Briefing paper: Viva Energy gas terminal emissions significantly underreported

28 February 2022

Comparison of greenhouse gas assessments in Environment Effects Statements (EES) for Viva Energy's Geelong gas terminal vs AGL's Westernport terminal reveals true scope of climate impact.

1. Overview and key findings

- In the Environment Effects Statement (EES), Viva Energy has downplayed the climate impact of its gas import terminal project by excluding emissions from transporting LNG to Geelong.
- This was done despite the most relevant previous Victorian project, AGL's Crib Point gas terminal, including the transport emissions in its EES.
- The Inquiry and Advisory Committee of the Crib Point EES process, where a similar project was evaluated, acknowledged transport emissions as a key source of emissions and recommended they be included in the assessment.
- Viva Energy's justification is that these transport emissions are beyond the company's "ability to control" because it is only the operator of the terminal, and thus not responsible for where gas is imported from. However, Viva Energy has also publicly announced a preliminary deal with Woodside to be the exclusive gas terminal for LNG from the Scarborough gas fields in Western Australia, indicating Viva Energy does have some control or influence over the source of LNG cargoes.
- Viva Energy's decision to exclude Scope 3 transport emissions is at odds with the relevance test of the Greenhouse Gas Protocol and also at odds with the Australian government's Climate Active carbon neutral standards.
- **Based on Viva Energy's own data in an appendix of the EES, if fuel transport emissions are included, then the project's total emissions would be between 4 and 12 times higher than the currently reported figures, depending on the gas source.**

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2. AGL Crib Point gas terminal proposal EES

a. Greenhouse gas assessment – operations

The EES for AGL's Crib Point gas terminal proposal in Victoria was exhibited from 2 July to 26 August 2020. Estimated operational emissions for the Crib Point terminal are featured in Table 11-4, copied below.

Table 11-4: Gas Import Jetty Works operational emissions - open loop and closed loop modes

Emissions source	Project activity	Total annual emissions (t CO_2-e)		
		Scope 1	Scope 2	Scope 3
Stationary fuel	Stationary fuel emissions during operation of the Gas Import Jetty Works (open loop)	55,570	-	-
Transport fuel	Transport fuel emissions during operation of the Gas Import Jetty Works	20	-	389,520
Purchased electricity	Purchased electricity emissions during operation of the Gas Import Jetty Works	-	2,160	210
Fugitive emissions	Fugitive emissions during operation of the Gas Import Jetty Works	1,910	-	-
Gas Import Jetty Works annual operational emissions; open loop		**57,500**	**2,160**	**389,730**
Stationary fuel	Stationary fuel emissions during operation of the Gas Import Jetty Works (closed loop)	236,140	-	-
Transport fuel	Transport fuel emissions during operation of the Gas Import Jetty Works	20	-	389,520
Purchased electricity	Purchased electricity emissions during operation of the Gas Import Jetty Works	-	2,160	210
Fugitive emissions	Fugitive emissions during operation of the Gas Import Jetty Works	1,910	-	-
Gas Import Jetty Works annual operational emissions; closed loop		**238,070**	**2,160**	**389,730**

Table note: The combined loop regasification mode would potentially be used when the ambient seawater temperature is too low for open loop regasification to operate effectively. This has been assumed to be 30 days a year. Should the combined loop be required it would lead to a further 17,370 t CO_2-e per annum in addition to the emissions associated with the open loop mode.

We have highlighted the emissions from transporting LNG to the site because they represent the largest source of emissions, and constitute virtually the totality of Scope 3 emissions.

b. Scope of assessment

Following the methodology in the internationally accepted Greenhouse Gas Protocol (GHG Protocol), AGL's assessment split emissions into three categories – Scope 1 for direct emissions, Scope 2 for indirect emissions associated with the import of energy (e.g. electricity purchased from the grid), and Scope 3 for other indirect emissions, including 'upstream' emissions associated with transport.

While Scope 3 emissions are not required to be reported under the National Greenhouse and Energy Reporting Act (NGER), they are included in the assessment because "they represent a material contribution to the overall greenhouse gas emissions from the Project" and the Project has "an ability to control or influence these emissions". (Section 11.4)

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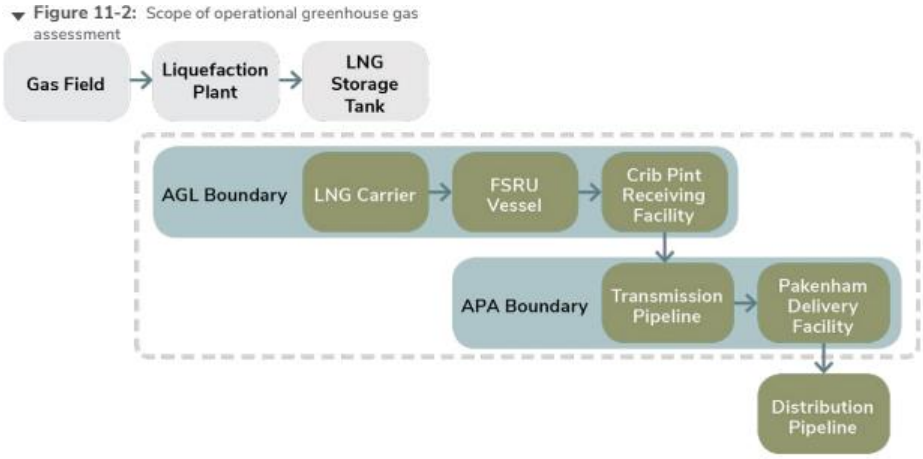
AGL's EES document further clarifies that transport is included:

> Key Scope 3 emissions that were included in the assessment include:
>
> - transportation of liquefied natural gas (LNG) to Crib Point Jetty by the LNG carriers
> - transport of workers to the Project site
> - embodied emissions in steel and concrete used in construction.

Figure 11-2 shows the boundary with transport fuel emissions in scope, labelled 'LNG Carrier':



c. *Total emissions for operations*

This analysis will use 'open loop' mode to compare the two projects. 'Open loop' refers to using seawater to re-heat the LNG and thus has lower operational emissions than 'closed loop' mode. Most Floating and Storage Regasification Units internationally are operated in open loop mode the majority of the time.

AGL project total 'open loop' mode annual emissions in EES: 449,390 tonnes of carbon dioxide equivalent (CO_2-e)

d. *Recommendations from the report of the Crib Point Inquiry and Advisory Committee to the Victorian Minister for Planning*

AGL's Crib Point gas terminal proposal went through a full Environment Effects Statement process, including hearings before an Inquiry and Advisory Committee (IAC). The IAC wrote a report of recommendations sent to the Minister on 21 February 2021, which is available online here.

The IAC report states:

- "Regarding Scope 3 GHG emissions associated with transport of LNG, these can be legitimately included in accounting calculations. Including these results in significantly higher total GHG emissions from the Project under either open or closed loop operating scenarios."

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- "If legitimate Scope 3 GHG emissions from LNG transport to Crib Point are considered...then GHG emissions associated with open loop mode would probably warrant some consideration regarding offsets."

Further, the report found:

"The consideration of Scope 3 GHG emissions associated with upstream transport of LNG to Crib Point is relevant and significantly increases the Project's GHG emissions."[1]

3. Viva Energy Geelong gas terminal proposal EES

a. Greenhouse gas assessment – operations

But unlike AGL, Viva Energy has deemed LNG transport to Geelong as sitting outside their Scope 3 emissions, despite this being the largest source of GHG emissions through the whole value chain.

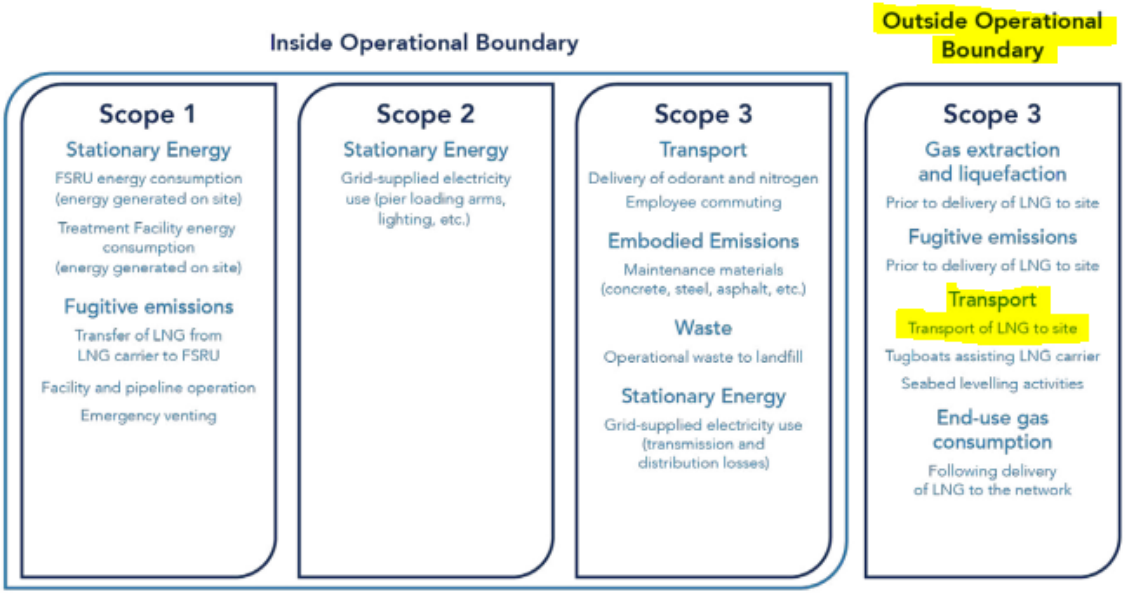

Figure 9-3 Operation phase emissions sources within the project's operational boundary

Above: Operational emissions scope boundary, Viva Energy Gas Terminal Project Environment Effects Statement, Chapter 9, Figure 9-3.

As a consequence, Viva Energy estimates that the total annual operations emissions (Scope 1, Scope 2, and 'relevant' Scope 3) of its FSRU operating in open loop mode would amount to just **47,906 tonnes of CO_2-e**, approximately nine times less than the figure reported by AGL. This is despite both

[1] https://www.planning.vic.gov.au/__data/assets/pdf_file/0022/517144/Crib-Point-EES-IAC-Report-1-Main-Report.pdf p.151

projects having the same import volumes (albeit with a small difference in the number of trips, Viva Energy estimate up to 45 trips to AGL's 40 trips).

b. Viva Energy's argument for excluding transport fuel emissions

Viva Energy's EES justifies excluding emissions from transporting the LNG as follows: "The decisions around the sourcing of LNG cargoes would be made by the customers of the terminal and not by Viva Energy as the operator, therefore the upstream emissions associated with transport of the LNG to the terminal were also not included in the study." (Viva Energy EES, Chapter 9, 9-6)

The study scope section 9-2 clarifies that the emissions boundary is limited to activities that are within Viva Energy's "ability to control".

4. Why transport emissions should be included in Viva Energy's greenhouse gas assessment

a. Gas supply deal with Woodside's Scarborough gas project

While arguing that as the terminal operator it has no ability to control where the imported LNG comes from, Viva Energy has also entered into a deal with Woodside to supply gas from their fields in Western Australia.

As quoted in the *Australian Financial Review* on 9 December 2021: **Woodside will work with the Geelong project "on an exclusive basis in relation to LNG regasification terminals in south-east Australia", Viva said.**[2]

Although this deal is at a preliminary stage and details have not been released, it clearly shows that Viva Energy does have some degree of control or influence over the sourcing of LNG cargoes. Therefore, for the sake of transparency and completeness, Scope 3 emissions from transport should be included in the GHG emissions assessment.

b. Greenhouse Gas Protocol

The GHG Protocol is the global standard for companies and organisations trying to measure, report and manage their emissions.

According to the GHG Protocol supplement document "Corporate Value Chain (Scope 3) Accounting and reporting Standard"[3] companies should account for all Scope 3 emissions **and disclose and justify any exclusions** (p.21).

The GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard also sets out the relevance test for which Scope 3 emissions should be included in the boundary, see table below:

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[2] https://www.afr.com/companies/energy/woodside-eyes-scarborough-gas-for-geelong-imports-20211209-p59g5k

[3] https://ghgprotocol.org/sites/default/files/standards/Corporate-Value-Chain-Accounting-Reporing-Standard_041613_2.pdf

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Table [6.1] Criteria for identifying relevant scope 3 activities

Criteria	Description
Size	They contribute significantly to the company's total anticipated scope 3 emissions (see section 7.1 for guidance on using initial estimation methods)
Influence	There are potential emissions reductions that could be undertaken or influenced by the company (see box 6.2)
Risk	They contribute to the company's risk exposure (e.g., climate change related risks such as financial, regulatory, supply chain, product and customer, litigation, and reputational risks) (see table 2.2)
Stakeholders	They are deemed critical by key stakeholders (e.g., customers, suppliers, investors, or civil society)
Outsourcing	They are outsourced activities previously performed in-house or activities outsourced by the reporting company that are typically performed in-house by other companies in the reporting company's sector
Sector guidance	They have been identified as significant by sector-specific guidance
Other	They meet any additional criteria for determining relevance developed by the company or industry sector

Emissions from transporting the LNG to Geelong would clearly meet the criteria for size, influence, risk, stakeholders, outsourcing and sector guidance (given the most relevant Victorian project, AGL's Crib Point terminal proposal, did include Scope 3 transport emissions).

This section of the GHG Protocol also explicitly advises against the kind of exclusion that Viva Energy has attempted, stating: **"In particular, companies should not exclude any activity that is expected to contribute significantly to the company's total scope 3 emissions."**[4]

c. *Climate Active Carbon Neutral Standards*

An adapted version of this relevance test is featured in the *Climate Active Carbon Neutral Standard for Organisations*.[5] Climate Active is the only government accredited carbon neutral certification scheme in Australia.

In November 2021, Viva Energy committed to targeting net zero emissions for the gas terminal project, but a statement limits this to Scope 1 and Scope 2 emissions.[6]

However, if Viva Energy wants to offset the emissions associated with the operation of this facility from the standpoint of the organisation, the company will need to include Scope 3 emissions as per the same relevance test.

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[4] https://ghgprotocol.org/sites/default/files/standards/Corporate-Value-Chain-Accounting-Reporing-Standard_041613_2.pdf p.60

[5] https://www.industry.gov.au/sites/default/files/2020-07/climate-active-carbon-neutral-standard-organisations.pdf (p.15)

[6] https://www.vivaenergy.com.au/media/news/2021/viva-energy-announces-net-zero-ambition

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If Viva Energy chooses to offset the emissions associated with the actual LNG product, the company will need to refer to the *Climate Active Carbon Neutral Standard for Products*. This defines the Life Cycle Assessment of emissions as "cradle to gate" or "cradle to grave", and includes all emissions that are "attributable". Attributable is defined as follows:

Attributable processes

Attributable processes are defined by the *GHG Protocol – Product Standard* (WBCSD and WRI, 2011b) as service, material and energy flows that become the product, make the product and carry the product through its life cycle.

All attributable processes (irrespective of scope) must be included in the emissions boundary of the product or service unless they fulfil all the conditions for exclusion.

A "cradle to gate" or "cradle to grave" approach would include Scope 3 transport emissions, which are attributable to the project.

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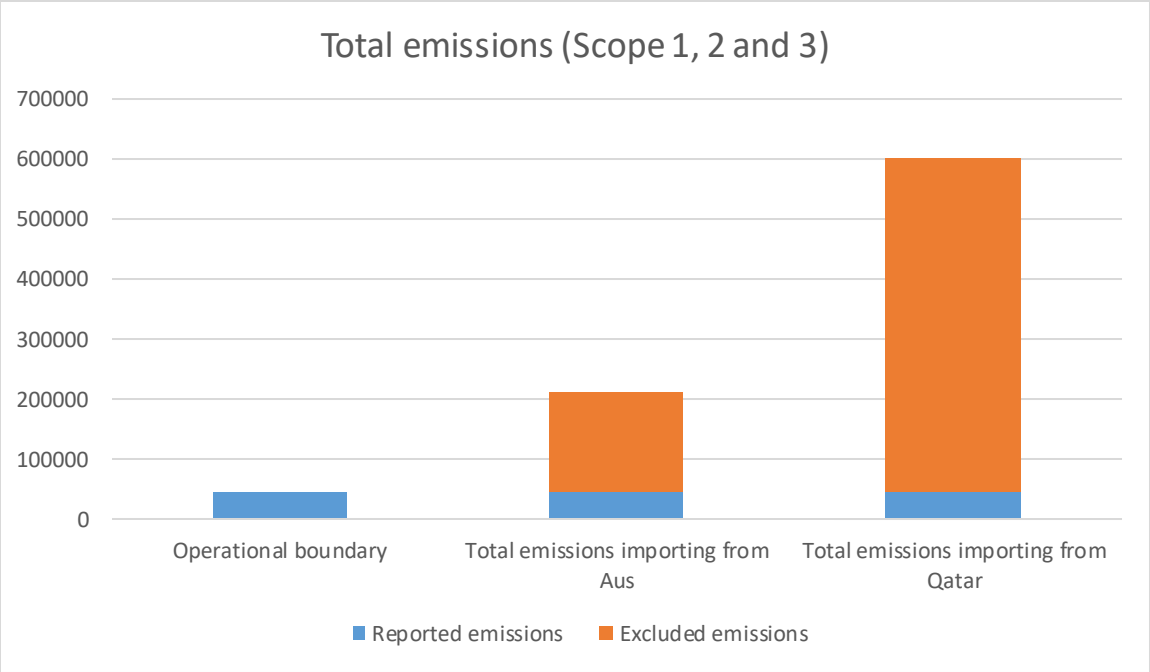
5. Viva Energy's transport emissions and their importance

While Viva Energy tried to exclude transport fuel emissions from their operation boundaries in the main text of the EES, the company did provide some figures in its *Technical Report C Greenhouse Gas Assessment*[7], Appendix A Scope 3 emissions outside of the operational boundary.

This document shows fuel transport emissions ranging from 165,500 tonnes of CO_2-e if gas is sourced from Australia to 553,400 tonnes of CO_2-e if gas were to be supplied from Qatar.[8]

If Viva Energy had followed the relevance test of the GHG Protocol, the internationally recognised authority in this space, the project's emissions would be 4 or 12 times higher than what Viva has recognised so far. This is a massive difference, and it is up to Viva to explain why it chose to exclude the biggest source of emissions from its greenhouse gas assessment, and only included it in the technical appendix of a 13,000 page EES document.



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

8 https://www.vivaenergy.com.au/ArticleDocuments/1193/VE%20GTP%20TechReportC_Greenhouse%20gas_exhibition.pdf.aspx See Appendix A, page 56.