

To: Inquiry and Advisory Committee for the Vopak Victoria Energy Terminal

26 June 2026

Vopak Victoria Energy Terminal Environment Effects Statement (EES)

We appreciate the opportunity to provide comment on the EES for the Vopak Victoria Energy Terminal (the terminal), which is proposed for importing liquefied natural gas (LNG) into Victoria.

About Environment Victoria

Environment Victoria is the leading not-for-profit environmental advocacy organisation in Victoria. With more than 40 grassroots member groups and over 200,000 individual supporters, we've been representing Victorian communities on environmental matters for over 55 years. Through advocacy, education and empowerment, Environment Victoria seeks significant and enduring solutions that will safeguard the environment and future wellbeing of all Victorians.

We stand for a fast and fair transition away from fossil fuels. Our Gas Free Victoria campaign has long advocated for progressively reducing the state's reliance on gas by embracing modern, efficient and clean alternatives. Fossil methane gas is an expensive energy resource that comes at the cost of a safe climate. The Vopak terminal is one of three LNG import terminals proposed for Victoria in recent years. These terminals are a threat to nature and the places we love. We do not believe this project should be approved on environmental grounds.

Notwithstanding our opposition to the project, our submission outlines issues we have identified with the EES and which should be improved before the EES could be deemed adequate. Please note that the sheer volume of content in this EES has meant that we did not have sufficient time nor resources to comprehensively review all sections. Therefore, where no comment is made this should not be interpreted as endorsement.

We are aware of and endorse Geelong Sustainability's submission on this matter.

Summary

Based on our review, the EES does not meet reasonable standards and does not meet the scoping requirements. It is underdeveloped and contains omissions, errors and misdirections. Further details on the below are contained in our submission.

- The EES appears to represent the project at an early design stage: some sections state it is at concept design which means that design refinements and value engineering that would reduce impacts and accurately represent the terminal as built have not yet occurred. Similarly, important plans and consultations have not yet been prepared and included in the EES.
- Major, viable opportunities to reduce environmental impacts have not been considered in the EES.
- Across the different sections, assumptions are made in the absence of evidence that should have been gathered, such as thorough surveys and literature review. Weak assumptions consistently lead to conclusions of low or no impact.
- The EES contains errors such as misidentifications of ecological features and inappropriate and/or unrepeatable methods.
- The EES contains misdirections, including large sections devoted to irrelevant topics and comparisons with improbable, high-impact alternatives rather than obvious, lower-impact alternatives.

Our strong recommendation is that the Inquiry and Advisory Committee advises the Minister for Planning and the Environment Protection Authority not to approve this project.

Project Rationale

The Scoping Requirements state that the EES should detail the proponent’s objectives and rationale (including in the context of energy security, efficiency and affordability) and the implications of the project not proceeding.¹ We do not believe that the project has a strong rationale, as follows:

Energy security refers to the secure supply of energy resources. The construction of the terminal is predicated on the idea that Victoria would experience a gas supply disruption without it.

We note, however, that gas shortfalls have been foreshadowed for at least a decade, with the Australian Competition and Consumer Commission (ACCC) tracking gas supply and demand since 2017. No shortfall has yet eventuated.² Also in 2017, the Australian government implemented the Australian Domestic Gas Security Mechanism (ADGSM) which allows for control of LNG exports in the event of an expected shortfall. This mechanism has never been used. The Australian Government is currently deliberating on a new domestic gas reservation mechanism that would place a 20% domestic supply obligation on LNG exporters. The Grattan Institute estimates that this would oversupply the domestic market by 60% for nearly a decade.³

¹ Department of Transport and Planning, *Scoping Requirements Vopak Victoria Energy Terminal Environment Effects Statement* (Victorian Government, 2025), 16, <https://www.planning.vic.gov.au/environmental-assessments/browse-projects/referrals/Vopak-Victoria-Energy-Terminal>.

² Australian Competition and Consumer Commission, *Gas Inquiry 2017-30 Reports*, (ACCC, 2026) Australia, <https://www.accc.gov.au/about-us/publications/serial-publications/gas-inquiry-2017-30-reports>.

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Grattan Institute, *Out of Gas: Managing the Decline of Gas in Australia* (Grattan Institute, n.d.) 67, accessed 1 June 2026, <https://grattan.edu.au/report/out-of-gas-managing-the-decline-of-gas-in-australia/>.

More recently, the Australian Energy Market Operator (AEMO) has been revising gas demand forecasts down each year yet still consistently overestimates the volumes of gas required by households and small businesses in Victoria (Figure 1). In the decade from 2016 to 2025, total gas consumption in Victoria’s Declared Transmission System dropped 19.3%.⁴ We note that the demand forecasts quoted in the EES are from 2025 and, such is the pace of change, they are already out of date.

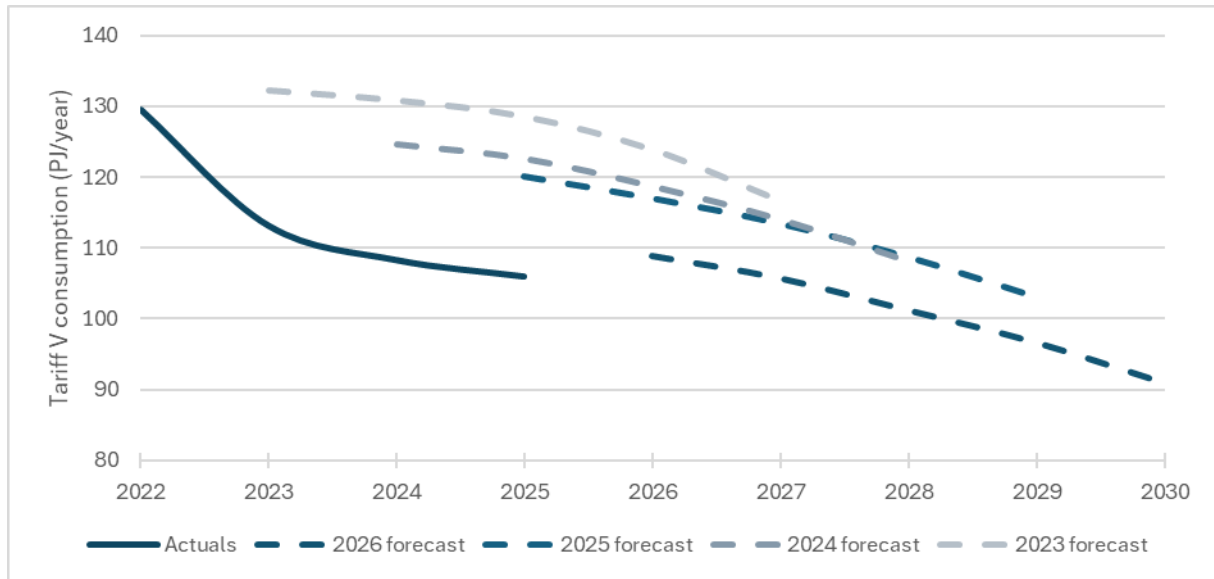


Figure 1: Tariff V consumption forecasts vs actuals from the Australian Energy Market Operator (AEMO) 2023-2026 Victorian Gas Planning Reports, showing systemic overestimation of forecast gas consumption.

Gas may also be used in Victoria for gas-powered generation (GPG). However, this market is changing rapidly. Both large and small batteries are increasingly providing peak electricity services at a lower cost than gas, and consequently are now the price-setting technologies, taking over from GPG.⁵ This seriously impacts the business model for gas-powered generation. The Grattan Institute expects that GPG will become more infrequent and ‘peaky’ and increasingly reliant on gas storage rather than flow. Victoria already has gas storage – at Iona (Port Campbell), Dandenong and the Mortlake pipeline.⁶ In addition, the Golden Beach Energy Storage Project is under development and will provide additional gas storage.

⁴ Australian Energy Market Operator, *Victorian Gas Planning Report* (AEMO, 2026), <https://www.aemo.com.au/energy-systems/gas/gas-forecasting-and-planning/victorian-gas-planning-report>.

⁵ Grattan Institute, *Out of Gas*.

⁶ Grattan Institute, *Out of Gas*.

An LNG import terminal ties gas supply to international markets. Since the energy crisis caused by the 2022 Russian invasion of Ukraine, Europe turned to LNG imports from Qatar and the United States (US) to replace Russian pipeline gas. As a result of the US-Israel-Iran conflict in 2026, recent data from the Institute for Energy Economics and Financial Analysis (IEEFA) has shown that Europe's reliance on LNG imports has become an energy supply vulnerability in its own right.⁷ Europe has not succeeded in breaking its reliance on Russian gas, and is now disproportionately reliant on the US. The US is now pressuring the European Union to roll back methane emissions laws to suit the higher-emissions gas produced in the US.⁸

Therefore, we do not believe there is a strong case for importing LNG into Victoria given the receding need for gas and other supply/storage options, and linking Victoria's gas supply to the international LNG market creates new energy security vulnerabilities.

Efficiency: Building an LNG import terminal is not aligned with energy efficiency, because gas appliances are outdated technologies and nearly all of the gas use in Victoria can be done more effectively and efficiently with electric technologies. Actions taken as part of the Victorian Government's Gas Substitution Roadmap are ensuring that the transition away from gas to more efficient, secure and affordable electric alternatives continues apace. These include introducing incentives and minimum standards to improve the insulation of homes, which significantly reduces the need to heat.⁹

Efficient heat pump technology can deliver a range of heating applications at a far greater efficiency than burning gas. The average gas ducted heater in a Victorian home is only about 80% efficient, whereas a reverse cycle heat pump uses about a quarter of the energy to perform the same task.¹⁰ More efficient electric alternatives are available for homes and businesses, and also in industrial settings: for example, installing commercially available industrial heat pumps in Victoria's food and beverage manufacturing sector could cut the state's industrial gas use by 36%.¹¹

⁷ Institute for Energy Economics and Financial Analysis, 'One Hundred Days of Disruption: How the Iran War Exposes Europe's Energy Vulnerabilities' (IEEFA, 2026), accessed 24 June 2026, <https://ieefa.org/resources/one-hundred-days-disruption-how-iran-war-exposes-europes-energy-vulnerabilities>.

⁸ Francesca Landini et al., 'US Gas Exporters Ask to Push Back EU Methane Regulation', *Reuters* (19 May 2026), <https://www.reuters.com/business/energy/us-gas-exporters-ask-push-back-eu-methane-regulation-until-2028-2026-05-19/>.

⁹ Amandine Denis-Ryan, *Reducing Demand - A Better Way to Bridge the Gas Supply Gap* (IEEFA, 2023), <https://ieefa.org/resources/reducing-demand-better-way-bridge-gas-supply-gap>.

¹⁰ Environment Victoria, *A Pipeline of Profits: How Gas Lobbyists Are Keeping Us Hooked on Expensive, Climate-Wrecking Gas Appliances* (2024), <https://environmentvictoria.org.au/2024/07/24/a-pipeline-of-profits/>.

¹¹ Amandine Denis-Ryan and Cameron Butler, *Industrial Heat Pumps Key to Addressing Excess Gas Demand* (IEEFA, 2024), https://ieefa.org/sites/default/files/2024-10/Industrial%20heat%20pumps%20key%20to%20addressing%20excess%20gas%20demand_Oct24.pdf.

Affordability: gas is now a high cost energy source, including both direct gas consumption and reliance on gas-powered electricity generation. We note that the terminal is expected to cost around \$400 million to build, plus an additional \$400 million in floating storage and regasification unit (FSRU) lease costs, plus the cost of gas, plus profits, all of which would be ultimately paid by consumers via their gas bills. Wholesale gas prices have already tripled in Victoria over the past decade.¹² As gas gets more expensive, householders are increasingly faced with the choice of going cold or going broke.

Importing LNG would strengthen the links between Victoria's gas supply and the volatile international LNG market. This in turn exposes gas consumers to higher prices caused by events such as the Russian invasion of Ukraine and the US-Israel-Iran conflict. Even without price spikes, volatility in and of itself contributes to higher prices and uncertainty because industrial gas buyers are unable to secure longer-term supply contracts.

In sum, the project may not be needed, in which case environmental damage would have occurred for no benefit. It would expose Victoria to higher energy prices and a disrupted international market, and it is not consistent with our current trajectory of improving energy efficiency via electrification and more efficient use of energy.

Implications of the project not proceeding: Victoria would maintain the existing momentum to reduce reliance on gas via the Gas Substitution Roadmap. The Australian government would establish a domestic supply obligation on LNG exporters. The existing gas storages would remain.

Marine ecology

Environment Victoria commissioned Dr Matt Edmunds of Australian Marine Ecology to provide an expert technical review of the marine ecology aspects of the EES. The full report is attached to this submission and we include the summary of findings of the review as follows:

General Issues

There were general issues with the framework and methodology of the EES assessment. The assessment had considerable selection bias and was not to an appropriate biological resolution. The assessment was not transparent, nor did it use an independently repeatable method. The EES did not incorporate the existing body of knowledge and this neglected to consider the existing deleterious state of the ecosystem. This meant the EES conclusions of no significant impact were unsound.

Turtles, Whales and Seals

The marine ecology assessment contributed 110 pages to species not present in the ecosystem, including turtles, whales and seals. This was at the expense of considering important aspects, such as species of conservation concern that are known in the area.

Features of Concern

¹² Institute for Energy Economics and Financial Analysis, 'The Export Effect' (IEEFA, 2026), accessed 25 June 2026, <https://ieefa.org/articles/export-effect>.

The EES did not address key species and features of concern. There was no attempt to address knowledge gaps and potential impacts for southern hooded shrimp or school shark – key species of conservation concern. There was no impact assessment on areas identified as having ecological importance – mapped as Key Ecological Feature areas. The assessment excluded large areas of potential impact, including The Rip at Port Phillip Heads and the Phillip Basin area.

Seabed Impacts

The greatest pressures and ecological concern are for the seabed biota and associated ecosystem functions. The EES did not integrate the full body of knowledge on the seabed system and failed to identify the contraction and depauperate states of existing seabed components. The EES field studies were incomplete and incompetent – as evidenced by misclassifications of obvious biotope classes, such as scallops and seaweed eutrophication. The seabed studies grouped the biota into coarse categories that did not have the biological resolution to properly predict impacts and recovery. The seabed impact assessments were atomised and scattered through the EES. There was effort to model and map physical pressures but there was no effort to model and map biological impacts and recovery. The impact predictions were generally in the form of a subjective narrative with assumptions not supported by, or contrary to, existing evidence.

Electromagnetic Disturbance

There is considerable potential for movement barrier and feeding disruption caused by the proposed two subsea power cables. This effect was poorly addressed in the EES. This disturbance is highly significant for migrating school shark pups, but potentially also for a large suite of demersal fishes, eels, sharks, skates and rays.

Contaminant Discharges

The FSRU would release disinfection by-products as part of the disinfection process of the heat exchangers, used to gasify the LNG. The discharge would be as a lower-temperature density plume on the seabed. This density plume would be into the Werribee relict palaeochannel. The potential dispersal of the plume was not adequately addressed. The disinfection by-products can include highly toxic substances that can bioaccumulate. The EES omitted addressing the contamination issue.

Ecosystem Assessment

The EES did not properly address ecosystem level properties and potential impacts. The EES ecosystem assessment was subjective and not based on any ecosystem description or model from the project area.

Cumulative Impact Assessment

The EES did not implement any process to combine and integrate existing and project pressures into a cumulative impact assessment. The EES assessment was subjective, brief and approached by a narrative that assumed potential impacts away based on activities alone. The actual potential for cumulative impacts is significant. The present ecosystem is in a deleterious state and declining. Added, cumulative impacts may tip the system into an unrecoverable state.

Environmental Management Framework

The EES environmental management framework was incapable of meeting any of the principles of modern ecosystem-based management. These principles are embodied in the Marine and Coastal Act and Policies. The framework did not include any outcomes-based approach that would ensure ecologically sustainable development.

Conclusions

In general, the EES marine ecology assessment did not meet the standards of contemporary, best practice assessments. The assessment was selectively biased and had an uneven treatment of different ecosystem components. This uneven treatment extended to assessing iconic, flagship species that do not occur in the project area. Most of the assessment was on grouped biotic components, such that it did not have the biological resolution to detect and understand impacts. There was incompetence in the fieldwork, with an inability to recognise existing impact conditions and common, easily recognisable biotopes. The EES did not build on the existing body of knowledge or adequately fill key knowledge gaps.

The impact assessment was not well supported by evidence and did not follow a transparent and independently repeatable method. The EES predicted there would be no significant impacts. Most of these predictions were based on assumptions rather than evidence. Some important areas of impact were omitted, including contamination effects of disinfection by-products and ecosystem chain effects.

The proposed project has the potential for considerable, ecosystem-level impacts, across a diverse range of habitats. These impacts include seabed disturbances to habitats that may take a long time to recover, barrier effects on demersal fish movements, including school shark and removal of fragmented, relict populations that are in decline.

The existing knowledge indicates Geelong Arm and Werribee biogeographical segments are presently in very poor ecological condition and in decline. The additional pressures of the proposed project may exacerbate this decline or, worse, tip the ecosystem into an unrecoverable state (known as hysteresis).

The poor standard of the marine ecology assessment means the information is unreliable for planning decisions and management. There is potential for the proposed project to cause considerable ecosystem-level harm. The full scope of potential impacts should be clearly incorporated into the environmental decision process.

The present level of evidence and knowledge indicates the proposed project would not be ecologically sustainable.

Greenhouse Gas Emissions

The EES does not demonstrate consideration of alternative sources of energy

The project Scoping Requirements states that “Key aspects of the project for which the EES will need to demonstrate consideration, and where relevant assessment, of feasible alternatives, include (but is not limited to): [...] the source of energy to power the FSRU.”¹³

Vopak’s 2022 EES referral form states five separate times that the FSRU “would be powered using onshore renewable energy” as a measure to reduce the greenhouse gas emissions resulting from purchased electricity and non-emergency stationary energy to zero.¹⁴

¹³ Department of Transport and Planning, *Scoping Requirements Vopak Victoria Energy Terminal Environment Effects Statement*, 13–14.

¹⁴ Vopak, *EES Referral Form (2022)*, 13, 16, 35, 70, 71, <https://www.planning.vic.gov.au/environmental-assessments/browse-projects/referrals/Vopak-Victoria-Energy-Terminal>.

The greenhouse gas assessment provided at the scoping stage clarifies this commitment further: “Edge understands VOPAK would purchase renewable electricity to power an electric boiler in open and closed loop operation through a Power Purchase Agreement (PPA). *The Client has requested this option to be the only source of electricity generation included in the Assessment to determine operational GHG emissions* [our emphasis]. Thus, alternative power supply options have not been considered in this Assessment.”¹⁵

This strong commitment has now been dropped: the EES does not consider powering the FSRU with onshore renewable energy via a PPA or via any other means. Instead, the EES makes an obviously favourable comparison between connecting to the electricity grid and on-site gas-fired generation.¹⁶ We found no reference to Vopak’s earlier commitment in the EES.

The decision to omit the renewable PPA option is of material impact. It means that, instead of there being zero emissions from purchased electricity and non-emergency stationary energy, purchased electricity is the largest contributor to emissions. Under the proposed approach, 49% of cumulative emissions and 82% of operational emissions out to 2039 are due to purchased energy.¹⁷

We request that the Inquiry and Advisory Committee consider that:

- Given Vopak’s commitment to a renewable energy PPA at the scoping stage to the exclusion of all other alternatives, a renewable PPA is a reasonable and feasible option that should be considered;
- Vopak has not considered a renewable energy PPA in the EES;
- This omission has a material impact on the project’s greenhouse gas emissions; and
- The EES therefore does not satisfy the scoping requirements.

Emissions relating to LNG shipping are underestimated by nearly half

The scoping requirements identify “Energy use and upstream greenhouse gas emissions (including fugitive emissions) resulting from all modes of project operations” as issues to be addressed by the EES.¹⁸ Upstream emissions include those resulting from shipping LNG to the terminal. The EES documents acknowledge that greenhouse gas emissions relating to LNG production and shipping are additional, as they would not have occurred if not for the project.¹⁹

¹⁵ Edge Group, *Victoria Energy Terminal Project Greenhouse Gas Preliminary Assessment* (Edge Group, 2022), 4, <https://www.planning.vic.gov.au/environmental-assessments/browse-projects/referrals/Vopak-Victoria-Energy-Terminal>.

¹⁶ Vopak, *Vopak Victoria Energy Terminal Environment Effects Statement - Chapter 3: Project Development and Alternatives* (2026), 30, https://static1.squarespace.com/static/6260e65b69ae582fb71ae724/t/6a03ff773822706813433163/1778646904008/VVET_EES_Chapter+3+Project+development+and+alternatives_WEB.pdf.

¹⁷ Aurecon Group, *Technical Assessment D.1 - Greenhouse Gas Impact Assessment* (2026), 46, <https://static1.squarespace.com/static/6260e65b69ae582fb71ae724/t/6a00ec83c216d807e25641da/1778445443634/Technical+Assessment+D.1+%E2%80%93+Greenhouse+Gas+Impact+Assessment+-+Rev+1.pdf>; Vopak, *Vopak Victoria Energy Terminal Environment Effects Statement - Chapter 11: Climate Change and Greenhouse Gas Emissions* (2026), 11, https://static1.squarespace.com/static/6260e65b69ae582fb71ae724/t/6a0405b6382270681344aa7c/1778648502907/VVET_EES_Chapter+11+Climate+Change+and+Greenhouse+Gas_WEB.pdf.

¹⁸ Department of Transport and Planning, *Scoping Requirements Vopak Victoria Energy Terminal Environment Effects Statement*, 21.

¹⁹ Aurecon Group, *Technical Assessment D.1 - Greenhouse Gas Impact Assessment*, 61.

The EES estimates LNG shipping emissions of 297,880 tCO₂-e in 2034, based on equal amounts of LNG coming from Port Hedland, Bahrain and Sabine Pass (the west coast of the US). The EES does not explain how shipping emissions were calculated. We have reviewed these values according to a peer-reviewed method published by Robert W. Howarth, a professor and internationally recognised expert on the impact of methane emissions on climate change.²⁰

We have matched our assumptions with those used in the EES, except where our method is more detailed, in which case it uses assumptions based on Howarth’s literature review. We assume a modern two-stroke carrier powered by LNG.

We estimated LNG shipping emissions of 534,074 tCO₂-e in 2034, which is almost double the EES estimate (Table 1). Extrapolating this difference over the 10-year project life (2030-39) we estimate the upstream emissions from LNG shipping alone to be approximately 3.6 million tCO₂-e. This is equivalent to burning around 3.7 million tonnes of brown coal.²¹

Table 1: Environment Victoria estimate of upstream shipping emissions.

Export location	Port Hedland	Bahrain	Sabine Pass	TOTAL
Fuel consumption emissions (tCO ₂ -e)	3,207	10,481	8,505	
Fuel slip fugitive methane emissions (tCO ₂ -e)	1,311	4,284	3,476	
Boil-off liquefaction emissions (tCO ₂ -e)	21	69	56	
Boil-off fugitive methane emissions (tCO ₂ -e)	1	3	2	
Total emissions per return voyage (tCO ₂ -e)	4,540	14,837	12,040	
No. return voyages in 2034	17	17	17	
Total shipping emissions in 2034 (tCO₂-e)	77,177	252,221	204,676	534,074

The Technical Appendix does not step out the method used to calculate shipping emissions but we suggest the following errors have been made which should be examined by the panel:

- The EES may have omitted fugitive methane emissions from incomplete fuel combustion (fuel slip emissions). A fuel slip rate of 0.038% is typical.²² Because methane is a much more powerful greenhouse gas than carbon dioxide, this accounts for 29% of total shipping emissions.
- The EES may have omitted emissions relating to boil off gases. During a voyage, unforced gasification of the LNG occurs, most of which is used to fuel the LNG carrier. The remainder is reliquefied, which burns additional LNG in the process, and a small amount is emitted as fugitive methane. Boil off emissions account for 2% of total shipping emissions.

²⁰ Robert W. Howarth, ‘The Greenhouse Gas Footprint of Liquefied Natural Gas (LNG) Exported from the United States’, *Energy Science & Engineering*, ahead of print, 3 October 2024, <https://doi.org/10.1002/ese3.1934>.

²¹ Department of Climate Change, Energy, the Environment and Water, *Australian National Greenhouse Accounts Factors* (DCCEEW, 2024), <https://www.dcceew.gov.au/sites/default/files/documents/national-greenhouse-account-factors-2024.pdf>.

²² Howarth, ‘The Greenhouse Gas Footprint of Liquefied Natural Gas (LNG) Exported from the United States’.

- The EES has undercounted the number of voyages required to deliver the amount of LNG required to meet the predicted shortfall. A carrier can only deliver around 90% of its gross cargo as LNG is needed both as fuel and as ‘heel’ or ballast for the return voyage to keep the tanks at low temperature.²³ This leads to an extra 3 shipments in 2034 for a total of 51.

Given that the scoping requirements explicitly include upstream emissions including fugitive emissions, we do not believe the EES is adequate.

Climate change risk assessment

This project meaningfully contributes to climate change. Energy transitions are complex and long-term sociotechnical processes that require the realignment of economies away from fossil fuel supply chains. In order to commercially justify the Victoria Energy Terminal, Vopak is betting on fossil fuel supply chains staying in place: (roughly) \$1 billion in revenue from selling fossil gas in order to recoup the cost of construction, operation, plus profit. This is a significant volume of gas. We reject the assertion in this EES that the project’s contribution to climate change is too low to justify examination.

The scoping requirements state that the EES must include “Potential for interaction between the project’s environmental effects and the impacts of climate change” and “Potential risks to the project’s ongoing sustainability, and to the environment, including susceptibility to extreme weather events in the context of modelled climate change scenarios.” We do not believe the EES addresses these aspects adequately.

The interaction between the project’s environmental effects and the impacts of climate change has not been examined meaningfully in the EES. Technical Appendix D.2 states that there is insufficient information on environmental effects and coping ranges for relevant habitats and species. No details of literature review are provided.

Instead, a “qualitative assessment” is provided. This includes relevant impact pathways identified as habitat removal and/or modification onshore, invasive species and pathogens, habitat removal and/or modification offshore, and discharge of reduced temperature waters. The assessment does not mention avian diseases due to increased temperature, which is listed as a high risk stressor on the wetland in the Port Phillip Bay (Western Shoreline) and Bellarine Peninsula Ramsar site management plan (in fact, this key document is not cited at all in climate change risk assessment for the terminal (Technical Appendix D.2)).²⁴ The Ramsar site management plan also lists sea level rises and increased intensity of storms as high risk stressors – yet these are not included in the impact pathways.²⁵

²³ Howarth, ‘The Greenhouse Gas Footprint of Liquefied Natural Gas (LNG) Exported from the United States’.

²⁴ Department of Environment, Land, Water and Planning, *Port Phillip Bay (Western Shoreline) and Bellarine Peninsula Ramsar Site Management Plan* (Victorian Government, 2018), https://www.water.vic.gov.au/__data/assets/pdf_file/0024/672801/Port-Phillip-Western-Shoreline-and-Bellarine-Peninsula-Ramsar-Site-management-Plan.pdf.

²⁵ Department of Environment, Land, Water and Planning, *Port Phillip Bay (Western Shoreline) and Bellarine Peninsula Ramsar Site Management Plan*.

The assessment does not use quantifiable measures, instead using language such as “only a very small proportion of the available range” and referring to vague management measures (“maintenance of water regime within Ramsar habitat”). There are also claims of environmental benefit (“the marine terminal would create habitat for marine taxa”) made without evidence.

Despite these gaps and reliance on assumptions, the EES concludes that “Through the Project design decisions as well as management measures in each technical assessment, no noticeable adverse effects from the interaction of exposure pathways with climate change are expected on sensitive receptors.” The document does not detail which design decisions and management measures are intended to achieve this result. The EES climate risk assessment repeats the unrigorous and optimistic findings of other reports in the EES.

Terrestrial ecology including avifauna

The Port Phillip Bay (Western Shoreline) and Bellarine Peninsula Ramsar site surrounds the coastal parts of the terminal proposal. The Ramsar site is the most important area in Victoria for migratory waders and the sixth most important in Australia.²⁶

The project would disturb 3.383 ha of waterbird foraging habitat during horizontal directional drilling. No timeline has been provided for when reinstatement of that habitat would occur and how timing would respond to the behavioural patterns of the species reliant on it.

Vopak’s mitigation plan proposes to engage Melbourne Water to flood alternative paddocks during construction. This approach should have been established before the EES was submitted, not flagged as a future action.

No targeted surveys were conducted for the endangered Australian Painted Snipe, Hooded Plover, Black Falcon (critically endangered in Victoria), Little Eagle, or listed waterfowl. Vopak has instead relied on general Melbourne Water monitoring not designed for this purpose. The Scoping Requirements required targeted surveys for listed species.

No targeted surveys of listed grasslands fauna were undertaken. These include the critically endangered Victorian grassland earless dragon and other endangered and vulnerable fauna. Instead, the EES suggests that targeted surveys be carried out during project works. Again, this is not in line with the scoping requirements.

The EES does not establish whether the six-to-nine month construction period for the horizontal directional drilling overlaps with the arrival of migratory shorebirds. Impact ratings cannot be sensibly assigned in the absence of this information.

Construction noise and vibration limits designed for humans are applied to wildlife without any justification or literature review. The EES should include a literature review of safe noise and vibration limits for relevant species – or at the closest taxonomic rank where species-level information does not exist. Applying human safety thresholds to wildlife without any justification is not science, it is a baseless assumption.

²⁶ ‘Port Phillip Bay (Western Shoreline) and Bellarine Peninsula - DCCEEW’, accessed 24 June 2026, <https://www.dcceew.gov.au/water/wetlands/australian-ramsar-wetlands/port-phillip-bellarine#site-management-plan>.

Around 35 hectares of threatened grasslands sit within the project area, including 14 hectares that are critically endangered. Vopak proposes to destroy or damage 3.5 hectares without exploring obvious alternative routes such as shifting the pipeline from Peak School Road to Windermere Road or trenching in the middle of existing roads rather than through grasslands. The scoping requirements required alternatives to be considered to avoid impacts on threatened ecological communities.

Safety, navigation and risk

The risk register omits inherent risk levels, likelihoods, and consequences, making it impossible to understand how residual risks were determined. More fundamentally, the risk management plan for the project does not yet appear to exist. The Safety, Hazard and Risk report suggests it is yet to be developed and the project is still at concept stage only.

The project area has not been surveyed for existing underground services that could cause obstruction during trenching – instead stating that if an obstruction is encountered, it will be dealt with at the time. This is not a plan. Despite this, the same report claims all relevant hazards have been addressed consistent with industry standards.

The wind modelling (Technical Appendix J) does not use data from the closest and most appropriate weather station (Point Wilson), instead using stations with different wind regimes: South Channel Island which is representative of a different part of the bay, and Avalon Airport which is onshore. Point Wilson weather station logs data dating back to 1990 including wind data. Wind speeds are a risk parameter for tasks that will be performed at the terminal, including mooring, loading arm connection, berthing, LNG unloading and gas send-out.²⁷

The risk of an undetected gas leak has not be considered. Gas is odourless during shipment, transfer, and transit through the Bay, all the way to the Gas Receiving Station onshore where odourant is added. Vopak has not explained how an odourless gas leak would be detected or managed at any point along this route.

Shipping movements appear to have been underestimated because the need to retain LNG for the tanker's return journey, both for fuel and ballast to maintain the LNG below -160° C, has been overlooked. An average delivered cargo of 90% of gross cargo is a reasonable assumption.²⁸ We estimate that this results in an extra 3 shipments in 2034 for a total of 51.

Shipping movements also need to account for the seasonality of Victoria's gas demand – they would not be evenly spread throughout the year. Typically, Victorian gas use peaks during the winter months, which is when LNG imports would be more likely. Safety and navigation issues including the availability of tugboats for berthing need to consider scenarios of high LNG carrier movements.

²⁷ Asia-Pacific Economic Cooperation, *Study on Optimal Use of Small-Scale Shallow-Draft LNG Carriers and FSRUs in the APEC Region* (APEC, 2020), https://www.apec.org/docs/default-source/publications/2020/4/study-on-optimal-use-of-small-scale-shallow-draft-lng-carriers-and-fsrus-in-the-apec-region/220_ewg_study-on-optimal-use-of-small-scale-shallow-draft-lng-carriers-and-fsrus-in-the-apec-region.pdf.

²⁸ Howarth, 'The Greenhouse Gas Footprint of Liquefied Natural Gas (LNG) Exported from the United States'.

There is no plan for where the floating terminal or LNG tankers would go for major maintenance or emergency repairs. The absence of a maintenance plan means a significant operational risk has not been identified or mitigated. There is no answer in the EES to the basic question of what happens when the floating terminal needs major repairs, or where a vessel carrying LNG would go.

You are welcome to contact me on the details below, should you wish to discuss this submission in more detail.

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