



ACF Community Geelong's

Summary of community concerns and new evidence revealed at the public hearings for **Viva's gas import terminal proposal**



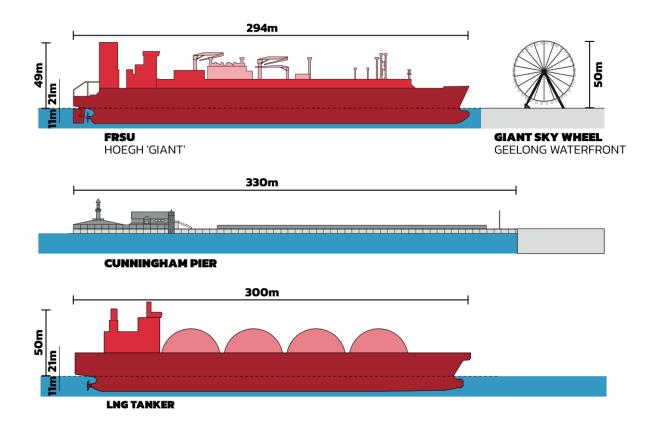
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Introduction

Viva Energy is proposing to build a massive floating gas terminal in Corio Bay. The Floating Storage Regasification Unit (FSRU) would import up to 160 petajoules (PJ) of gas per year, and operate until 2040. Dozens of local groups, and more than 4000 people, have signed a petition outlining concerns with the proposal. A state government Environmental Effects Statement (EES) inquiry into the proposal received more than 2000 submissions, 99.9% against Viva's proposal.



This factsheet draws together information presented at the Viva Gas Terminal Inquiry and Advisory Committee (IAC) hearings, conducted June to August this year, to summarise the range of community opposition, key concerns mentioned in submissions and evidence raised by expert witnesses.

Summary

<u>There is broad and diverse local opposition to this project</u>. Over 4000 people have signed a petition, 2000 submitted to the inquiry in opposition of the project and hundreds have attended events throughout the year.

<u>Australia has enough gas without importing it from overseas</u>. We export 60% of the gas we extract on the East coast, far exceeding what we need locally.

<u>The federal government is already stepping in to ensure there will be no gas shortfall</u>. LNG exporters aren't doing the right thing by Australians so the Federal Resources Minister has signalled that she will trigger the Australian Domestic Gas Security Mechanism next year to ensure domestic supply.

<u>Imported gas is more expensive and won't solve price issues</u>. Cryogenically cooling gas and shipping it thousands of kilometres is not cheap. Importing also means that the price will be linked to the international gas price, which will remain high for the foreseeable future due to the war in Ukraine.

<u>The project will not address any short-term gas crisis because Viva can't get their</u> <u>gas-processing boat in time</u>. European countries have snapped up all of the existing FSRU ships, likely requiring Viva to procure a new-build ship and pushing out the project timeline.

<u>Viva's gas plan is incompatible with Victoria's climate targets and declining gas use</u>. The Gas Substitution Roadmap anticipates a reduction in gas use of 50% by 2030 in line with emissions reduction targets of 45-50% by 2030. On the other hand, Viva's project rationale assumes gas use will remain at current levels until 2040, impling the gas industry will do nothing to cut emissions for another 20 years.

The project will be responsible for significant carbon pollution, which Viva has tried to downplay. Viva has deliberately excluded the largest source of pollution – the fuel burned in LNG tanker ships to transport the gas to Geelong. Once this source is properly included, the total emissions associated with the project are up to 12 times higher.

<u>Serious safety concerns have not been addressed</u>. Expert witnesses found that there were deficiencies in the assessment of risk presented for the project including a lack of consideration of major accidents, navigational risks because of the shallow and narrow channel, emergency responses and accidents at adjacent major hazard facilities impacting on the proposed terminal.

<u>Dredging. chlorinated discharge and legacy pollutants pose a threat to marine life</u>. Viva's assessment used outdated literature, old maps and inadequate surveys. It gives the community no confidence that the Ramsar listed wetlands less than 1.5km from the site would suffer no ill-effects from the proposal. Local residents will be exposed to noise pollution and odours. Viva's existing refinery operations are already exceeding noise limits. This new facility will increase noise and foul smells due to the odorant added to the gas.

The project will not generate long term sustainable jobs and may have negative impacts on adjacent businesses. We all know that the future of work for our city is in the net-zero emissions economy. Viva's proposal employs less than 70 workers, with no guarantees they will be locals. GeelongPort and Geelong Grammar School, among others, may be impacted by the project.

Viva's EES has been so flawed it's not possible to assess the risks, so the project is not ready to be approved. Viva's EES was an inadequate assessment of the effects of the project. In an attempt to rectify this substandard work, Viva submitted technical notes *after* the closing submissions were made. This was a blatant violation of the rules of procedural fairness as it wasn't possible to cross examine this last-minute expert evidence.

Evidence presented at the EES hearings clearly shows the project is flawed, dangerous and incapable of being properly assessed based on current information. It should be rejected by the Planning Minister.

Major concerns

There is broad and diverse local opposition to this project

There is broad and diverse community opposition to Viva's project within the Geelong community. Of more than 2041 individual submissions to the Environment Effects Statement (EES) hearings, an expert review found 99.9% were opposed, with only two in favour.¹

The list of groups who submitted against the proposal includes City of Greater Geelong, Borough of Queenscliffe, Labor Environment Action Network, Geelong Grammar School, GeelongPort, Australian Nursing & Midwifery Federation Victorian Branch, Norlane Community Initiatives, North Shore Residents Group, Environment Victoria, ACF Geelong, tourism business Sea All Dolphin Swims and Queenscliff Community Association.



¹ Review of submissions in Document 72, Matt Edmunds, p141. The only submissions in support were submission 1212 and 1880.

In addition, 4000 people have signed a petition calling on Planning Minister Richard Wynne to reject the gas terminal, and 2000+ have signed another petition calling for the Victorian Legislative Council to have the Government reject Viva's application.² More than 400 Geelong residents protested on the streets against the terminal in April 2022,³ and 150 have presented their concerns to the planning panel assessing the proposal.



There has been extensive coverage of this community opposition in *The Age*, *Geelong Advertiser*, *Geelong Times*, *Bay FM* and the *ABC News*.⁴ *The Geelong Advertiser* echoed calls for a move away from gas in their recent editorial: "But if we are really going to tackle climate change, and not just talk about it, we need to start to rapidly reduce our reliance on gas. Not seek out more of it."⁵

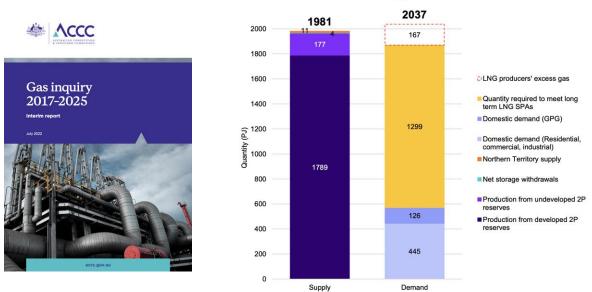
² <u>https://geelongrenewablesnotgas.org/petition/</u>

³ <u>https://geelongrenewablesnotgas.org/media/</u>

⁴ <u>https://geelongrenewablesnotgas.org/media/</u>

⁵ *Geelong Advertiser* Editorial, July 2022,

https://geelongrenewablesnotgas.org/wp-content/uploads/2022/07/Gas-Reliance-Dangerous_with-highlig hts.png



Australia has enough gas without importing it from overseas

Chart O.2: Forecast east coast supply-demand balance in 2023

On an annual basis, Australia currently exports twice as much gas as it consumes. For example, the ACCC's July 2022 gas inquiry report found Australia will produce approximately 1981 petajoules (PJ) of gas in 2023, and is expected to export 60% of it or 1299PJ under long-term contracts. When considering future gas supply, the situation is even more imbalanced because LNG exporters control 90% of proven and probable reserves.⁶

The problem, therefore, isn't a lack of gas supply. The problem is a small number of companies control gas production and prefer to sell it overseas at higher prices. It's about inadequate market regulation, which is why the ACCC has an ongoing gas inquiry to scrutinise the industry, and why the federal government has a mechanism to control exports.

⁶ ACCC Gas inquiry interim report July 2022, pg

^{6-7 &}lt;u>https://www.accc.gov.au/publications/serial-publications/gas-inquiry-2017-2025/gas-inquiry-july-2022-i</u>nterim-report

The federal government is already stepping in to ensure there will be no gas

shortfall

The Australian Domestic Gas Security Mechanism (ADGSM) was created to allow the federal government to limit the amount of gas that companies can export, freeing it up for domestic use and avoiding any shortfall. After the ACCC report was released in July 2022, the new Minister for Resources Madeleine King issued an intention to trigger the ADGSM in time for winter next year. This means the federal government is stepping in to shore up supply, avoiding any shortfall and reducing the need for an import terminal.

It's possible the ADGSM might not be needed, because the threat of it is enough to incentivise LNG exporters to spare more gas for domestic use. Whether or not the mechanism is triggered, the result is the same – covering up the domestic gas shortfall.

Imported gas is more expensive and won't solve price issues

Imported gas is more expensive because it involves additional processes – turning the gas into a supercooled liquid, transporting it, then converting it back into a gas. This premium must be added to the gas price. Prices for LNG from international sources have historically been much higher than for gas produced in Australia. In order for Viva's import terminal to be of any use, it needs to source gas at a competitive price in the global market, and find willing buyers here in Australia. Another gas import terminal that has already been approved at Port Kembla in NSW has so far been unable to find enough buyers for imported gas.

The project will not address any short-term gas crisis because Viva can't get their gas-processing boat in time



As mentioned above, Australia is unlikely to have a gas shortfall in the next few years because the federal government is stepping in to shore up supply. But even if there was a shortfall, Viva's gas import terminal could not be built quickly enough to help.

The key component of the project is a Floating Storage and Regasification Unit (FSRU). This is the giant ship to process the LNG back into a gas. However, in May this year Reuters reported that Viva lost its tentative booking for an FSRU from Hoegh LNG to a German user.⁷ European nations have secured all available FSRUs in response to the Ukraine war restricting their gas supply from Russia.

⁷

https://www.reuters.com/business/energy/europes-dash-gas-puts-australias-Ing-import-plans-risk-2022-05 -30/

At the hearings, Martin Marrion (a global expert in LNG import terminals) stated that:

"FSRU availability is therefore limited for the next five years, with all but one of the existing global fleet of FSRUs committed to existing charters etc, and the remaining vessel expected to finalise an arrangement shortly. Therefore, the Project may require a new build vessel, which could limit availability to 2026 or 2027 at the earliest." ⁸

In other words, by the time the gas import terminal is ready, the short-term gas crisis will have passed, and governments will have solved the problem another way – by reducing demand for gas.

As the GeelongPort submission put it:

"...by the time the Project is up and running (assuming it is approved), the market will already have moved and adapted to alternative electricity, heating, and industrial fuel sources, such that the Project no longer makes any sense." ⁹

⁸ Document 70, Mannion Statement, [5.4.10] – [5.4.12], pg 24 – 25. Quoted in Document 381, GeelongPort Submission, 19 July. Accessed at: <u>https://engage.vic.gov.au/download/document/27962</u>

⁹ Document 381, GeelongPort submission, 19 July [121] pg 31

Viva's gas plan is incompatible with Victoria's climate targets and declining gas use



Gas is a fossil fuel and a major contributor to climate change. In order to reduce emissions, Victoria will need to significantly reduce gas use as part of the state's energy transition. To address this challenge, the Victorian Government released a Gas Substitution Roadmap in July 2022. Modelling underpinning the Roadmap anticipates Victoria can cut gas use by 50% by 2030. This is aligned with Victoria's legislated interim emissions reduction targets, which aim for emissions cuts of 45-50% across the economy by 2030.

The modelling also found that switching from gas to efficient electric appliances could save a typical household more than \$1000 in energy bills per year.¹⁰

But while the Victorian government aims to slash gas use, Viva's project rationale assumes gas use will remain at current levels until 2040. This is totally unrealistic, and implies the Victorian gas industry would do nothing to cut emissions for another 20 years. It goes against climate science that says we need to urgently cut emissions this

¹⁰ Victorian Gas Substitution Roadmap, pp 26-27.

https://www.energy.vic.gov.au/gas/victorias-gas-substitution-roadmap (Tabled document 184 in the hearings.)

decade if we are to limit global warming to 1.5 or even 2 degrees Celsius by 2100 – and also ignores the Victorian government's own policies to get off gas.

The Andrews government should avoid giving the go-ahead to a project that contradicts the state's own climate policies, especially in the lead-up to an election. It would send the wrong message to voters in key electorates who are deeply concerned about climate change.

The project will be responsible for significant carbon pollution, which Viva has tried to downplay

ELONGADVERTISER.COM.AU WEDNESDAY MARCH 2 2022

Viva criticised over omitting terminal transport emissions

GEORGIA HOLLOWAY

ENVIRONMENT Victoria has accused Viva Energy of using a "climate accounting trick" to under report its estimated gas terminal emissions. In its statement, Viva Energy reports the total operating emissions of the gas terminal would be an estimated 47,906 tonnes of carbon dioxide equivalent, however Environment Victoria campaigns manager Greg Foyster claims the true number is up to 12 times higher.

"Viva has pulled a climate accounting trick and excluded the emissions from transporting the liquefied natural gas to Victoria," Mr Foyster

said. "In other words, they're proposing to import massive amounts of gas in huge LNG tankers but not counting all the fuel that those boats will burn to get here."

On Monday, Viva Energy released its environment effects statement as well as the commencement of the 30-day public exhibition for

the proposed gas terminal project that is slated to deliver a new and critical supply of natural gas to southeast Australia.

Viva Energy chief executive Scott Wyatt said the project would play a critical role in meeting the state's energy needs while forming an important short-term solution to gas shortages. "We have set out the emis-

We have set out the emissions that will be created by implementing this facility. There are also plans to offset those emissions, so it is a genuine zero emissions project," Mr Wyatt said.

"We haven't counted the emissions that are associated with bringing gas into the state because our role is not as a gas supplier, our role is as an infrastructure player in terms of providing infrastructure for existing retailers, wholesalers and gas producers to bring gas into Victoria."

But Mr Foyster said: "Instead of giving the community a complete and transparent account of greenhouse gas emissions, Viva Energy has buried the figures in the appendix of a 13,000-page document.

"Viva Energy have tried to argue these transport emissions are out of scope, even though a similar project from AGL included them, and the government-appointed panel that assessed that project also said they should be included."

To view the Viva Energy gas terminal project EES, head to vivaenergy.com.au/ energy-hub/gas-terminalproject/environment-effectsstatement

Viva has tried to claim the project will only be responsible for about 48,000 tonnes of carbon dioxide emissions per year. But as Environment Victoria exposed, this figure deliberately excludes the largest source of pollution – the fuel burned in LNG tanker ships to transport the gas to Geelong. Once this source is properly included, the total emissions associated with the project are up to 12 times higher – about 600,000 tonnes of carbon dioxide per year if the gas is sourced from Qatar, according to Viva's own technical reports.¹¹

Viva justified this exclusion by arguing they would not have control over where the gas is sourced from. Nevertheless, through the hearings we learned that Viva actually **could** require the LNG import terminal users to buy gas from Australian sources to reduce emissions from transport, but they are choosing not to do so to protect the "financial interests" of the big gas companies they will have as clients.

¹¹ Viva Energy Gas Terminal EES Technical Report C Greenhouse Gases, Appendix A pdf p 56. Accessed at:

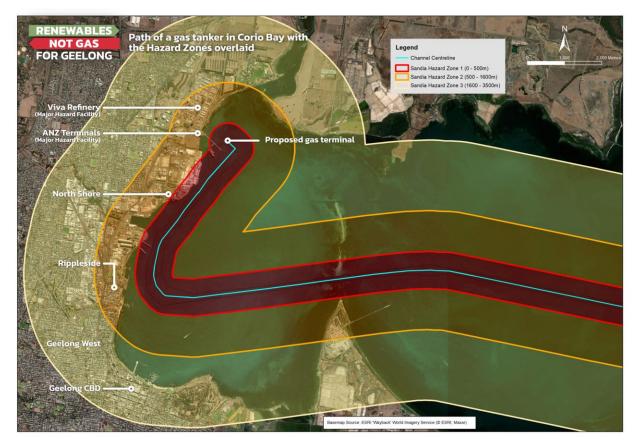
https://www.vivaenergy.com.au/ArticleDocuments/1193/VE%20GTP%20TechReportC_Greenhouse%20g as_exhibition.pdf.aspx

And that's even before counting the emissions created when the gas is burned in homes and businesses. This project would import up to 160 petajoules of gas, which is more than households use in Victoria per year. That would release about 8.8 million tonnes of greenhouse pollution per year,¹² equivalent to more than 9% of Victoria's annual emissions.¹³ Approving this project means locking in a polluting fuel that will make it much harder for Victoria to reach its legislated climate targets, and will contribute to a climate crisis that is already too dangerous.

Projects of this magnitude can lock in emissions for decades by reinforcing our reliance on fossil fuels. Viva's project could prolong the status quo reliance on gas even though cheaper and cleaner alternatives exist in Victoria. For Viva's project to be successful, the recently released Victorian Gas Substitution Roadmap would have to fail in its objective to reduce emissions from Victoria's gas sector.

¹² Ibid, p 56

¹³ Viva's technical reports cite Victoria's total emissions as 91.33 million-tonnes of carbon dioxide equivalent (Mt CO2-e).



Serious safety concerns have not been addressed

While Viva Energy has imported oil products in tanker ships to Refinery Pier for decades, LNG is a much more hazardous substance, and Corio Bay has never been exposed to this level of risk before.

LNG can act as an asphyxiant if unignited, or create intense pool fires which carry enough radiant heat to cause death or injury to people.

Many LNG terminals are located at a safe distance from homes and buffered by exclusion zones. At Darwin LNG, for example, there is a 500-metre moving exclusion zone around any vessel carrying gas into the port and a land exclusion zone of 500 metres around the gas facility. Viva's project would involve LNG ships travelling within 250 metres of houses in North Shore. This is too close, and Viva has not given the community confidence that this risk can be managed.

The Corio Bay shipping channel is too narrow and shallow, and does not meet the recommendations from the Society of International Gas Tanker and Terminal Operators

(SIGTTO) for LNG Ports.¹⁴ Rival LNG company Vopak rejected a Corio Bay location for their gas terminal proposal for this reason:

"A near shore site at Geelong was given serious consideration but dismissed given the need for dredging and the tight navigational and docking requirements."¹⁵

As GeelongPort pointed out in their initial submission, Viva simply has not addressed the implications of major accident events for the safety of workers or the impacts of simultaneous operations at the port area. Two GeelongPort expert witnesses¹⁶ provided evidence that:

- The berths are located too close to allow safe navigation of the LNG carriers
- There is insufficient distance between the berths in the event of a fire on the LNG carrier or the gas terminal (FSRU) to enforce a protective exclusion zone
- The mooring studies have not complied with industry standards
- There is lack of consideration of major accident events
- There was insufficient involvement of stakeholders in the safety and hazard risk assessments
- The risk assessment has not considered simultaneous operations at the Port, i.e. accidents at the adjacent major hazard facilities (Viva's own refinery, and the Quantem chemical facility) impacting on Viva's gas terminal
- The risk results presented for the pier appear to be optimistic as the scenarios considered are limited to the gas terminal (FSRU) and events on the LNGC were omitted.
- There is a lack of description of the emergency response after an incident.

¹⁴ Site selection and design for LNG Ports and Jetties, information paper 14.

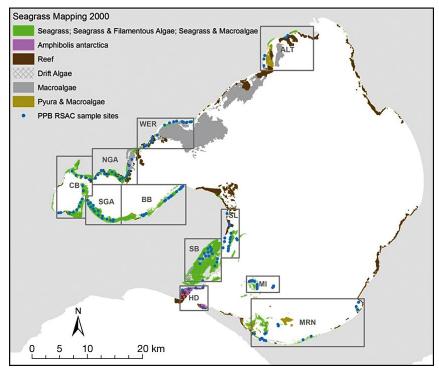
https://my.lwv.org/sites/default/files/4_-_sigtto_information_paper_no._14_clean_copy_-_19_apr_2019.pd <u>f</u>

¹⁵ <u>https://victoriaenergyterminal.com.au/faqs</u> (Accessed 23 August 2022)

¹⁶ Document 278, GeelongPort Expert witness presentation (Martin Mannion) and Document 373, Geelong Port Expert witness presentation (Dr Anand Pillay)

Dredging, chlorinated discharge and legacy pollutants pose a threat to

marine life



The proposed site of the gas terminal at Refinery Pier is approximately 1.3 kilometres from wetlands at Limeburners Bay. This area is part of The Port Phillip Bay (Western Shoreline) and Bellarine Peninsula Ramsar site, internationally recognised as wetlands of ecological significance.

The project would harm the local marine environment through dredging, legacy pollutants and chlorinated discharge.

Significant dredging is needed because LNG cargo ships are larger than those currently using shipping channels. Dredging disturbs marine sediment and creates turbidity (mud suspended in the water). This mud will continue to be stirred up by the larger ships, whose hulls will likely be only 30-50cm from the sea bed when fully laden.

This is concerning because the mud blocks sunlight travelling through the water, and the seagrasses in Corio Bay need light to photosynthesise and survive. Viva's proposed gas terminal would remove approximately 30 hectares of seagrass beds, but more could be lost due to this turbidity and reduced light levels in the water.

The seagrasses in Corio Bay are critical for the health of the nearby Ramsar wetlands. However, Viva's Environment Effects Statement failed to document which seagrass species were present and where they grow in the Bay, or the impacts reduced light due to dredging may have upon them. Dredging and continued seafloor disturbance will agitate buried contaminated sediments - legacy pollutants - such as organochlorines and hydrocarbons (since the 1970s). Cadmium, lead, mercury, zinc and copper have been historically measured in shellfish in Corio Bay.

A recent study¹⁷ noted changes to Corio Bay sand flathead metabolism due to the current low level toxicity. The effect of increasing the amount of contaminants may increase these changes and impact the health of other marine life in the Bay.

The proposal is for the gas terminal to use seawater to reheat the LNG from a supercooled liquid to a gas. It would do this by sucking in water (and some marine organisms) from Corio Bay, adding chlorine, and then releasing this back into the bay as 'chlorinated discharge', which would be harmful to marine life in high concentrations. During the hearings, an expert in coastal hydrodynamics, Dr Andrew McCowen argued that chlorine concentrations close to the Ramsar wetland will be significantly greater, and therefore more damaging, than Viva's modelling suggests.¹⁸

The onus is on Viva to show this project will not cause unacceptable damage to the marine environment. However, experts at the hearings argued Viva's Environment Effects Statement was of poor quality and can't be relied upon as an accurate assessment of the true impacts. Marine ecologist Dr Matt Edmunds indenfitied critical flaws including using outdated literature and old maps, inadequate underwater surveys, failing to identify seagrass species and even missing a threatened species (the southern hooded shrimp). He concluded that the marine ecology assessment did not meet scientific standards.¹⁹

¹⁷ Metabolites **2020**, 10, 24; doi:10.3390/metabo10010024 <u>www.mdpi.com/journal/metabolites</u>

¹⁸ Document 379, Submission from Geelong Grammar School. Based on Document 75, Expert Statement of Andrew McCowan - Effects of dredging and seawater discharges, 8.2, pp. 30 – 32 (PDF 31-33).

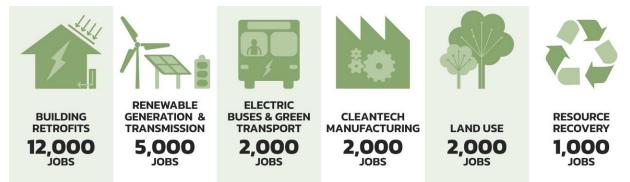
¹⁹ Document 72, Edmunds, Conclusions, p176, pdf 190.

Local residents will be exposed to noise pollution and odours

During the hearings, acoustics expert Darren Tardio measured noise levels and concluded Viva's existing refinery operations are *already* exceeding noise limits at night time, defined under Victoria's Environmental Protection Regulations.²⁰ A new gas import terminal would add to noise that is already above the acceptable threshold. Local residents are already exposed to foul odours from Viva's refinery, and this would increase with the addition of gas processing, due to the necessary addition of odorants that aid in the detection of leaks.

The project will not generate long term sustainable jobs and may have

negative impacts on adjacent businesses



Viva estimates that the project will only generate up to 70 ongoing jobs.²¹ These jobs will have a limited life-span as it is inevitable that we will reduce our use of fossil gas. Given the specialist nature of operating an FSRU, it is unlikely that locals would be employed in the roles.

This contrasts with over ten thousand ongoing full-time jobs which could be created across the Geelong region as part of transitioning to a net-zero economy.²² Furthermore, there may be negative business impacts to other port users, and local businesses such as GeelongPort and Geelong Grammar School, both of which employ significant numbers of the local population in a wide variety of trades and occupations. Viva's EES was criticised for poorly researching the likely social and economic impacts of the project on nearby businesses. For example, GeelongPort has indicated that it has plans to build a Hydrogen import facility in the same location as the gas import

²¹ Viva Energy (2022)

²⁰ Document 71, Expert statement of Darren Tardio on noise, 2.6, p3.

https://www.vivaenergy.com.au/energy-hub/gas-terminal-project/about-our-project#:~:text=Over%20the% 20two%20year%20construction.delivering%20first%20gas%20in%202024

²² https://geelongrenewablesnotgas.org/leaders-endorse-zero-emissions/

terminal.²³ **GeelongPort's plans to build the Hydrogen facility will be blocked if this proposal is approved.** Geelong Grammar School outlined its concerns regarding the business impacts upon the school and said that these have not been addressed by Viva in the EES.²⁴

Viva's EES has been so flawed it's not possible to assess the risks, so the

project is not ready to be approved

Viva's EES lacked key information which makes it impossible to fully comprehend the risk it poses to the local environment and the local community. The level of missing work was such that Viva tried to supplement the EES by releasing more information once the hearings had commenced on topics such as noise monitoring and physical surveys of the intertidal areas.

This affected the fairness of the process, as thousands of people had already made their submissions based on the old and incomplete information, and it severely hampered the ability of the local community to understand and properly scrutinise Viva's findings.

In a last-ditch effort to fix the many inadequacies of their EES, Viva submitted technical notes at the very end of the hearings, **even after the closing submissions were made**, despite having years to prepare a proper document. This is in blatant violation of the rules of procedural fairness as it wasn't possible to cross examine this last-minute expert evidence.

Despite these late additions, even by the end of the hearings Victoria's Environment Protection Authority tabled a letter on 4 August arguing it was "not presently possible to determine" if Viva had identified the risks relating to noise and air emissions and marine discharges.²⁵ The EPA has requested further information in order to assess the project.

These flaws and last-minute changes are an indication that Viva cannot manage the risks of this project and it is not ready for approval.

²³ Document 278, Mannion,

²⁴ Document 379, Geelong Grammar School submission , p95

²⁵ Document 477, EPA letter to IAC 4 August 2022, p2.

About Geelong Renewables Not Gas



Geelong Renewables Not Gas (GRNG) was formed in response to Viva Energy's proposal to build a gas terminal in Corio Bay. We are proudly independent, non-partisan and funded by donations from our community.

We're a diverse bunch from different local suburbs and backgrounds, including North Geelong residents directly affected by the proposal, people passionate about fishing and boating, and people concerned about pollution and the climate crisis.

For more information on the campaign, visit https://geelongrenewablesnotgas.org/



GRNG is run by ACF Community Geelong. This is an independently organised group backed by the Australian Conservation Foundation, Australia's national environment organisation.