

Our Ref: Response to December 2024 RFI - GHG_20250116

16 January 2025

Jesse Evans
Director
Energy and Resource Assessments
NSW Department of Planning, Housing and Infrastructure

Dear Jessie

RE: Request for Additional Information – Consideration of Climate Change (Net Zero Future) Act 2023

We refer to the Request for Further Information dated 16 December 2024 regarding the Project's impact on commitments under the *Climate Change (Net Zero Future) Act 2023* (Climate Change Act) (16 December RFI). The specific information requests are in bold and italicised with the response to the issue following. It is noted that this response should be read in conjunction with the Greenhouse Gas and Energy Assessment (GHGEA) (Umwelt 2022) provided with the EIS, the Submissions Report prepared for the Project (Umwelt 2023) and the Delta Coal response to the IEAPM dated 31 May 2024 (Delta Coal 2024) which cover much of the material requested in the 16 December RFI.

The Department has requested further information to demonstrate how the Chain Valley Colliery would affect emissions reductions targets of the Climate Change (Net Zero Future) Act 2023, having consideration to the EPA's (draft) Climate Change Guidelines for High Emitting Projects (EPA Draft Climate Change Assessment Guidelines).

Section 9 of the Climate Change Act sets emissions reductions targets for NSW.

9 Targets for reducing net greenhouse gas emissions

(1) The targets for reducing net greenhouse gas emissions in New South Wales are—

(a) by 30 June 2030—to reduce net greenhouse gas emissions in New South Wales by at least 50% from the net greenhouse gas emissions in 2005, and

(b) by 30 June 2035—to reduce net greenhouse gas emissions in New South Wales by at least 70% from the net greenhouse gas emissions in 2005, and

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(c) *by 30 June 2050—to reduce net greenhouse gas emissions in New South Wales to zero.*

The Chain Valley Colliery Consolidation Project (The Project) includes the consolidation of approval requirements for the existing Chain Valley Colliery and Mannering Colliery under a single consent, as well as the continuation of existing mining operations for an additional two years beyond the current approval of 31 December 2027 to 31 December 2029.

2035 and 2050 Emissions

The proposed Project's Scope 1, 2 and 3 greenhouse gas (GHG) emissions, including emissions associated with closure of the operations, would have no impact on the State's ability to meet the 2050 net zero target and is unlikely to have any material impact on the 2035 70% reduction target as emissions associated with coal extraction from the Project will have finished at least 5 years prior to this target and decommissioning activities are expected to be well advanced by this target date. Importantly, fugitive methane and carbon dioxide emissions are expected to have substantially reduced or have ceased by 2035 under the proposed Project operating timeframe as there are significant financial drivers for Delta Coal to seal shafts and cease ventilating underground workings which is the primary source of post closure emissions.

Ventilated emissions after the cessation of mining activities would be subject to the NGER Safeguard Mechanism Emissions Intensity scheme, provided that the combined Scope 1 emissions were greater than 100,000 tCO₂-e. Without a production variable (i.e. no ROM coal production), the entirety of the fugitive emissions generated by the site would need to be offset under the Safeguard Mechanism.

2030 Emissions

While the Project will not extend mining operations beyond 31 December 2029, Domestic Scope 3 emissions associated with the transport and combustion of coal mined up until 31 December 2029 are expected to be negligible and limited only to small volumes of coal mined in the final months of the Project. Fugitive emissions associated with stockpiled coal and scope 1 and 2 emissions associated with mining operations (including fugitive emissions associated with ROM production) will also have ceased by the 30 June 2030 target date for a 50% reduction in NSW GHG emissions. Continuation emissions associated with the Project at or beyond 30 June 2030 may include:

- Scope 1 fugitive emissions associated with legacy mining activities (while shafts remain unsealed and ventilated)
- Scope 1 fugitive emissions associated with decommissioning activities including demolition activities
- Scope 2 emissions associated with the transport of demolition material and any externally sourced electricity required to support demolition works.

Of the above, Scope 1 emissions associated with ventilation activities represents the most significant potential source of emissions from the Project in 2030. The GHG emissions are released to the atmosphere via ventilation fans and would be expected to be significantly lower than during operations due to the declining rate of gas make from mined areas (as discussed in Section 3.2 of the IEAPM advice to DPHI on the Greenhouse Gas Assessment and summarised in Figure 1 from that report, extracted in **Figure 1** below) (IEAPM, 2024a) and the ability to seal off inactive mining areas and reduce fugitive emissions from those areas being released via the ventilation system.

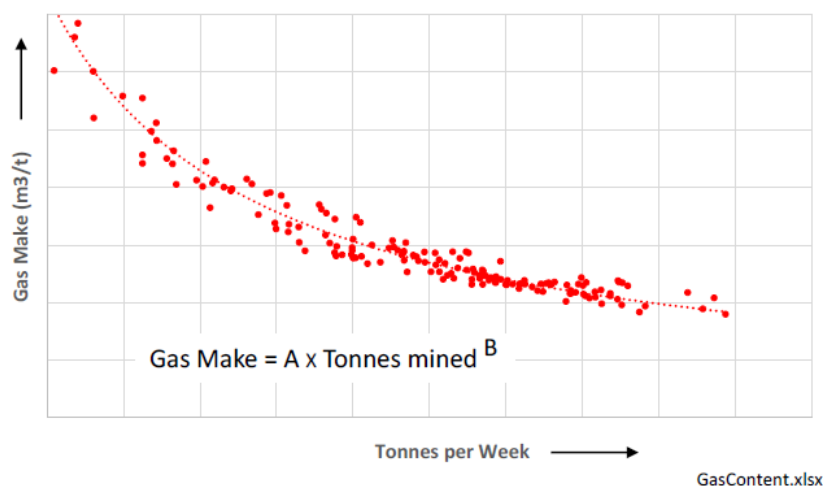


Figure 1: An example of a relationship between gas make and coal mined for the “active mining area”

As noted above, the costs associated with ongoing ventilation of underground workings are a significant cost to the operation and there is a strong financial incentive for workings to be sealed to reduce these ventilation costs, which would have corresponding benefits in terms of significantly reducing emissions.

As detailed in the Delta Coal response to the IEAPM dated 31 May 2024 (Delta Coal 2024), Delta Coal has committed to the preparation of a greenhouse gas management plan within 6 months of the Project being approved which will include improved differentiation between legacy emissions, ROM emissions and stockpile emissions of both current and future mining areas and provide detail and priorities on mitigation measures. This Management Plan will be prepared in accordance with Draft EPA Climate Change Guidelines (of Final version adopted) and will include proposed measures to reduce fugitive emissions from the mine following the cessation of mining.

While it is acknowledged that the Draft EPA Climate Change Guidelines would require the preparation of the Greenhouse Gas Management Plan to support the assessment of the development application, this is not considered to be warranted for the current Project for the following reasons:

- The assessment of potential GHG impacts (Completed in July 2022) was finalised well before the release of the Draft Climate Change Assessment Guidelines by the EPA on 31 May 2024 and the Response to IEAPM advice on GHG emissions was largely completed prior to the release of the Draft Policy for public comment.
- The Project does not seek any material change to existing approved operations that would increase GHG emissions until 2028, in comparison what is already approved. Maximum approved ROM coal production will *reduce* from 3.2 Mtpa (combined) to 2.8 Mtpa under the approved Project. If the Project is not approved, there is no regulatory requirement other than as required under the Safeguard Mechanism (discussed further below) for further reductions in greenhouse Gas emissions from the currently approved operations.
- The commitment to prepare and implement a GHG Management Plan within 6 months of approval represents an improvement in GHG management commitments relative to existing approved operations during a period when no such requirements would apply if the Project is not approved or approval is further delayed due to the need to prepare such a management plan prior to determination of the development application.

- The IEAPM specifically identified in the response to Delata Coal's Response of this aspect of its advice:

The Panel does not consider that any of the matters raised in the Panel's advice must be addressed prior to the project being approved. The principal matter relates to Delta Coal developing a standalone Greenhouse Gas Management Plan (GHGMP). Hence, the Panel does not take exception to Delta's view that the GHGMP should be provided to the DPHI for approval within 6 months of project approval (should the project be approved).

It is noted that this response post-dates the closure of the public consultation period on the Draft Climate Change Assessment Guidelines.

- Delta Coal is currently undertaking a range of studies necessary to inform the development of the management plan.

Safeguard Mechanism Requirements for Existing Operations

In addition to the commitment to prepare and implement a greenhouse Gas Management Plan, Delta Coal is subject to the requirements under the Safeguard Mechanism established under the Commonwealth *National Greenhouse Gas and Energy Reporting Act 2007* (NGERS Act). The NSW EPA Fact Sheet: *Climate Change Policy Action Plan – information for proponents and licensees* relevant provide (NSW EPA, 2024b):

Alignment with Safeguard Mechanism obligations

We are working closely with our Commonwealth Government colleagues to ensure our climate change approaches complement (and do not conflict with or duplicate) actions being taken at the Commonwealth level, especially the Safeguard Mechanism (under the Australian Government's National Greenhouse and Energy Reporting Act 2007).

While the Safeguard Mechanism provides minimum requirements for the highest emitting facilities, it is important that the EPA and the consent authority:

- *properly understand the potential greenhouse gas emissions associated with a proposed new or significantly modified development and*
- *ensure that all proponents are adequately avoiding, minimising and managing their emissions over all stages of the development.*

Under the Safeguard Mechanism, Delta Coal is required to reduce the emissions intensity (EI) of operations relative to its approved Facility Specific Emissions Intensity (FSEI). This EI baseline is calculated relative to tonnes of ROM coal produced from the operation (i.e. Total Scope 1 emissions in t CO₂-e divided by tonnes of ROM coal produced). The approved FSEI for Delta Coal's Chain Valley and Mannering Colliery operations (registered as one facility) is 0.5976 and the annually declining EI's for Delta Coal operations over the life of the Project are set out in **Table 1**. These targets apply irrespective of ROM coal tonnages and are designed to improve the GHG efficiency of extraction from the operation. As noted in the GHGEA, lower rates of ROM production from the operation will generally result in a higher EI due to the large contribution of fugitive emissions from historical mining which is largely independent of ROM production. Should the targets not be able to be achieved through mitigation and avoidance of impacts, the corresponding GHG reduction shortfall necessary to meet the relevant EI target is required to be met through the surrender of carbon credits (Australian Carbon Credit Units / Safeguard Mechanism Credits) usable under the Safeguard Mechanism.

As can be seen by **Table 1**, the Delta Coal operations (Mannering and Chain Valley Collieries) must deliver significant greenhouse gas emissions intensity reductions under the Safeguard Mechanism over the life of the Project. Calculated relative to maximum ROM coal production¹ (as required under the Draft EPA Climate Change Assessment Guidelines), these reductions are significant with predicted emissions in 2029-30 reporting period associated with the operations reducing to approximately 1/3 of the emissions from operations in the 2023-24 reporting period.

Table 1 Targeted Emission Intensity Reductions for Delta Coal Operations

Reporting Period	Target Emission Intensity (EI)	Approved ROM (Mtpa)	(Proposed) Production	Max Scope 1 Emissions at Target EI – Approved (Mt CO ₂ -e)	Max Scope 1 Emissions at Target EI – Project
2023-24	0.5693	3.2		1.82176	1.82176
2024-25	0.5379	3.2		1.72128	1.72128
2025-26	0.5031	3.2 (2.8)		1.60992	1.40868
2026-27	0.4651	3.2 (2.8)		1.48832	1.30228
2027-28*	0.3892	3.2 (2.8)		1.24544	1.08976
2028-29*	0.3067	(2.8)		0	0.85876
2029*	0.2178	(2.8)		0	0.60984
		Total		7.88672	8.81236

* Includes periods applicable only to proposed extended life of operations under the Chain Valley Consolidation Project

As noted above in relation to 2035 and 2050 emissions, any emissions associated with fugitive emissions in ventilation emissions after the cessation of mining activities would be subject to the NGER Safeguard Mechanism Emissions Intensity scheme, provided that the combined Scope 1 emissions were greater than 100,000 tCO₂-e. Without a production variable (i.e. no ROM Coal production), the entirety of the fugitive emissions generated by the site would need to be offset under the Safeguard Mechanism.

The Department requests further information to demonstrate how the Chain Valley Consolidation Project addresses the avoidance-mitigation-offset hierarchy principles within this guideline.

The Project seeks a continuation of existing operations. As discussed in the GHGEA (Umwelt, 2022) and in the Delta Coal Response to the IEAPM (Delta Coal, 2024), legacy fugitive emissions associated with historical workings represent a significant contribution to the operations Scope 1 emissions and are largely independent of ROM coal production rate. These emissions cannot be avoided short of ceasing operations and sealing the mines. This option is not consistent with the objective of the Project which is to maintain a reliable cost-effective supply of coal to the VPPS.

The proposed Greenhouse Gas Management Plan will include consideration of different options to mitigate/reduce emissions from all sources, including these legacy emissions. Options to be investigated in the preparation of the Plan and over the life of the Project will include:

- sealing of historical workings

¹ The GHGEA (Umwelt 2022) calculated a lower total Scope 1 emissions of the life of the Project due to calculations being based on predicted production rates rather than a maximum rate.

- pre-mining seam drainage (either as in-seam or surface to seam) and capture/ combustion of drained gas
- opportunities to use or flare ventilation air from the mine in air intake for the VPPS (and therefore reduce methane emissions to the atmosphere).

Should the emissions intensity of operations exceed the Safeguard Mechanism targets, the purchase of credits approved under the scheme will be necessary.

Delta Coal, and previous owners of the mines, have investigated a range of different options to reduce emissions over the past two decades with available options identified as not being reasonable and/or feasible due to a range of factors including:

- prohibitive capital costs
- implications for supply continuity
- safety or environmental constraints
- immaturity of technology or approval, and/or
- legal or tenure constraints.

Options related to the capture and use or flaring of fugitive emissions is also constrained by the relative percentages of methane and carbon-dioxide in the extracted air/gas.

The application of the Safeguard mechanism creates a financial driver for reductions and the availability of carbon offsets provides a financial benchmark against which a marginal cost of abatement can be determined. Further and improved sealing of inactive areas of former underground mining operations is considered to present the best opportunities for reducing, but not completely avoiding, fugitive emissions. However, due to the short duration of the Project, it is likely that most other mitigation options will not be viable or feasible due to either capital costs implications and/or lead times associated with approval and installation timeframes.

It is noted that, should the project not proceed, fugitive emissions from other operations and emissions associated with the transport of this coal to the VPPS would still arise; accordingly, the predicted emissions from the Project does not represent a net increase in emissions relative to the Project not proceeding.

The Department also requests that further information is provided as to how the Project addresses commitments under the 2015 Paris Agreement with particular consideration of Scope 3 emissions.

As noted above, the Project does not seek approval for coal production beyond 31 December 2029. While there may be some minor volumes of coal produced in the 2029 production year that are combusted in 2030, these quantities are expected to be negligible in terms of overall Paris Agreement commitments.

Accordingly, Scope 3 emissions associated with the combustion of coal from the Project are not expected in 2030 and therefore are considered unlikely to have any impact on signatories to the 2015 Paris Agreement meeting their commitments.

The primary purpose of the Project is to supply coal to the VPPS, which is owned by Delta Coal's parent company, for electricity generation. However, to cover a scenario where sale to the VPPS is not possible during the life of the Project, Delta Coal seeks a continuation of the existing ability to export up to 660,000t of product coal from the operations. This is only likely to occur in the event of an unplanned extended shut-down of VPPS during the life of the Project.

As export coal has not been sold by Delta Coal (i.e. since acquisition of the mines from Centennial and Lake Coal), potential export destinations are unknown and it is not possible to identify with any certainty likely tonnages to specific countries (other than note that maximum tonnages sold overseas would be capped at 660,00 tpa). In the unlikely event that coal is sold to the export market, Delta Coal commits to limiting any such sales to purchasers bound by legislated commitments reflecting the destination country's commitments under the 2015 Paris Agreement. As noted above however, it is considered unlikely that any material quantities of product coal from the Project would be combusted in 2030 or beyond and would therefore be unlikely to impact any target countries commitments under the 2015 Paris Agreement.

Irrespective of whether the Project is approved. VPPS will require coal for its operations and Scope 3 emissions associated with this production attributed to the Project in the GHGEA will occur irrespective of whether the Project occurs.

It is noted that the regulation of GHG emissions from VPPS and the broader electricity sector is also subject to State and Commonwealth Government commitments regarding the 2015 Paris Agreement and broader policy considerations associated with National Electricity Market supply requirements and energy Intensity targets. These emissions are outside the control of Delta Coal and Government regulation of emission reductions from this sector will necessarily have regard to broader public interest considerations including electricity supply and pricing considerations in the event that projected supply from lower GHG intensive sources cannot meet demands or alternative supply options have unreasonable market implications (including cost of supply). The ability for the Project to maintain consistent and cost-effective supply for VPPS is a relevant consideration within this broader public interest consideration.

We trust this information meets with your current requirements. Please do not hesitate to contact the undersigned on 1300 793 267 should you require clarification or further information.

Yours sincerely

A handwritten signature in blue ink, appearing to read 'David Holmes', with a long horizontal flourish extending to the right.

David Holmes
Principal Environmental Consultant

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References:

Delta Coal, 2024, *Chain Valley Consolidation Project: RFI-Delta Coal, 2024, SSD-17017460 Chain Valley Consolidation Project: RFI-66888209 Request For Information – IEAPM Greenhouse Gas Advice*, Letter to Department of Planning, Housing and Infrastructure dated 31 May 2024

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NSW EPA, 2024b) *Fact Sheet: Climate Change Policy Action Plan – information for proponents and licensee*. <https://www.epa.nsw.gov.au/your-environment/climate-change/policy-and-action-plan/information-for-proponents> Page updated 6 November 2024 and Accessed 14 January 2025)

NSW EPA, 2024, *NSW EPA Guide for Large Emitters – Draft for Consultation*, https://yoursay.epa.nsw.gov.au/download_file/view/1249/664 Accessed 14 January 2025.

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