

Submission to Department of Environment, Land, Water and Planning (DELWP)

Re: The Gas Import Jetty Works at Westernport Bay

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To members of the Inquiry and Advisory Committee

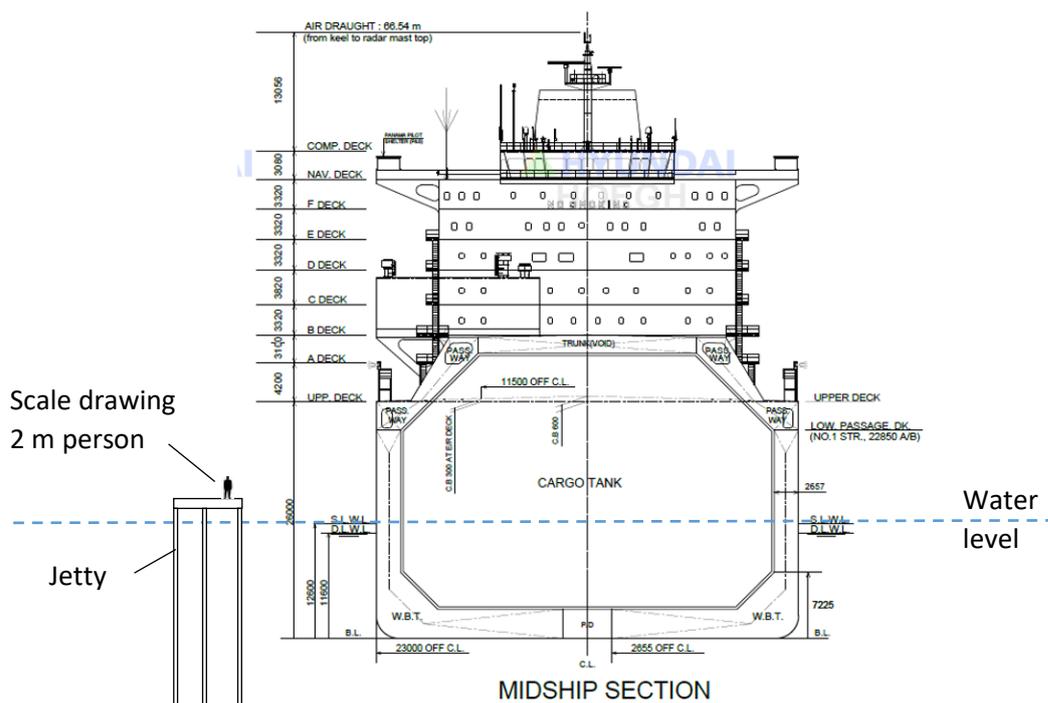
Thank you for the opportunity to make this submission. I have lived in Victoria for 70 years, was a secondary teacher for 30 years and for the last 18 years have been a senior research fellow at an educational research organisation in Melbourne. My family, including my 6 grandchildren, love the natural environment and we are frequent visitors to Victoria's national parks. We recommend the Mornington Peninsula, Phillip Island, French Island National Park and the Ramsar wetland to international visitors as very special places to visit in Victoria. I have focused on environmental considerations for my submission.

Global warming

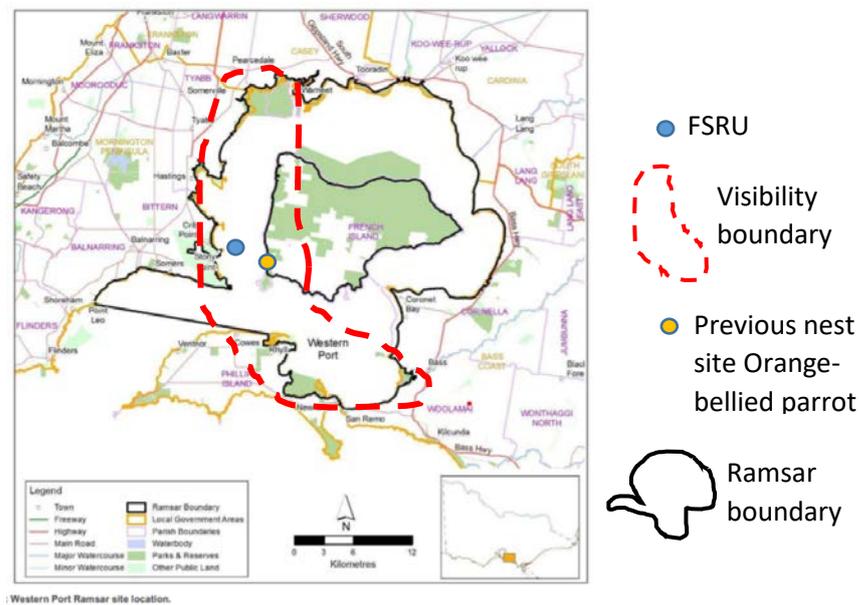
Gas is a fossil fuel and as such will add to Victoria's emissions and global warming. In order to be carbon neutral by 2050, and meet our Paris commitment, Victoria must set ambitious emissions reduction targets, not undertake projects that *increase* emissions. The AGL gas project is a backward emissions step and a long term threat to our survival. Furthermore, the Victorian government's own [website](#) states that 'currently known gas reserves in Victoria are expected to meet demand for at least the next 15 to 30 years'. The importation of gas is **not** needed.

Visual pollution

The Höegh Esperanza Floating Storage Regasification Unit (FSRU) is a huge vessel, 294 metres long and 46 metres wide. The vessel will dominate the jetty area and block views to French Island National Park and beyond. A visual eyesore and off-putting for safe recreation.



The height of the vessel is 54 metres above sea level and therefore [visible](#) from 20 kilometres across the water. The FSRU will also be visible from the entire west side of French Island National Park (4.5 km distant), from the Westernport Coastal Reserves 18 km to the north and from Cowes on Phillip Island to the south. Not an attractive sight for those visiting for the natural beauty.



Water pollution

Heat, supplied by seawater, is required to return the LNG to a gaseous state and up to 450 million litres (180 Olympic swimming pools) will be pumped **per day** through the heat exchangers. The water discharged will be 7°C cooler than the seawater temperature. There will also be a small concentration of residual chlorine at the discharge from the FSRU even though there is no applicable ANZECC guideline trigger value for chlorine in marine environments. The long term effects of chlorine disinfection by-products are unknown. Victorian law does not permit the discharge of wastewater in high conservation areas. **It is hard to believe that such risky discharges and industrial scale disturbances are being contemplated, let alone permitted, within the Ramsar boundary.**

There is also the unacceptable risk of spills within the boundary from the up to 40 ships that would supply the FSRU each year. While small, there is a risk of a major incident. In qualitative risk analysis, risk = severity × likelihood. While likelihood is low, in this case severity is high leading to significant risk.

Risk of rollover and gas boil-off

FSRUs have a higher risk of 'rollover'¹ than land-based systems. The FSRU industry is very young and 'rigorous standard best-practice operating guidance is not yet established and what is available is inadequate for predicting, preventing and mitigating rollovers with confidence'.² Uncontrolled venting of boil off gas in vapour form to the atmosphere is a flammability hazard leading to tank structure over-

¹ Rollover is associated with large boil-off gas evaporation rates that lead to significant increases in-tank pressure that may become difficult to control. Rollovers risk hazardous and environmentally damaging consequences, such as structural damage to the tanks and uncontrolled venting of gas to the atmosphere.

² Kulitsaa, M. & Wood, D. (2018) Floating storage and regasification units face specific LNG rollover challenges: Consideration of saturated vapor pressure provides insight and mitigation options, Science Direct, Natural Gas Industry B 5 (2018) 391-414

pressurization with potential environmental damage. Over 20 rollovers have occurred in the short lifetime of FSRUs.

Existing industry guidance for handling FSRU rollovers remains limited because: 1) there are a range of vessel designs with different tank pressure ratings; 2) tanks are typically not equipped with specific “anti-rollover” equipment; 3) most FSRUs are not equipped with “densitometers” throughout their tanks; and, 4) FSRU industry procedures are often ill-suited to the operational patterns imposed on the vessels.³

The EES Technical Report K (page E-4) agrees that handling rollovers at Crib Point will be limited and states that LNG ships do not normally have either the instrumentation to detect rollovers. This statement is most worrying.

Location

It is unacceptable that the proposed FSRU is located within, not outside the Ramsar boundary. The Ramsar site seven wetland dependent fauna species listed under the EPBC Act, two of which, the Curlew sandpiper and the Eastern curlew are critically endangered.⁴

The Crib Point location is only 4.5 km from the western boundary of the French Island national park and in very close proximity to a previously known breeding area of the rare Orange-bellied parrot near Tankerton jetty to the south-east. This species is at **serious risk of functional extinction** in the wild.⁵ As the EES reports, Ch 7 p 48, captive birds were released in April 2020 just north of the FSRU location. Having nearly one huge gas tanker per week entering this sensitive area minimises the chance that the birds will return.

Alternative location

I believe that the AGL gas project should **not** proceed at all for the environmental reasons described above. If it does proceed, it should be located elsewhere. Viva Energy has proposed their [Geelong site](#) for an FSRU. It is a much better option. It would have the benefit of closer proximity to existing gas pipeline infrastructure, a larger port and a major hazard facility.

Summary

In the 21st century, when the world is trying to reduce emissions, when biodiversity is threatened by climate change, we should be doing all we can to protect what is left of our natural environments. The AGL FRSU proposal makes no sense and should not proceed.

Thank you for reading and considering my submission.

Yours sincerely,



Ray Peck

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<https://www.researchgate.net/publication/324566936> LNG rollover challenges and their mitigation on Floating Storage and Regasification Units New perspectives in assessing rollover consequences

⁴ https://www.water.vic.gov.au/_data/assets/pdf_file/0029/66269/Western-Port-Ramsar-Site-Management-Plan-Summary.pdf

⁵ <https://www.environment.vic.gov.au/conserving-threatened-species/threatened-species/orange-bellied-parrot>