and can meet the objectives of the project.”*¹⁴

h. AGL’s claims on LNG vs pipeline gas prices are misleading

Section 2.2.8 of Chapter 2 covers the economics of gas transport. The purpose of this section is to argue that the Project would be a more cost-effective way to supply gas to Victoria. While the total operation costs of the Project could make it cheaper than sending gas through the existing gas transmission network, AGL did not provide evidence in this report.

¹³ <https://majorprojects.planningportal.nsw.gov.au/prweb/PRRestService/mp/01/getContent?AttachRef=SSI-9471-MOD-1%2120191128T233407.251%20GMT>

¹⁴ https://www.planning.vic.gov.au/_data/assets/pdf_file/0031/409936/Att-1_Crib-Point-EES-scoping-requirements_FINAL.pdf

One of the main sources for comparison between the costs of importing LNG and diverting gas to Melbourne from Queensland was in Figure 2-18.

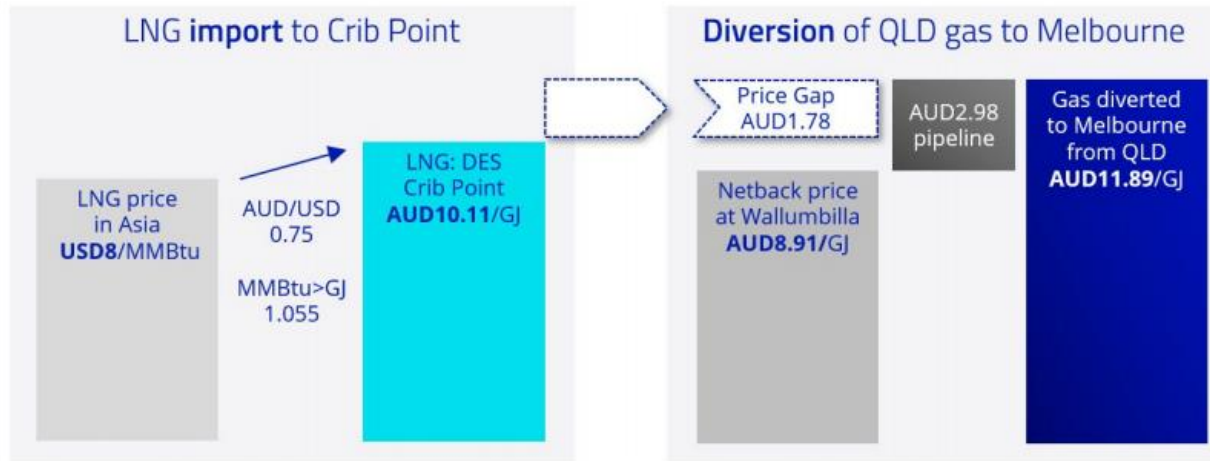


Figure 7
Imported LNG prices vs piped LNG price (AGL 2020)

This figure is extremely misleading as it is not comparing the prices of the same type of good.

Firstly, AGL presents the cost of “LNG: DES Crib Point” at AUD 10.11/GJ. Delivered Ex Ship (DES) is an international trade term which means “the seller fulfils his obligation to deliver when the goods have been made available to the buyer on board the ship uncleared for import at the named port of destination.” This means that this price does not include the operation costs of the Project, nor the margin that AGL expects to receive from its operation.

AGL then compares this price (which does not include the costs of the Project’s operations) to gas that is delivered to Melbourne (i.e. gas that includes the cost of transportation to its destination) and highlights a “price gap of AUD 1.78”.

It is worth noting that AGL used the same example from Figure 7 last year at the 19th International Conference & Exhibition on Liquefied Natural Gas¹⁵. During this conference, AGL characterized the “price gap of AUD 1.78” as a “AUD 1.78 margin” which could be left to “cover storage and regasification costs”.

The reality is that we do not know the operating costs of AGL’s plant nor the value they plan to extract from their operation. Instead of providing the IAC and the public with information regarding the advantages of LNG over pipeline gas, AGL have provided a misleading comparison.

¹⁵ <https://www.gti.energy/wp-content/uploads/2019/10/46-LNG19-04April2019-Deckart-Phaedra-paper.pdf>

II. Climate Change and Greenhouse Gases

a. Climate change is a present threat

For millions of Australians climate change is not a distant future threat but a current dangerous reality. In the last decade we have suffered what might be the worst drought in Australian history, which has ravaged our farmers and pushed the Murray-Darling river system to its limit.

This drought – exacerbated by climate change – also created the dry conditions that fuelled last summer’s devastating bushfires. Lives were lost, rural communities destroyed, pristine areas of bush were lost, and an estimated three billion wild animals¹⁶ were killed or displaced.

These record-breaking drought and bushfires have happened after a global average increase of 1.1 degrees Celsius on the average global temperature since preindustrial times. If we continue following an emissions trajectory consistent with a “representative concentration pathway 8.5.”¹⁷ (RCP 8.5).

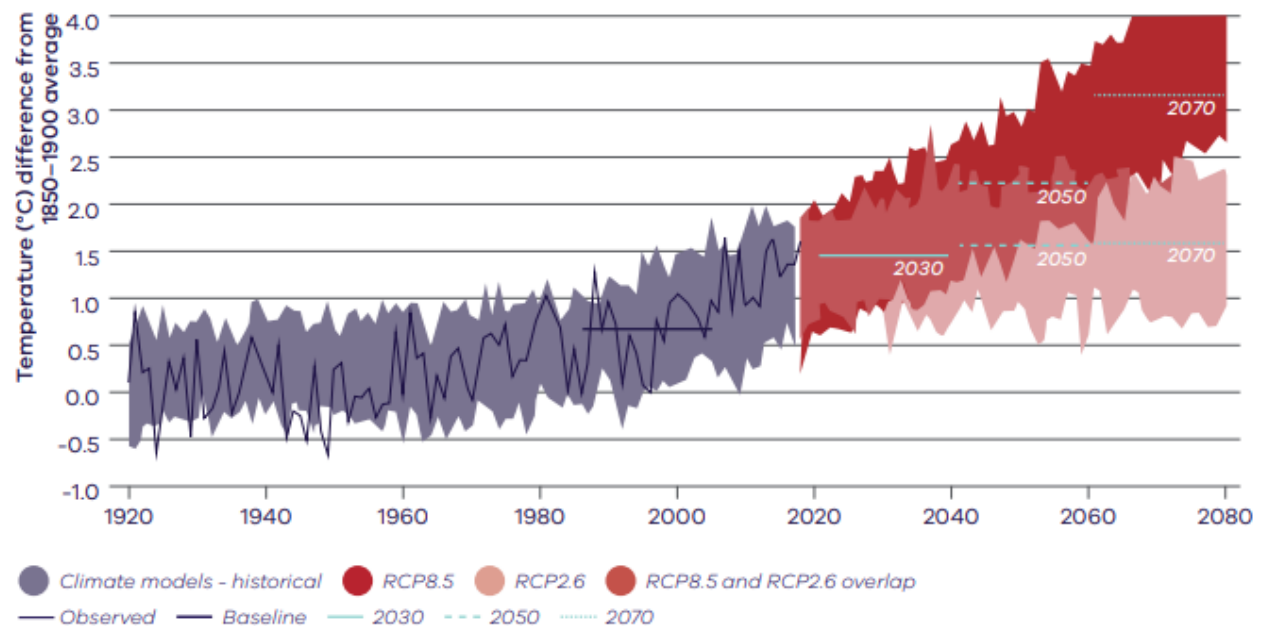


Figure 8

Average Annual temperature of Victoria in observations and models relative to the pre-industrial era showing different emission pathways (CSIRO, 2019)

¹⁶ <https://www.wwf.org.au/news/news/2020/3-billion-animals-impacted-by-australia-bushfire-crisis#gs.dvts6a>

¹⁷ <https://www.pnas.org/content/early/2020/07/30/2007117117>

While AGL asserts in their Climate Change Risk Assessment (EES Attachment IV) that its Project would be designed to manage the worst-case impacts of climate change¹⁸ the reality is that we do not know whether the global community could adapt to changes in climate consistent with that emissions trajectory. According to Schellnuber et al (2016), under global warming of 4 degrees Celsius by 2100 *“impacts projected for ecosystems, agriculture, and water supply in the twenty-first century could, for example, lead to large-scale displacement of populations, with manifold consequences for human security, health and economic and trade systems.”*¹⁹

Contemplating average global temperature increases of 3.2 to 5.4 degrees Celsius by 2080-2100 must force us to reflect on the consequences of continuing to give the green light to fossil fuel projects such as AGL’s gas import terminal which make the ‘worst-case scenario’ a more likely outcome.

a. Victoria is particularly exposed to the impacts of climate change

That Victoria is particularly vulnerable to climate change with observed temperatures in Victoria tracking towards the upper limit of projections (see Figure 10 below). An acknowledgement of this reality has been included in the preamble of the *Climate Change Act (2017)*: *“Victoria is particularly vulnerable to the adverse effects of climate change. Natural disasters are increasing in frequency and severity as a result of the changing climate.”*

¹⁸ An RCP 8.5 represents the “worst-case” scenario and would lead to average global temperature increases of 3.2 to 5.4 degrees Celsius by 2100.

¹⁹ https://www.researchgate.net/publication/306037653_The_Challenge_of_a_4C_World_by_2100

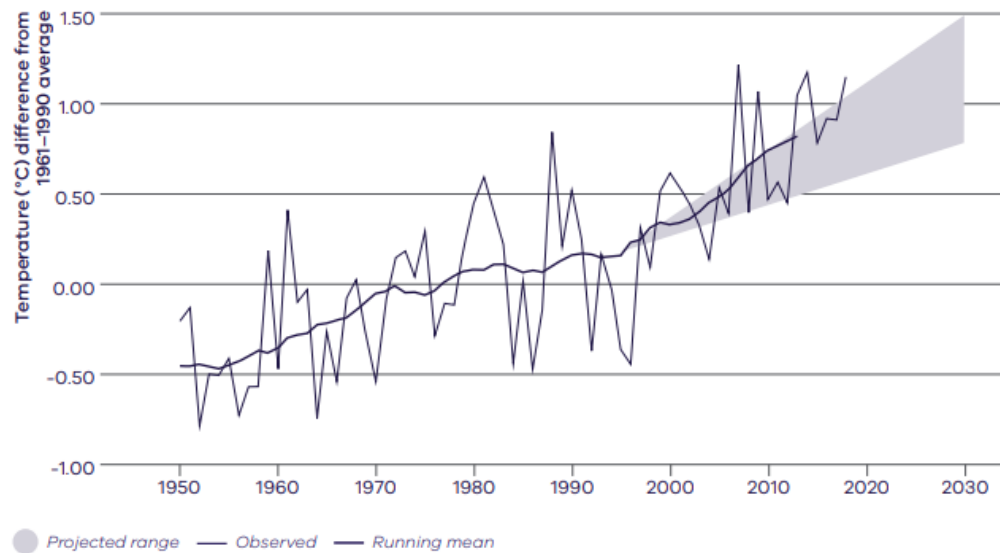


Figure 9

Comparison of the observed average annual temperatures for Victoria with the projected range of change. Shown are observed temperature difference from 1961-1990 average (thin black line) plus the 10-year running average (thicker line), and the projected temperature change to 2030 across climate models and emissions scenarios (relative to a 1986-2005 baseline period). (CSIRO, 2019).

Observed winter rainfall in Victoria is tracking towards the drier end of projections

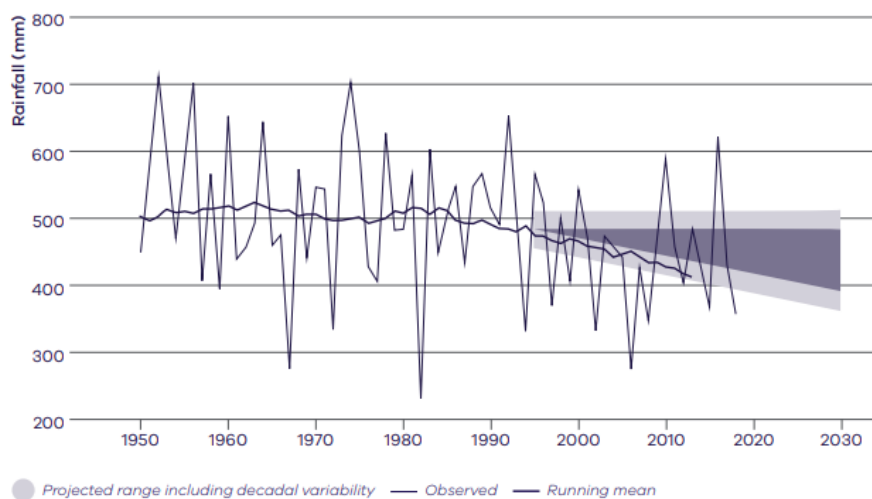


Figure 10

Observed rainfall averaged over Victoria (Australian Water Availability Project; thin black line) plus the 10-year running mean (thicker line), and the projected rainfall change to 2030 across climate models and emissions scenarios (relative to a 1986–2005 baseline period) (dark grey shading) plus an indication of decadal variability (light grey shading; one standard deviation of 10-year running average from the observations). (CSIRO, 2019).

As Figures 9 and 10 show, Victoria has already become hotter and drier and as climate change unfolds, extreme weather events such as intense droughts, bushfires, heatwaves, extreme rainfall events and coastal inundations will become more common.²⁰

This will have a wide range of impacts including biodiversity loss, potentially reduced water security, deterioration of our food systems, heat-related health issues and damages to key Victorian economic sectors such as agriculture and tourism.^{21 22 23}

b. We need to adopt an emissions trajectory consistent with limiting warming to below 1.5 degrees

The speed of our transition to a zero-carbon economy matters as much as the destination: the faster we can reduce our emissions the greater the chances we have to avoid the worst consequences of climate change.

While Victoria represents a small fraction of the global emissions, it is crucial that we contribute our fair share to limiting global temperature increase in accordance to the Paris Agreement objective of *“holding the increase in the global average temperature to well below 2 degrees Celsius above pre-industrial levels and pursuing efforts to limit the temperature to increase to 1.5 degrees Celsius above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts climate change.”*²⁴

As part of the implementation of the *Climate Change Act 2017* the Victorian government appointed an Independent Expert Panel to provide advice on interim emission reduction targets for 2025 and 2030. To support their advice the Panel in turn commissioned The Centre for International Economics to analyse

²⁰ https://www.climatechange.vic.gov.au/_data/assets/pdf_file/0029/442964/Victorias-Climate-Science-Report-2019.pdf

²¹ https://www.climatechange.vic.gov.au/_data/assets/pdf_file/0029/442964/Victorias-Climate-Science-Report-2019.pdf

²² <https://www.water.vic.gov.au/climate-change>

²³ <https://www.necma.vic.gov.au/News-Events/Media-Releases/ArtMID/537/ArticleID/492/Embedding-climate-change-in-agriculture>

²⁴ https://unfccc.int/sites/default/files/english_paris_agreement.pdf

different emission reduction pathways for Victoria to consider their relative costs. The report concluded that a rapid emission reduction (65% by 2030) would be (from a costs perspective) **the best or tied as the best pathway** for the Victorian economy and would minimise the transition costs under different scenarios.

Discount rate	Nature of abatement cost curve	
	Flat cost curve <i>Incremental abatement comes at low additional cost; consistent with learning by doing; no regrets options; good policy configuration</i>	Steep cost curve <i>Incremental abatement comes at higher cost: limited learning by doing, abatement opportunities used up in early actions</i>
1.4 per cent <i>Rate used for long term (>50 years) intergenerational decisions (in Stern 2006, for example). Based on zero (or very low) pure discount rate, but allows for some growth in real consumption. Some also argue that current real risk-free discount rate is very low.</i>	GSI reduction: 0.3 per cent to 0.5 per cent Lowest GSI loss in VIC emissions (65% 2030) followed by (55% 2030).	GSI reduction: 2.4 per cent to 3.6 per cent Lowest GSI loss in VIC emissions (65% 2030) followed by (55% 2030).
4 per cent <i>Designed to represent the market return on capital over the long term. In climate change, this is a rate typically used by analysts such as Nordhaus (2008) Also, frequently used as a lower bound in cost-benefit analysis.</i>	GSI reduction: 0.3 per cent to 0.4 per cent Equal lowest GSI loss in VIC emissions (65% 2030), VIC emissions (55% 2030) and VIC emissions (45% 2030)	GSI reduction: 2.1 per cent to 2.9 per cent Lowest GSI loss in VIC emissions (65% 2030) followed by (55% 2030).
7 per cent <i>Represents opportunity cost of capital; a rate often used for Government cost-benefit analysis and regulatory impact analysis. Generally, applies to periods less than 50 years.</i>	GSI reduction: 0.2 per cent to 0.3 per cent Equal lowest GSI loss in VIC emissions (65% 2030) and VIC emissions (55% 2030)	GSI reduction: 1.8 per cent to 2.2 per cent Equal lowest GSI loss in VIC emissions (65% 2030) and VIC emissions (55% 2030)

Figure 11

Impact of timing of emissions abatement (The CIE 2019)

Further, reducing our emissions by a 65% by 2030 would put us on a pathway that would be close to be consistent with a 1.5 degrees Celsius emissions budget. While the Independent Expert Advice on Interim Targets acknowledged that following an emissions trajectory consistent with a 1.5 degree carbon budget would be the most beneficial for the Victorian economy and its community²⁵, it fell short of recommending targets consistent with a 1.5 degrees Celsius emission budget.

Victoria's emissions targets for 2025 and 2030 are yet to be set. These are now legally overdue, and frustratingly there is no timeframe for when this decision will be made, but this will hopefully be

²⁵ https://www.climatechange.vic.gov.au/_data/assets/pdf_file/0020/421715/Economic-impacts-of-timing-of-emissions-abatement.pdf

completed by the end of 2020 (emissions targets and “sector pledges” for emissions reductions are due to take effect from 1 January 2021). While the content of government abatement policy is not yet determined, it is entirely possible that a significant reduction in gas consumption will be necessary over the coming decade.



Figure 12

Interim Emissions Reduction Targets for Victoria (2021-2030), Independent Expert Panel (2019)

c. The gas industry has become the main force behind carbon emissions increases

Despite international commitments such as the Paris Agreement (2015) and increasing evidence that the window of opportunity for limiting climate change to 1.5 degrees Celsius is rapidly closing, annual global greenhouse gas emissions continue to rise, by 1.5% in 2017, 2.1% in 2018, and a projected increase of +0.6% in 2019.^{26 27}

While some reports have shown that government policies adopted in response to the COVID-19 crisis have reduced this year’s global carbon emissions, this decrease will prove short-lived unless we change the way we fuel our economies.²⁸

²⁶ <https://iopscience.iop.org/article/10.1088/1748-9326/ab57b3>

²⁷ <https://essd.copernicus.org/articles/11/1783/2019/>

²⁸ <https://www.nature.com/articles/s41558-020-0797-x>

The main driver of increases in global carbon emissions since 2012 has been gas, growing by a 2.6% last year. This is the case as well in Australia where an uncontrolled growth of that the gas industry has wiped out most of the progress in other sectors such as in electricity generation.^{29 30}

d. The emissions intensity of gas is likely understated

One of the main claims of the gas industry is that gas is cleaner than coal and hence we should adopt it as a 'clean fuel'. This argument is deeply flawed, because: (1) as stated above, the gas industry is one of the main forces behind global carbon emissions increase; (2) climate change is driven by absolute emissions, and if the gas industry keeps growing at its current rates the fact that gas is less carbon-intensive than coal becomes irrelevant; and (3) the assumption that gas itself is less polluting than coal holds true only when considering the final moment of combustion, but not when seen across the full life-cycle, including fugitive emissions.

The claim that gas is a 'clean' fuel is based in the fact that gas emits around half the carbon dioxide when combusted in a new, efficient natural gas power plant compared with emissions from a typical new coal plant.³¹

This assessment of the climate impact of gas is misleading as drilling and extraction of natural gas from wells, and its transportation through pipelines and/or its liquefaction and re-gasification results in significant gas leakage. Methane, the main component of "gas", has 34 times the global warming potential of carbon dioxide over a 100-year period and 86 times higher than carbon dioxide over a 20-year period.³²

One of the main uncertainties around gas production is the level of methane leakage from infrastructure. This is a crucial point: if methane leakage is above 3.2% from when it is extracted from the well through to its delivery at a power station, gas becomes just as polluting, if not more polluting, than coal.³³

Recent studies have shown that we have previously underestimated how much methane is released to the atmosphere during gas production. It has been found that some onshore gas fields in the United States have levels of leakage of 2-17%, far above the 3.2% threshold for gas to deliver any climate benefits.

²⁹ <https://www.abc.net.au/news/2018-06-21/gorgon-gas-plant-wiping-out-a-year-of-solar-emission-savings/9890386>

³⁰ <https://www.theguardian.com/environment/2018/nov/13/problem-in-waiting-why-natural-gas-will-wipe-out-australias-emissions-gains>

³¹

https://netl.doe.gov/projects/files/CostAndPerformanceBaselineForFossilEnergyPlantsVol1BitumCoalAndNGtoElec tBBRRev4-1_092419.pdf

³² http://www.climatechange2013.org/images/report/WG1AR5_Chapter08_FINAL.pdf

³³ <https://www.pnas.org/content/109/17/6435>

Despite these findings, the Australian gas industry and National Greenhouse Gas Inventory report far lower emission intensities for unconventional gas emissions than some U.S. gas fields. Existing evidence indicates that this is a result of using default emissions factors rather than on reliable measurements.³⁴

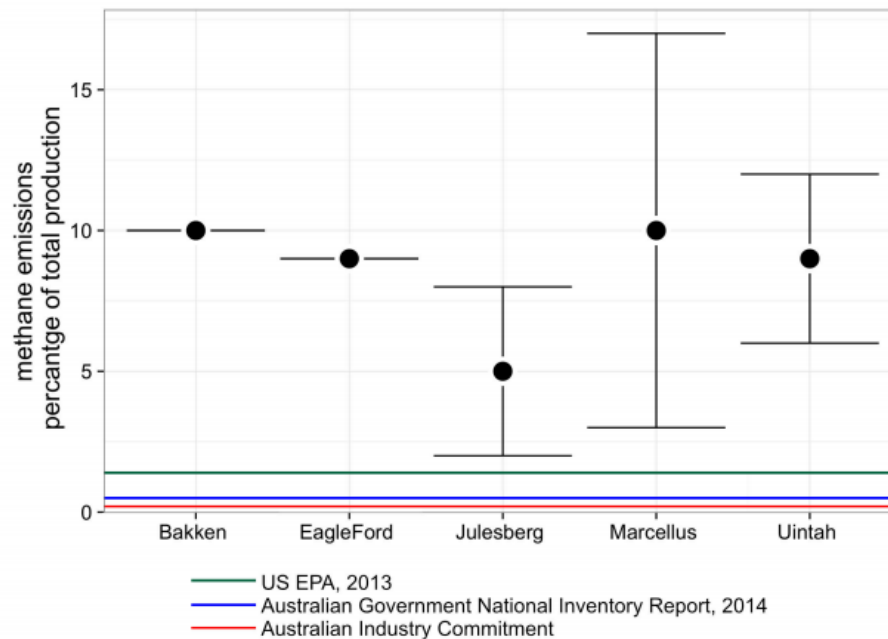


Figure 13

Measured fugitive emissions at US gas fields compared to Australian industry and government reporting (MEI 2016)

e. The real climate impact of AGL's gas import terminal.

As seen in subsection 'd' above, the carbon footprint of gas could vary greatly by methane leakage. Additional factors would be energy used during the liquefaction process, transport fuel consumption and energy used during the regassification process.

AGL claims that only the following sources of carbon emissions are relevant to the project:

34

<http://climatecollege.unimelb.edu.au/files/site1/docs/6032/20161023%20Review%20of%20Methane%20Emissions.pdf>

Source of greenhouse gas emission	Activity	Included in assessment?	Direct	Indirect	
			Scope 1	Scope 2	Scope 3
Stationary fuel	Fuel consumed by onsite plant and equipment (including the FSRU)	✓	•		•
	Fuel consumed by offsite plant and equipment	x			•
	Natural gas consumed by end users in the VTS (i.e. commercial and residential properties)	x			•
Transport fuel	Fuel consumed by Project vehicles and boats operating at the Project site	✓	•		•
	Fuel consumed for operational supply and material delivery	✓			•
	Employee air travel	✓			•
	Employee commute to and from home to site	✓			•
Purchased electricity	Electricity used in Project offices	x		•	•
	Electricity consumed in plant and equipment	✓		•	•
Fugitive emissions	Operational waste disposed at landfill	x			•
	Fugitive emissions from plant and pipeline operations	✓	•		
	Emissions from the disposal of municipal solid waste	x			•
	Emissions from liquid waste products, sewerage	x			•

Figure 14

Summary of operational greenhouse gas emissions relevant to the AGL's gas import terminal (AECOM, AGL 2019)

To complement this table, AGL states *“While outside the scope of the study, the emissions from the production of the LNG and the end-use consumption of the natural gas have been estimated for context. It is estimated that the annual emissions associated with the production of 160 PJ of LNG are 1.3 Mt of CO₂-e.”*³⁵ This paragraph was included to address Recommendation No. 2 of the Independent peer review of the Greenhouse Gas Impact Assessment.

AGL's efforts to use the emissions intensity of Qatari gas as the basis for an estimate of either the entire LNG industry or this project in particular lacks rigour and could be characterised as self-serving as Qatar gas has a low emission intensity of extraction.³⁶ The existing literature is clear that the emission intensity of gas production should be stated as a range as it varies greatly due to major differences in methane leakage among gas fields.

³⁵ https://www.gasimportprojectvictoria.com.au/sites/default/files/2020-07/GIJP%20EES%20Technical%20Report%20F%20Greenhouse%20gas%20impact%20assessment_2.pdf

³⁶ <https://www.nature.com/articles/s41467-020-14606-4>

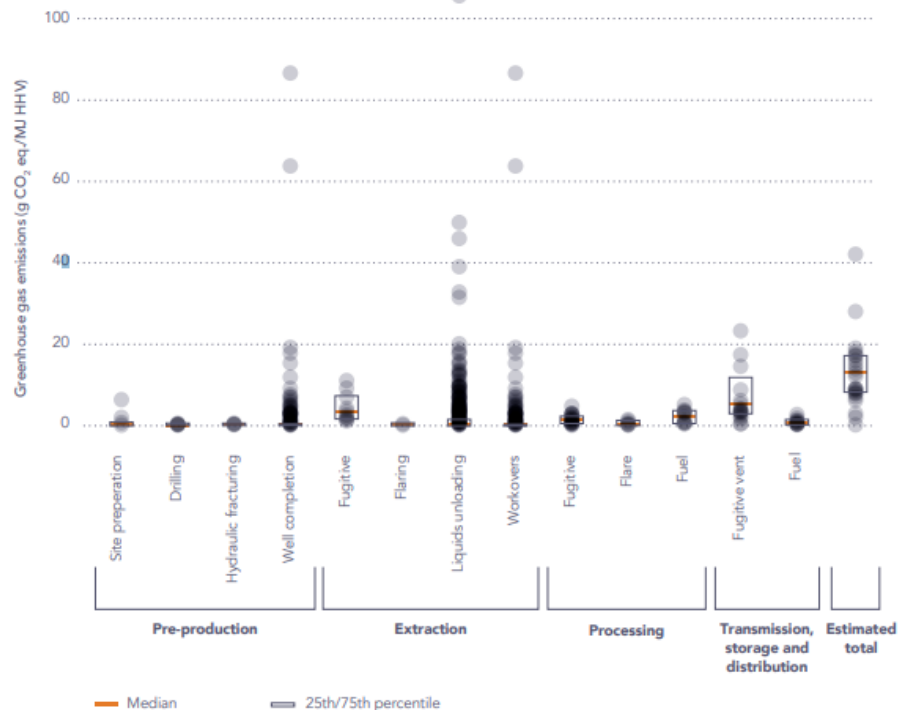


Figure 15

Greenhouse gas emission estimates across the natural gas supply chain (Sustainable Gas Institute 2015)

While AGL cannot influence upstream activities, AGL cannot absolutely exonerate themselves from their responsibility as actors in the gas supply chain. If AGL were interested in delivering a low-carbon fuel they would have articulated plans to source their LNG imports from gas fields that have proven to have low rates of methane leakage. Instead they have indicated that they plan to make their purchase decisions solely from a price perspective, meaning they should not assume the imported gas will have a comparatively lower emissions intensity, as they have done in the EES documents.

As for downstream activities, the EES documents make it clear just how problematic gas is for climate change. The use of the gas that AGL proposes to import would produce an estimated 8 million tonnes of greenhouse gases. This is a staggering volume of emissions, equivalent to over 7% of Victoria's entire contribution to climate change.

The stated purpose for this proposed project is to ensure Victoria has adequate gas supply. AGL cites various pieces of evidence for the forecast shortfall of gas, should their project not go ahead. To follow AGL's logic to its own conclusion, if this project does not go ahead, then Victoria would not have enough gas. It stands to reason, then, that but for the Crib Point project, Victoria could avoid up to 8 million tonnes of greenhouse gases.

Naturally the need for heat would need to be met by other sources, such as electric alternatives (explored above), which would incur some emissions, but the implication is clear: AGL and the Crib Point project must bear some responsibility for the enormous volume of emissions that would be created by the combustion of the gas AGL proposes to import.

It would be an error to assume that all of those emissions would happen regardless of whether the Crib Point terminal goes ahead.

An additional reason for this is that an additional source of new gas supply would diminish the urgency of government policy aimed at reducing gas demand. An impending gas shortfall could be seen by government as an opportunity to accelerate heating appliance switching programs, building energy efficiency upgrades and other measures that would serve to reduce both demand for gas and greenhouse gas emissions.

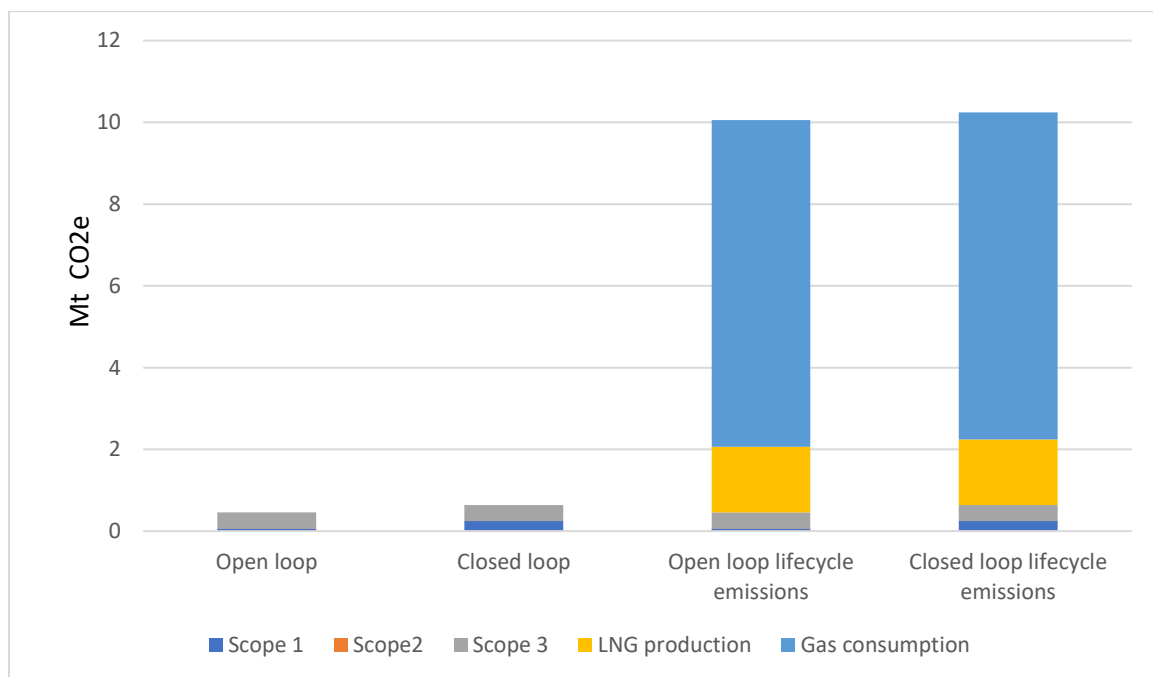


Figure 16

Comparison of AGL's attributed GHG emissions for its Open loop and Closed loop and their respective lifecycle emissions*³⁷

Victoria is in the process of setting state climate targets for 2025 and 2030. A question for this project is whether it is compatible with a *downward trajectory* of emissions. For that, the answer is no – building this project will discourage other, better, cleaner options such as reducing gas demand through household

³⁷ Based on data contained in AGL's Greenhouse Gas Impact Assessment.

energy upgrades and improved commercial and industrial energy efficiency. Essentially, it locks in Victoria's high gas consumption for decades and hampers Victoria's ability to reduce emissions in a manner consistent with the objectives of the Paris Agreement.

Finally, it is worth noting the growing interest in greater regulation of Scope 3 emissions – that is, emissions associated with downstream use (in this case, the 8 million tonnes of greenhouse gases released by AGL's customers through use of the imported gas). In NSW in the last 18 months, a court case and a decision of the Independent Planning Commission both considered the downstream emissions associated with proposed coal mines in reaching their conclusions.³⁸ There is also a bill before Federal Parliament to amend the *National Greenhouse and Energy Reporting Act (2007)* to require the inclusion of Scope 3 emissions in reporting requirements.³⁹

While there is legal uncertainty around how exactly how Scope 3 emissions will be treated in the future, these emissions clear ought to be a consideration for this Panel, especially given the very significant overall volume of emissions associated with the use of AGL's imported gas.

³⁸ <https://corrs.com.au/insights/dealing-with-scope-3-emissions-one-year-on-from-the-rocky-hill-decision>

³⁹ https://www.aph.gov.au/Parliamentary_Business/Bills_Legislation/Bills_Search_Results/Result?bId=r6490

III. Potential impacts on the marine environment of wastewater discharges

There are material flaws in the EES risk assessment of the impact of wastewater discharges, which leads us to reject AGL's conclusions regarding how manageable their wastewater discharges will be on marine biodiversity.

Further, AGL failed to properly address the implications of existing environmental regulations on its plans to obtain a permit to discharge wastewater in a high conservation value area such as Westernport Bay.

a. Lack of Information on the legal compliance of the Project's Wastewater discharges

According to AGL its Project could discharge up to 468,000 cubic meters of chlorinated wastewater per day when operating in an open loop mode.

In Section 8.5.8 of Chapter 9 *Surface Water* and its Attachment II *Legislation and policy report*, AGL quotes the objective of the State Environment Protection Policy (Waters), namely establishing a framework for protecting and rehabilitating the health of Victoria's water environments. AGL also mentions that in addition to general provisions, Schedule 5 of the SEPP (Waters) provides norms for Areas of High Conservation Value, which includes Ramsar Wetlands. In these documents AGL tried to characterise the project as just needing to minimise potential adverse impact on beneficial uses to obtain a licence to discharge wastewaters in Westernport Bay.

Nevertheless, AGL failed to explain how its Project's wastewater discharges could be in compliance with Clause 22(2) of the SEPP (Waters). This clause establishes that the Environment Protection Authority (EPA) *"must not approve any application for a new discharge of wastewater to surface waters in (b) waters of high conservation value as specified in Schedule 5"*.

Further, the explanatory notes of the SEPP (Waters) leave no room for doubt on how this Clause should be interpreted:

"Clause 22(2) sets out the circumstances where the Authority will not approve a new wastewater discharge. These include discharges to high value waterbodies, or to areas vulnerable to the impacts of wastewater discharges. For the purposes of this clause, areas of high conservation significance are defined in Schedule 5 of this Policy, and declared special water supply catchment areas are defined under Schedule 5 of the Catchment and Land Protection Act 1994." (emphasis added)

Based on public records we know that AGL was aware that Clause 22(2) could present a roadblock to the Crib Point Project. During 2018 a draft version of the SEPP (Waters) was open for public consultation and AGL wrote a submission seeking to weaken the restriction of Clause 22(2),⁴⁰ without success.⁴¹

It is up to AGL to explain why the Project's EES attempted to mischaracterise existing environmental protections for sites such as Westernport Bay which would prevent AGL from obtaining a permit to operate the Project in an open loop mode.

b. Unsubstantiated claims and discrepancies

- AGL does not provide evidence to support its claim that wastewater discharges would have no contaminants other than residual chlorine. (Section 4.7, p. 49 of the Ecological Impact Assessment).
- The guideline values used to assess the impacts on the ecosystem do not use chronic toxicity data. This is material as sedentary organisms could be chronically and significantly exposed to the Project's wastewater toxicants.
- The documents do not explain why a 99% guideline value for protection was not adopted, considering that the project would be developed in a Ramsar site.
- The EES failed to provide adequate information to allow for the accurate identification of potential discharges to the marine environment during the construction phase and to quantify the character of these discharges (key components, volumes, temperatures, concentrations).
- The EES calculates that total discharges during closed loop operations would be 5°C above ambient (EES Table 6-3 and page 6-7). However, all but one of the included discharges is above this temperature. Calculation of volume and temperature contributions of the component discharges, as presented in the EES, indicates that the average discharge water temperature would be higher than reported. This has implications in any impact assessment of thermal pollution on the Westernport Bay environment.
- The EES analysed the impact of chlorine on juvenile marine stage barramundi (*Lates calcarifer*). This fish does not inhabit Westernport Bay. While this could be part of a standard testing approach the best practice would be to conduct the test with fish that actually inhabit Westernport Bay. Considering the high conservation value of the area we think that a best practice approach is warranted.

⁴⁰ https://www.water.vic.gov.au/_data/assets/pdf_file/0033/394971/AGL.pdf

⁴¹ In response to AGL's submission the EPA stated 'Clause 22 acknowledges that there are areas formally recognised by government as needing to be managed to preserve their conservation value.'

https://www.water.vic.gov.au/_data/assets/pdf_file/0021/395031/SEPP-Waters-Summary-of-Comment-and-Response-Report.pdf

IV. Stakeholder engagement and social impacts

For many citizens, trust in corporations and in governments is low and conflict over potentially unsustainable projects continues to increase.

While the EES process aims to offer communities an opportunity to engage in the assessment of environmentally significant projects, it is an uphill battle and community members endure high personal costs to have a chance to influence the results of a process which historically tends to favour the proponent.

AGL has claimed that *“The aim of our engagement is not to try and change the community’s minds with the facts, but to build trust by showing we are willing to be accountable for the inherent risks a FRSU and pipeline will bring to a community. Ultimately, by working with them to solve the problems together, we want them to win under conditions the project can live with.”*⁴² Based on the experience of the last 2 years and our own interactions with community members, we would argue that AGL has failed to meet its own objective of building trust.

a. Value of Green Space/ Blue Space and the Impact of Lost Recreational Space

There is a clear lack of acknowledgment of the value of natural spaces (both green and blue) and the recreational benefits of them within the EES documentation. Many academic authors have identified the connection between nature and human wellbeing.

The natural environments in which we live, work and exercise play a crucial role in both the mental and physical health of the community. Nature is used by people in a range of ways for example; for recreation, as stress relief, meditation and to get some peace and quiet as a break from work or living conditions (Stigsdotter et al., 2010), (Orsega-Smith et al., 2004), (Wolf & Wohlfart, 2013)

The loss of control over a communities’ green spaces and ability to preserve their natural environments, or the modification of either the look, feel or access can result in extreme feelings of helplessness, anxiety and lost autonomy which can detrimentally impact on the long term mental health of a community.

EES (technical report M-social impact assessment) identifies that it would be of “little inconvenience” for communities to change their place of recreation, however AGL presents no evidence to back up the claim that displacing people from their longstanding area of recreation will have only “little inconvenience”.

Overall, the EES report fails to provide adequate description of and allowance for the deep connection that humans have with their natural environment.

⁴² <https://www.gti.energy/wp-content/uploads/2019/10/46-LNG19-04April2019-Deckart-Phaedra-paper.pdf>

b. AGL's proposal lacks social licence

Social licence is one of AGL's key pillars within their strategic framework, defined as "meeting and exceeding community expectations." This concept is gravely underrepresented within the EES. In fact, the term "social licence" could be found only three times throughout the EES document set, and no quantitative or qualitative data is presented which adequately addresses the question of whether social licence to operate exists.

As a starting point for critique, we look first at whether AGL has been "meeting and exceeding community expectations." In lieu of AGL having presented evidence to make this evaluation, we present the following comments and anecdotes:

- "We know [the community] are ... taking one for the team, I suppose, in helping Australia and particularly the southern states meet their energy supply needs" - Phaedra Deckart (AGL's General Manager, Energy Supply & Origination) during a February 2019 ABC interview about the Crib Point proposal.
- "In relation to the Project, AGL is not expecting the community to trust us and we recognise the community can't simply take our word that safety and environmental risks will be well managed."
 - AGL's response to criticism about AGL's track record, found in EES Attachment V, 7.5.3 Questioning of AGL's safety record.
- Environment Victoria's Community Organiser has heard a number of complaints from community members about AGL's consultation process, which range from:
 - Consultation events being entirely run by public relations specialists rather than those with expertise to answer the myriad questions the community had about the Project;
 - AGL representatives using divisive tactics with community members, such as offering grants to community organisations without transparent process, and calling organisers within the community to offer them financial incentives to discontinue advocacy and organising activities; and
 - AGL not meeting deadlines for the provision of public material as part of the EES public exhibition phase, to those who requested that information, thereby further inhibiting the community's ability to meaningfully participate in the EES process.

Together these show both that AGL have not been meeting (at least some) community expectations, and that AGL broadly – at the level of the staff who compiled the EES, as well as at a senior leadership level – do not expect nor intend to meet community expectations.

Beyond AGL's simplistic definition of social licence, it is useful to understand the normative foundations of social licence – that a community first sees legitimacy in the process, then believes the proponent has credibility, and finally has trust in the proponent and the process to deliver balanced outcomes. AGL have not presented any data on the community's perception of legitimacy or credibility, and have themselves stated that they do not expect the community to trust them. On this basis, and the anecdotal evidence

provided above, we conclude that AGL's EES falls far short of meeting their own objectives for social licence for the Project.

As a final point, it is worth noting the public opposition to this project by politicians in the area. In particular, that Greg Hunt, a senior Minister in a Federal government that is otherwise driving a major push for new gas supplies, is prepared to publicly oppose this project is an important barometer of how little social licence the Project has.

c. Cumulative Impact of Project on Public Health

The Social Impact Assessment (SIA) within the EES lacks clarity around the cumulative impacts on the community of the suggested project. These impacts relate to a range of areas, including but not limited to: risks to biodiversity, lost autonomy, unforeseen hazard risks and associated lack of evidence, exposure to noise and light pollution, mental health implications of climate change and environmental damage etc.

While the social and cultural impacts on the communities' health are of grave concern to many social interest groups, 'health concerns associated to social health and quality of life, rarely carry over to post decision monitoring' by resource companies according to Kinnear, Kabir, Mann & Bricknell.⁴³

This evidence supports community concerns that if this project did go ahead there would be only very low level (if any) monitoring of the long-term human health impacts (both mental, physical and social) of this project by AGL. There was potential for AGL to address this concern through the SIA or any other documentation within the EES, this however was not provided at any satisfactory level.

Without the provision of adequate evidence or even acknowledgement of many of these impacts and areas of concern for the community, AGL has failed to accurately demonstrate that they understand the effect this project will have on the community and therefore have not performed their duty as the proponent in this EES process.

Within the social impact statement of the EES, AGL refers to the "ideological objection to the project reflecting a preference for use of renewable resources" raised by landholders in their conversations with AGL. It is disappointing to see AGL lower itself to dismissing the public preference for renewable energy over gas as an "ideological objection".

⁴³ <https://www.researchgate.net/publication/280056321>

V. Safety, Hazard and Risk

The EES does not provide enough information to conclude that AGL can manage the significant risks that will be present in the construction and operation phases of the Project.

- No quantitative calculation of potential fuel oil spill volumes has been undertaken for the EES. AGL only provides qualitative assessments and generally dismisses the likelihood of any but small spills occurring without evidence.
- Risks of spills from the FSRU are not quantified and potential spill scenarios are not explored:
- It is unclear whether any modelling of oil spills has been undertaken by the Proponents.
- The EES clearly acknowledges the sensitivity of Westernport Bay to oil spill impacts. Despite this there is no systematic identification of species or groups of species that are particularly vulnerable and sensitive to oil spill impact.
- The EES failed to state that AGL will develop a spill response plan or what the content and format of that plan would be. The EES should have set out the arrangements and responsibilities of contractors and provide some idea of the level of response that will be maintained.
- Little detail of potential discharges arising from the construction of the jetty infrastructure is noted. Section 4.8.1 notes three potential contamination sources but it is not clear whether these apply to the jetty section of the pipeline. Similarly, it is unclear whether hydrostatic testing of jetty pipelines will be undertaken and, if so, how water will be managed.
- The EES states in numerous places that the use of fire-fighting foam will be used. No details of the type to be used, volumes stored or expected to be used in various scenarios makes it impossible to assess the effectiveness of firewater and foam run-off or the potential effects of these on the marine environment.

Conclusion

AGL has failed to make the case that its Project is either necessary or an acceptable way to address Victoria's energy security. At the same time, serious flaws and mischaracterisations in technical reports raise serious doubts that AGL would be able to avoid or manage the potential environmental and social impacts of its Project.

Further, AGL has been extremely candid about its plans to increase its gas operations over the next decade. This Project will likely serve to maintain the Victorian reliance on polluting gas, making it harder for the state to reduce its emissions over the critical next decade in particular, but also across the intended 20 year life of the Project if approved.

Key points:

On the rationale for the project:

- AGL does not provide evidence that increasing gas supply would provide greater benefits to Victoria than other approaches such as increasing energy efficiency.
- Even if one accepted that increased supply is necessary, AGL did not provide evidence on the need for its Project when another gas import terminal would be capable of providing gas to Victoria.
- AGL provided misleading figures regarding the potential cost of its imported gas, which is one of the main arguments that AGL has used to justify its Project.

On the climate impacts of the project:

- AGL is attempting to understate the impact this project could have, by choosing to ignore significant upstream and downstream emissions, adding up to more than 10 million tonnes per year
- The very existence of the project will serve to lock in Victoria's high emissions linked to gas consumption and will delay necessary policies and programs that could be targeted at reducing gas usage.

On the marine impacts of wastewater discharges:

- The open loop operation of the Project is likely in breach of the strict prohibition, found in the State Environment Protection Policy (Waters), on discharging wastewater into high conservation value areas.
- Prior to the EES process, AGL had previously attempted to weaken this provision, indicating that they (correctly) consider it to be a hard barrier to the Project.
- There are several incongruencies on the data provided for water discharges. This in turn affects the impact assessments of the Project on marine environments, compromising their conclusions.

On Stakeholder engagement and social impacts of the Project:

- AGL has not presented any data on the community's perception of legitimacy or credibility.
- AGL has failed to demonstrate that it understands the severe impacts this project will have on the community failing its duty to properly engage with stakeholders.
- There is demonstrable, visible, significant, broad and deep community opposition to this project. AGL's quest to operate with social licence has failed.

On Safety, Hazard and Risks related to the Project:

- AGL failed to provide modelling on oil spills. Risks of spills from the FSRU are not quantified and potential spill scenarios are not explored.

Ultimately, we do not believe this project should go ahead. We urge the Panel to assess the EES according to its merit and recommend against this Project.

In 2020, Victoria can and must do better than to allow a gas import terminal, which will lock in high gas usage and therefore high greenhouse gas emissions, to be built within the boundaries of an internationally significant marine ecosystem.

APPENDIX

Attachment 1 to Environment Victoria's Submission to the environment assessment of the Crib Point gas import jetty and gas pipeline project

Attached to our submission is a spreadsheet with the individual submissions of **9,484** people opposing AGL's and APA's gas import jetty and gas pipeline project.

We developed an online tool to make it easier for our supporters and the broader public to engage in the public exhibition stage of this project in these very difficult, unprecedented times. The tool was a platform for people, particularly those living in the Westernport Bay area, to share information about the key risks of this project and to give the opportunity to have a personalised say when, for almost everyone, engaging directly with AGL's 11,000-page-long EES would have been impossible.

The draft content was written by thirteen people, only two of whom were Environment Victoria staff. Everyone who used the tool had to make difficult choices about what to include in their submission and what to leave out. Almost everyone added at least one paragraph explaining what they think the risks associated with this project are, and many people have transformed their chosen draft text to the point where it is no longer recognisable.

We had previously asked for a further extension for submissions from Minister Wynne, in light of the impact of Stage 4 coronavirus restrictions on the community's ability to support each other to respond to AGL's EES documents. In his letter rejecting our request for a Stage 4 extension, the Minister encouraged us and the community to use technology creatively to enable full participation in this very complex process. This is exactly the role this tool has played, helping local people and visitors to have their say about the future of the Bay.

While we are providing this to the Crib Point Inquiry and Advisory Committee in a single document, this is clearly a compilation of individual submissions. A cursory glance will show that they are all materially different and that each person has a different point they want to make.

We include this with our own submission as many people who used the tool notified us that they experienced difficulty navigating the Engage Victoria portal, and many also notified us that they abandoned lodging their submission because of their frustrations. The difficulties experienced include people being unable to make a submission on the Engage Victoria website using a mobile phone, people finding it too difficult to attach a document to their submission and people not understanding some of the language used on the Engage Victoria website.

This spreadsheet includes 2,807 submissions that were initially sent to DELWP via email, as well as submissions that Environment Victoria supporters and other members of the public may have successfully submitted through the Engage Victoria website. Since Environment Victoria has no way of knowing which of our supporters were successful in lodging their submission via the Engage Victoria portal, we are attaching the submission of every person who has communicated with us that

they would like their submission to be considered by the Crib Point Inquiry and Advisory Committee and the Minister for Planning.

We believe the unprecedented volume of submissions generated through this tool speaks to the unprecedented scale of community opposition to AGL's proposed gas import terminal in Westernport Bay.