



4 November 2025

NSW Environmental Protection Authority
Locked Bag 5022
Parramatta NSW 2124

By email: climatechange.review@epa.nsw.gov.au

To whom it may concern,

RE: PEABODY – FEEDBACK ON THE EPA'S CONSULTATION DRAFT CLIMATE CHANGE LICENSEE REQUIREMENTS

This cover letter and enclosed Feedback Report (Enclosure 1) has been prepared by Peabody Energy Australia Pty Ltd (Peabody) to provide feedback on the draft EPA reform package released for consultation.

Peabody along with a consortium of subsidiaries operate seven facilities within Australia that are subject to the Safeguard Mechanism, of which three are located in NSW (Wilpinjong Coal Mine, Wambo Coal Mine and Metropolitan Colliery).

Peabody acknowledges that, in collaboration with its stakeholders, Peabody has a responsibility to reduce its greenhouse gas emissions to fulfill its ambition of achieving net zero emissions by 2050 (Peabody, 2022)¹. Applying emission reduction technology to existing resources and infrastructure must balance the need for a timely transition with the necessity for steel and affordable, reliable energy (Peabody, 2025)².

Peabody is committed to responsibly mining its existing thermal coal reserves, recognising the role coal continues to play in meeting growing global energy demand (Peabody, 2025)².

Feedback Report Summary

According to the Net Zero Commission (2025)³ the NSW Resources Sector has already demonstrated measurable progress in reducing greenhouse gas emissions and is the only sector that has achieved an average annual reduction rate of approximately 2% between 2005 and 2022, which is aligned with the decline required to meet NSW's net zero pathway between 2005 and 2030.

Projections from NSW DCCEEW further support that through the application of the Safeguard Mechanism would result in the NSW coal sector largely achieving the NSW legislated economy wide net emissions targets for 2030, 2035 and 2050 *in the absence of any additional NSW policy augmentation*.

¹ Peabody Energy Corporation (2022) *Peabody Statement on Climate Change*.

Website: <https://www.peabodyenergy.com/Peabody/media/MediaLibrary/Sustainability/Peabody-Statement-on-Climate-Change-2022-FINAL.pdf>

² Peabody Energy Corporation (2025) *2025 Sustainability Report*.

Website: https://www.peabodyenergy.com/peabody/media/mediaLibrary/2025_peabody_sustainability_report.pdf

³ Net Zero Commission (2024) *2024 Annual Report*.

Website: <https://www.parliament.nsw.gov.au/tp/files/190092/Enclosure%201%20-%20Net%20Zero%20Commission%202024%20Annual%20Report.pdf>

Given the existing Resources Sector emission reductions achieved since 2005 relative to other emitting sectors in NSW, plus additional emission reductions projected by NSW DEECW as arising from the reformed Commonwealth's Safeguard Mechanism, the NSW EPA should carefully consider the productivity implications of adding further duplication between State and Federal Government emission reduction obligations on existing Safeguard facilities in NSW.

As the EPA would be aware, the complexity of the NSW approvals processes for major projects often results in modification applications taking years to prepare, be assessed, ultimately to be determined and associated secondary approvals to be obtained and biodiversity offset obligations resolved. Any implementation timeframes that are introduced in the EPA's reform package need to be reflective of contemporary approvals realities in the NSW mining sector and this reinforces the need for whole-of-Government integration of any EPA reform package.

Peabody suggests that revision of the *Strategic Statement on Coal Exploration and Mining in NSW* (NSW Government, 2021) should provide clear direction to proponents, regulatory Agencies and Government-owned entities as to the NSW Government's stance for the continuation of coal production in NSW. Clarity from the NSW Government on support for existing coal mining operations would particularly assist in signalling to all interested parties that the industry should be supported in its efforts to continue to reduce the greenhouse gas intensity of coal production in NSW.

Proposed reforms should also be targeted carefully. Scope 1 emissions are the direct responsibility of the mining companies, whereas Scope 2 emissions are captured under the Scope 1 reporting of electricity generators. Focusing on Scope 2 within the Resources Sector risks double-counting, creating regulatory inefficiency and disincentivising long term electrification strategies.

Peabody's comments on the proposed new EPA requirements for NSW's large greenhouse gas emitters below have four main components aimed *at reducing additional duplicative regulatory burden on our mining operations in NSW*.

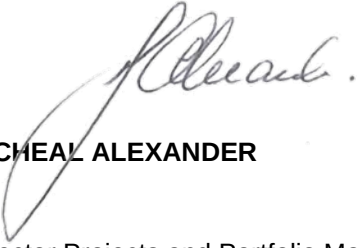
These are as follows:

1. Co-ordination of all major NSW Government agency activities on the future of the coal sector, abatement expectations and associated requirements.
2. Avoiding simplistic CO₂-e triggers for additional methane abatement related obligations and replacing these with triggers that are methane-specific and suitably differentiated for the differing contexts of open cut and underground operations.
3. Recognising the material economic implications of potentially introducing simplistic renewable fuel mandates on industry. Any mandate should allow for the application of equivalent diesel fuel consumption reduction measures, and/or the equivalent application of offsets (i.e. ACCUs) based on a site-specific reasonable and feasible assessment conducted by the operator.
4. Providing feedback on the practicality of key components of individual draft EPA consultation documents.

Peabody appreciates the opportunity to provide feedback on the draft reform package and would be happy to engage further with the EPA on any of the comments provided.

Please contact the undersigned if you have any queries or require any additional information.

Yours sincerely,

A handwritten signature in dark ink, appearing to read 'Micheal Alexander', with a large, sweeping initial 'M'.

MICHEAL ALEXANDER

Director Projects and Portfolio Management (NSW)

Enclosure 1 Feedback Report on The EPA's Consultation Draft Climate Change Licensee Requirements.

ENCLOSURE 1

**FEEDBACK REPORT
ON THE EPA'S
CONSULTATION DRAFT CLIMATE CHANGE LICENSEE REQUIREMENTS**

PEABODY

PEABODY

**FEEDBACK REPORT
ON THE EPA'S
CONSULTATION DRAFT CLIMATE CHANGE LICENSEE REQUIREMENTS**



November 2025

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1 INTRODUCTION

The New South Wales (NSW) Environment Protection Authority (EPA) is seeking public feedback on the proposed new requirements for NSW's large greenhouse gas emitters, including three consultation draft documents (the draft EPA reform package):

- *Proposed Climate Change Licensee Requirements* (Draft Licensee Requirements) (NSW EPA, 2025a);
- *Climate Change Mitigation and Adaptation Plans: Proposed Mitigation Requirements* (Draft CCMAP Requirements) (NSW EPA, 2025b); and
- *Proposed Greenhouse Gas Mitigation Guide for NSW Coal Mines* (Draft Coal Mine Mitigation Guide) (NSW EPA, 2025c).

This document has been prepared by Peabody Energy Australia Pty Ltd (Peabody) to provide feedback on the three documents released for consultation.

1.1 BACKGROUND TO PEABODY OPERATIONS

Peabody is a subsidiary of Peabody Energy, one of the world's largest private-sector coal companies. Peabody has been active since 1883 and has, through its subsidiaries, majority interests in coal operations located throughout all major U.S. coal-producing regions and in Australia. It has metallurgical and thermal coal customers in more than 25 countries on six continents.

In 2024, Peabody operations achieved total sales of 118.1 million tons primarily to steel producers in U.S., Japan, Australia, Taiwan, and Indonesia, as well as to electricity generators in Australia and Asia.

Peabody, along with a consortium of subsidiaries, operate seven facilities within Australia that are subject to the Safeguard Mechanism including the Wilpinjong Coal Mine, Wambo Coal Mine, Metropolitan Colliery (Metropolitan Coal Mine), Centurion Coal Mine, Moorvale Coal Mine and Coppabella Coal Mine. Of the seven Safeguard Mechanism facilities within Australia, three are located within NSW. Table 1 provides a summary of these three facilities.

Table 1
Summary of NSW Facilities Subject to New Climate Change Licensee Requirements

Mine	Operating Company	Coalfield Location	Mine Type	Approved to Mine Until	FY24 Safeguard Scope 1 Emissions (t CO ₂ -e)
Wilpinjong Coal Mine	Wilpinjong Coal Pty Ltd	Western Coalfield	Surface	December 2033	162,960
Wambo Coal Mine	Wambo Coal Pty Limited	Hunter Coalfield	Underground	August 2042	162,094
Metropolitan Coal Mine	Metropolitan Collieries Pty Ltd	Southern Coalfield	Underground	June 2032	696,752

1.1.1 Wilpinjong Coal Mine

The Wilpinjong Coal Mine is an existing open cut coal mining operation located approximately 40 kilometres (km) north-east of Mudgee within the Mid-Western Regional Local Government Area (LGA), in central NSW.

The Wilpinjong Coal Mine produces thermal coal products which are transported by rail to domestic customers for use in electricity generation and/or to port for export. Open cut mining operations are undertaken 24 hours per day, seven days per week.

The approved Wilpinjong Coal Mine includes some eight named open cuts (i.e. Pits 1-8), plus significant ancillary and supporting infrastructure. This infrastructure includes run-of-mine (ROM) coal storage, coal handling and processing, rail spur, rail loading, internal roads, pipelines, electricity distribution, workshops and water management structures.

Development Consent (SSD-6764) for the Wilpinjong Extension Project provides for the continued operation of the Wilpinjong Coal Mine at rates of up to 16 million tonnes per annum (Mtpa) of ROM coal, until 2033.

Due to the historically low emissions intensity of production at the Wilpinjong Coal Mine, the existing Emission Intensity Determination (EID) for ROM coal is 0.009093 t CO₂-e / t ROM (CER, 2025). This ranks the Wilpinjong Coal Mine as having the second-lowest emissions intensity among approximately 70 Australian coal mining facilities with published EIDs. This low emissions intensity is attributable to both very low fugitive emissions characteristic of the Western Coalfield and also low strip ratios typical of operations at the Wilpinjong Coal Mine.

In FY24 the Wilpinjong Coal Mine emitted approximately 162,960 t CO₂-e or approximately 16% of Peabody's Scope 1 NSW emissions.

1.1.2 Wambo Coal Mine

The Wambo Coal Mine is situated approximately 15 km west of Singleton, near the village of Warkworth, NSW and currently consists of underground operations owned and operated by Peabody, and an open cut mining operation which is a 50:50 joint venture between United Collieries (Glencore and MEU) and Wambo Coal (Peabody).

A range of open cut and underground mine operations have been conducted at the Wambo Coal Mine since mining operations commenced in 1969 producing thermal coal. Mining under Development Consent (DA 305-7-2003) commenced in 2004, with both open cut and underground operations conducted until 2020.

From 1 December 2020, the Wambo Coal Mine transitioned into Phase 2 operations which included underground mining and coal handling and processing.

Wambo Coal Mine has an EID of approximately 0.07258 t CO₂-e / t ROM, only marginally higher than the industry default value of 0.0653 t CO₂-e / t ROM, as specified under the Safeguard Rule (CER, 2025).

In FY24 the Wambo Coal Mine emitted approximately 162,094 t CO₂-e or approximately 16% of Peabody's Scope 1 NSW emissions.

Underground mining operations at the Wambo Coal Mine are approved until August 2042 at rates of up to 9.75 Mtpa of ROM coal, however the company made a decision to cease operations in the current mining area in 2025.

The coal handling and processing plant will continue to operate in support of the United Wambo Open Cut Coal Mine (separate coal mine operated by Glencore). While United Wambo is operated by Glencore, the potential significant impost of additional EPA requirements would also affect Peabody's interest in this joint venture.

1.1.3 Metropolitan Coal Mine

The Metropolitan Coal Mine is located approximately 30 km north of Wollongong, adjacent to the township of Helensburgh, NSW.

The Metropolitan Coal Mine is one of the longest continually running coal mining operations in Australia, with a history dating back to the 1880s. The Metropolitan Coal Mine is located in the Southern Coalfield of NSW within the Wollongong LGA.

Product coal produced at the Metropolitan Coal Mine is primarily sold as a metallurgical coal used in steelmaking with around half of the metallurgical product being sold to BlueScope's Port Kembla Steelworks. The remaining metallurgical product coal is sold to overseas markets. The Metropolitan Coal Mine also produces coal rejects which are exported via rail to Port Kembla Coal Terminal and typically sold for energy producing purposes (i.e. as a thermal coal) or for use in manufacturing.

Mining operations at the Metropolitan Coal Mine are approved until June 2032 at a maximum ROM coal extraction rate of 3.2 Mtpa.

Because the Metropolitan Coal Mine is an underground coal mine located in the Southern Coalfields, it has a comparatively higher EID to Peabody's other mines in NSW, with an EID of 0.2969 t CO₂-e / t ROM.

In FY24 the Metropolitan Coal Mine produced approximately 696,752 t CO₂-e or approximately 68% of Peabody's Scope 1 emissions in NSW.

1.1.4 Peabody Supports Net Zero

Peabody acknowledges that, in collaboration with its stakeholders, Peabody has a responsibility to reduce its greenhouse gas emissions to fulfill its ambition of achieving net zero emissions by 2050 (Peabody, 2022). Applying emission reduction technology to existing resources and infrastructure must balance the need for a timely transition with the necessity for steel and affordable, reliable energy (Peabody, 2025).

In recent years, this transition has been driven primarily by Peabody's strategic focus on reducing reliance on thermal coal in line with projected demand trends, along with expanding its metallurgical coal operations to support continued global steelmaking requirements (Peabody, 2025).

Peabody is committed to responsibly mining its existing thermal coal reserves, recognising the role coal continues to play in meeting growing global energy demand (Peabody, 2025).

Potential emission reduction levers include (Peabody, 2025):

- *Incorporating the risks and opportunities in each mine's emission profile to optimize emission and energy performance*
- *Prioritizing emission reduction initiatives that create value and mitigate risk, especially in relation to the cost structure of each of our mines*
- *Minimizing dependence on purchased offsets through effective emission reduction*

Peabody's ongoing compliance with the Safeguard Mechanism across its portfolio of Australian mines, will facilitate management of its facilities in a manner that is consistent with both meeting Australia's interim targets under its Nationally Determined Contribution, and ultimately Australia's net zero target for 2050.

1.2 STRUCTURE OF THIS DOCUMENT

An overview of the main text of this Feedback Report is presented below:

Section 1	Background on Peabody's operations and context for this submission.
Section 2	Relevant State and Federal context to the submission.
Section 3	General feedback on the proposed requirements.
Section 4	Document-specific feedback, including responses to the specific EPA consultation questions set out in each draft document.
Section 5	Summary of key matters that warrant further consideration by the NSW EPA based on Peabody's review.
Section 6	Lists the documents referenced in the main text of the Feedback Report.

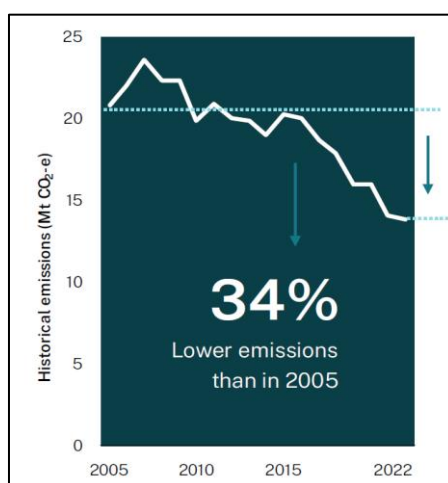
2 RELEVANT STATE AND FEDERAL CONTEXT TO THE SUBMISSION

2.1 NSW RESOURCES SECTOR PERFORMANCE TO DATE

As part of the *Climate Change (Net Zero Future) Act 2023* (Net Zero Future Act), the NSW Government has legislated emission reduction targets of 50% below 2005 levels by 2030, 70% below 2005 levels by 2035, and net zero by 2050. These trajectories are illustrated on Chart 1 by the red line.

The Net Zero Act also established the Net Zero Commission (NZC) to monitor, review, report on, and provide advice regarding progress towards these targets.

The NZC released its first annual report in 2024 (NZC, 2024), which found that the NSW Resources Sector accounted for a net 12% of total state emissions placing it as the fifth largest contributor out of seven sectors. The NSW Resources Sector decline in emissions since 2005 was highlighted graphically by the NSW NZC in Figure 2.6.A of its 2024 report (NZC, 2024) (reproduced here as Figure 1).



Source: NZC (2024).

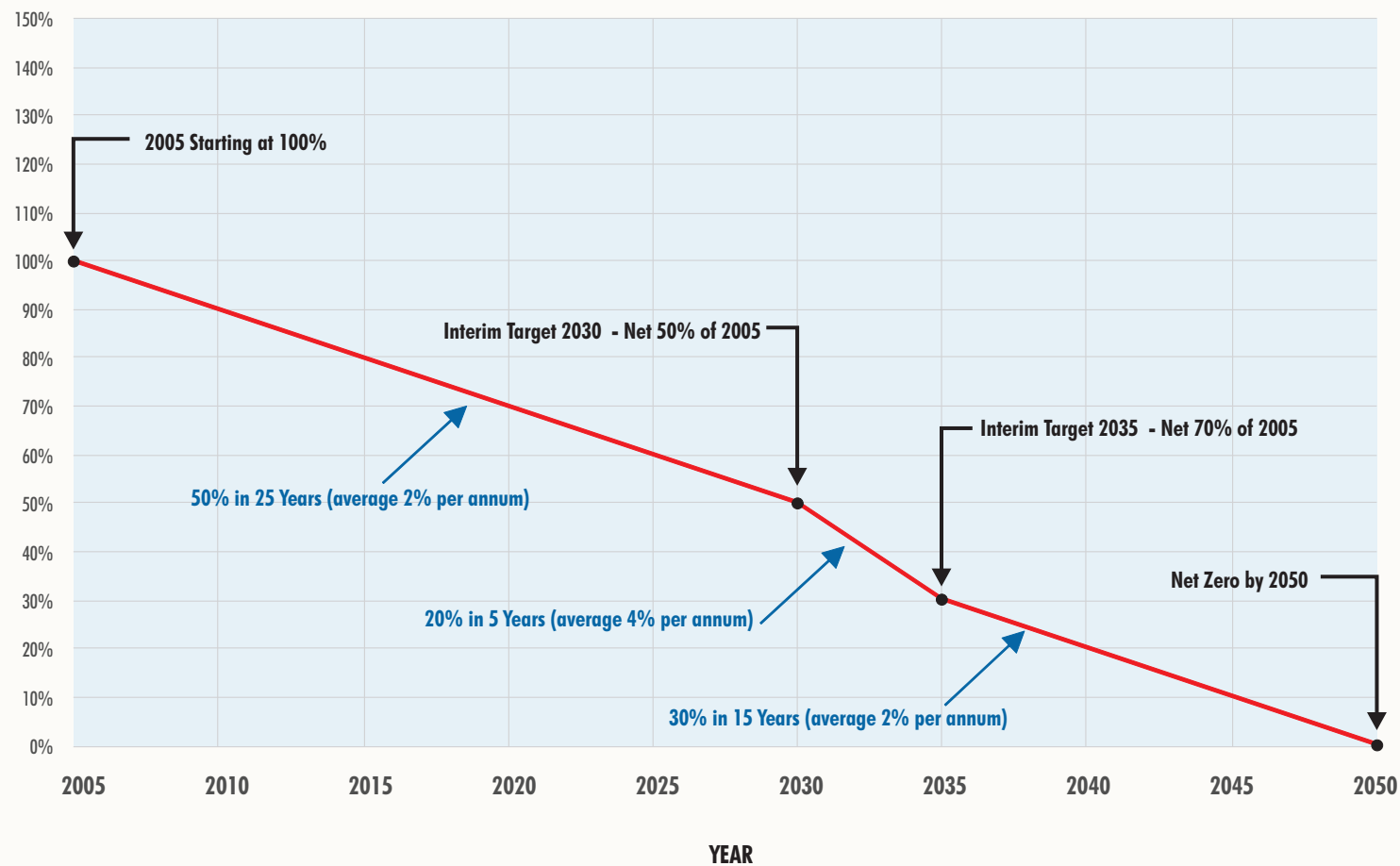
Figure 1
Change in Annual Resources Sector Emissions NSW (2005-2022)

Excluding the influence of the land use sector, the relative performance of key economic sectors against interim reduction targets is shown on Chart 2. This comparison reveals that the Resources Sector was the only sector achieving an average annual reduction rate of approximately 2%, which is aligned with the decline required to meet NSW's net zero pathway between 2005 and 2030.

The Net Zero Future Act emission reduction targets established by NSW for 2030 and 2035 are more ambitious than the current Commonwealth targets as set out in Australia's NDC. However, when considered over whole of the relevant periods between 2005 and 2030 (2% per annum), 2030 and 2035 (4% per annum) and 2035 and 2050 (2% per annum) the annual emission reduction rates are generally comparable to, or lower than the reformed Safeguard Mechanism decline rates (i.e. 4.9% decline rate until financial year 2030 and a subsequent minimum 3.285% reduction after financial year 2030).

The observed reduction in reported Resource Sector emissions between 2005 and 2022 occurred prior to the introduction of the reforms to the Commonwealth Safeguard Mechanism in 2023, which will act to drive further industry net emission reductions. This is explored further below.

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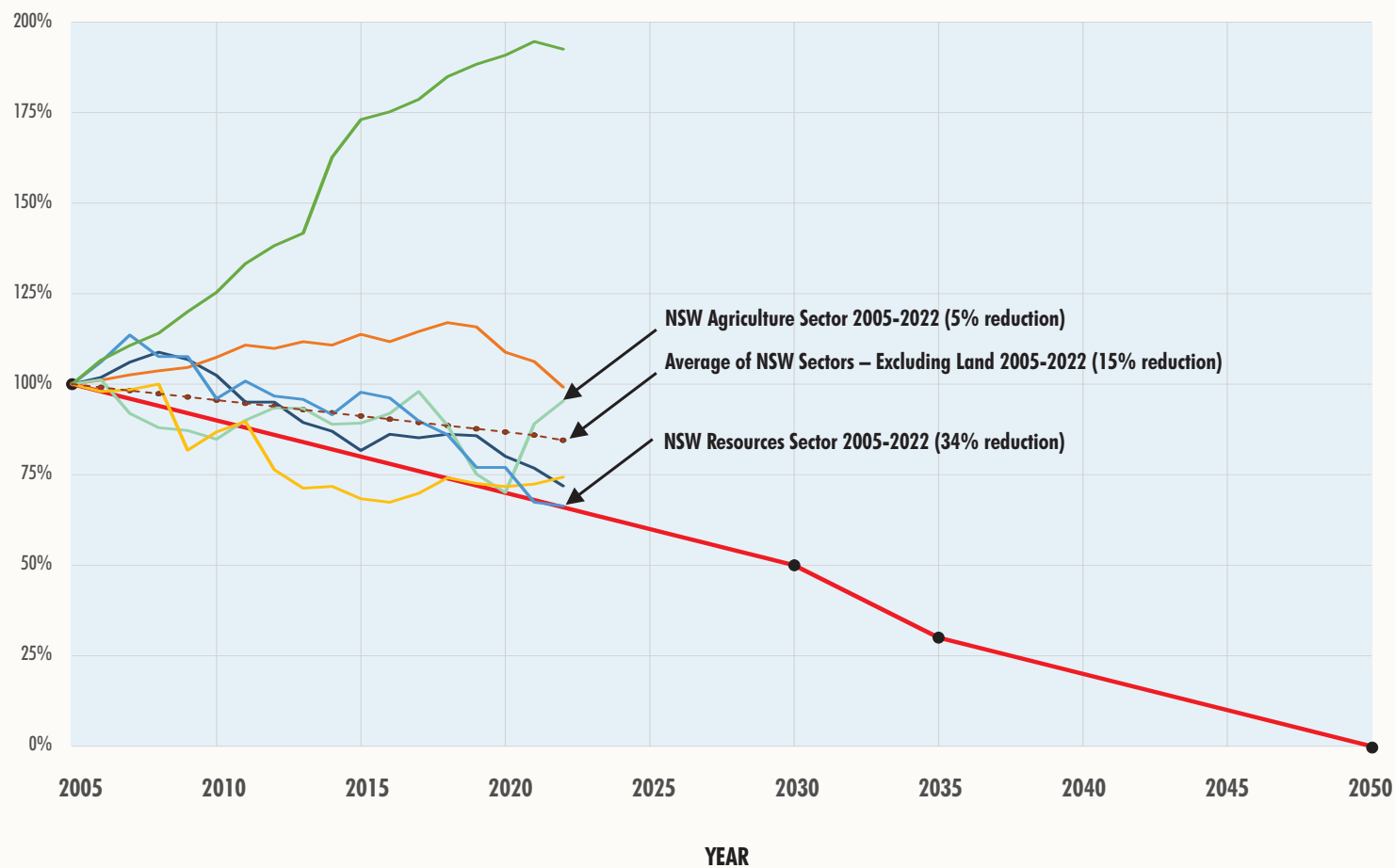
Source: Metropolitan Coal(2025)

Peabody

NSW Net Zero Interim Targets
as Annual Average Net Reduction Rates

Chart 1

\\MET-21-25_GHG_001A



Source: After NZC (2024)

Peabody

WILPINJONG COAL MINE

NSW Sectoral Performance 2005-2022

(Excluding Land Sector)

- Compared to NSW Net Zero Targets

Chart 2

2.2 NSW COAL SECTOR PROJECTIONS UNDER THE REFORMED SAFEGUARD MECHANISM

The anticipated impact of the Safeguard Mechanism on NSW coal mining emissions is provided by recent projections prepared by the Climate and Atmospheric Science, Science and Insights Division of the NSW Department of Climate Change, Energy, the Environment and Water (DCCEEW) (NSW DCCEEW, 2025). These projections were prepared in 2025 and are reproduced on Figure 2.

The NSW DCCEEW (2025) projections reproduced on Figure 2 indicate that the introduction of the reformed Safeguard Mechanism would (as a percentage of 2005 emissions) likely result in net NSW coal mine emissions *undershooting* the 2030 NSW emission reduction target and making very significant progress towards both the net 2035 and 2050 NSW reduction targets for coal mining in the State.

NSW DCCEEW projections indicate 2035 outcomes potentially varying between a modest undershoot or overshoot (approximately +/- 4%) of the NSW State targets with the reformed Safeguard Mechanism, depending upon the number of new coal developments that are approved (i.e. SGM 1 represents currently approved operations and SGM 2 and 3 represent additional scenarios with mining proposals currently in the approvals process) (Figure 2).

In this context, the NSW Resources Industry existing reported emissions reductions since 2005, plus the Commonwealth Safeguard Reforms ratcheting down Safeguard facility baselines, is projected by NSW DCCEEW to result in the NSW coal sector largely achieving the NSW legislated economy wide net emissions targets for 2030, 2035 and 2050 *in the absence of any additional NSW policy augmentation*.

Peabody notes that the Commonwealth Safeguard Mechanism may also be amended over the period to 2050, and Safeguard Mechanism baseline decline rates could potentially be adjusted in response to release of Australia's ongoing progressive Nationally Determined Targets (NDCs) that are required to be submitted every 5 years.

Given the existing Resources Sector emission reductions achieved since 2005 relative to other emitting sectors in NSW, plus additional emission reductions projected by NSW DCCEEW as arising from the reformed Commonwealth's Safeguard Mechanism, the NSW EPA should carefully consider the productivity implications of adding further duplication between State and Federal Government emission reduction obligations on existing Safeguard facilities in NSW.

This is explored further below.

2.3 WESTERN AUSTRALIAN EPA'S APPROACH TO SAFEGUARD FACILITIES

In October 2024 the Western Australian Government released an updated greenhouse gas emissions policy for major projects assessed by the Western Australian Environmental Protection Authority, effectively removing duplication between state and commonwealth emission reduction obligations for projects addressed by the Safeguard Mechanism (Government of Western Australia, 2024a):

... Having considered the recommendation, the Government has determined that where proposals with significant greenhouse gas emissions are adequately dealt with by other regulatory measures such as the strengthened Safeguard Mechanism, those emissions should not be regulated by the State. ...

Impact of the Safeguard Mechanism

Scenario	Subsector	Actual (Mt CO ₂ -e)			Projected (Mt CO ₂ -e)			Change since 2004-05 (%)		
		1990-91	2004-05	2021-22	2029-30	2034-35	2049-50	2029-30	2034-35	2049-50
BAU 1	Fugitives	21,528	19,019	10,062	11,857	8,748	802	-38	-54	-96
	Stat. energy	306	1,375	3,364	3,056	2,154	-	122	57	-100
BAU 2	Fugitives	21,528	19,019	10,062	13,066	9,466	1,055	-31	-50	-94
	Stat. energy	306	1,375	3,364	3,899	2,958	60	184	115	-96
BAU 3	Fugitives	21,528	19,019	10,062	13,649	9,738	1,146	-28	-49	-94
	Stat. energy	306	1,375	3,364	4,035	3,385	76	193	146	-94
SGM 1	Scope 1	21,833	20,394	13,425	7,706	5,248	801	-62	-74	-96
SGM 2					9,570	6,922	802	-53	-66	-96
SGM 3					9,636	7,404	802	-53	-64	-96

Notes: BAU = Business-as-usual; SGM = Safeguard Mechanism; Stat. energy = Stationary energy emissions (i.e. fuel combustion)

Reductions relative to 2005 levels

- Under BAU 1 fugitive emissions in 2030 of 11.9 Mt CO₂-e will be 38% below the 2005 level of 19.0 Mt CO₂-e, falling short of the 50% reduction in 2030 which will require emissions to drop to 7.2 Mt CO₂-e
- Under SGM 1 scope 1 emissions in 2030 of 7.7 Mt CO₂-e will be 62% below the 2005 level of 19.0 Mt CO₂-e

Department of Climate Change, Energy, the Environment and Water



Source: NSW DCCEEW, 2025

Figure 2: DCCEEW Projected Impact of the Safeguard Mechanism on NSW Coal Emissions

The Western Australian Government further explained the reforms as follows (Government of Western Australia, 2025b):

The Commonwealth Government's reforms to the Safeguard Mechanism, which passed Federal Parliament on 30 March 2023, establish a nationally consistent approach to reducing greenhouse gas emissions for Australia's largest emitters, imposing declining baselines on covered facilities, known as designated large facilities.

Setting duplicate greenhouse gas limits at the state level on proposals regulated under the Safeguard Mechanism creates confusion for proponents and administrative burden for regulators without delivering any additional environmental benefit.

This policy change is focused on removing duplication and does not change Western Australia's commitment to working with all sectors of the economy to achieve net zero greenhouse gas emissions by 2050.

...

While the NSW EPA's statutory obligations may vary somewhat from the Western Australian Environmental Protection Authority, Peabody suggests the NSW DCCEEW (2025) projections of the impact of the reformed Safeguard Mechanism on NSW coal sector emissions highlights that the conclusions reached by the Western Australian Government for major projects are equally applicable to the NSW coal sector.

Special care therefore needs to be applied by the NSW EPA when considering adding further and potentially economically regressive requirements (refer Section 3.2) upon those larger NSW coal mining operations that already have declining nationally determined net emission reduction obligations under Commonwealth legislation.

2.4 SUBMISSION CONTEXT

In the context of the significant progress already made by the NSW Resources Sector relative to other NSW sectors (Section 2.1), the significant future impact of the Commonwealth Safeguard reforms (Section 2.2), Peabody's comments on the proposed new EPA requirements for NSW's large greenhouse gas emitters below have four main components aimed *at reducing additional duplicative regulatory burden on our mining operations in NSW*.

These are as follows:

1. Co-ordination of all major NSW Government agency activities on the future of the coal sector, abatement expectations and associated requirements.
2. Avoiding simplistic CO₂-e triggers for additional methane abatement related obligations and replacing these with triggers that are methane-specific and suitably differentiated for the differing contexts of open cut and underground operations.
3. Recognising the material economic implications of potentially introducing simplistic renewable fuel mandates on industry. Any mandate should allow for the application of equivalent diesel fuel consumption reduction measures, and/or the equivalent application of offsets (i.e. ACCUs) based on a site-specific reasonable and feasible assessment conducted by the operator.
4. Providing feedback on the practicality of key components of individual draft EPA consultation documents.

Peabody also considers it important to note that the EPA recognises that NSW's targets for 2030, 2035 and 2050 as set out in the Net Zero Act are all net, rather than absolute (emphasis added):

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

Offsets are an integral part of Australia's approach to reduce net emissions because they are one of the most economically efficient methods. This needs to be acknowledged and facilitated by EPA, not discouraged. The Safeguard Mechanism and carbon credit arrangements provide a flexible, market-based approach to reducing the net emissions (i.e. emissions intensity) of Australia's largest industrial facilities.

Further, the NSW EPA should also consider whether some of the proposed measures in the draft consultation package are equitable between economic sectors, relative to current greenhouse gas emission reduction performance and obligations that are likely to be imposed by the NSW Government on key emitting sectors.

For example, the supporting documents prepared for the consultation package includes an estimate of the 2022 methane emissions in the State, which highlights that agriculture is by far the largest source of fugitive methane emissions in NSW, followed by emissions from energy (i.e. largely underground coal mines) (NSW EPA, 2025d) (Chart 3). While methane mitigation technologies such as drainage, flaring and RTOs are being developed for application in the coal sector, with increasing regulatory pressure enforcing their uptake, comparable abatement requirements are not being enforced on agriculture despite its larger methane footprint.

Peabody acknowledges that underground coal mining emissions are currently a key source of NSW methane emissions. However, notably, major underground coal mines in NSW are already subject to the reformed Safeguard Mechanism, which is driving significant investigation and investments into additional methane destruction projects where it is reasonable and feasible for proponents to do so, and the offsetting of emissions where it is not. As the decline of the Safeguard Mechanism baseline continues, the cost of emission offsetting will support further investment in emission reduction in a manner that best suits the technical and financial capabilities of individual coal mines.

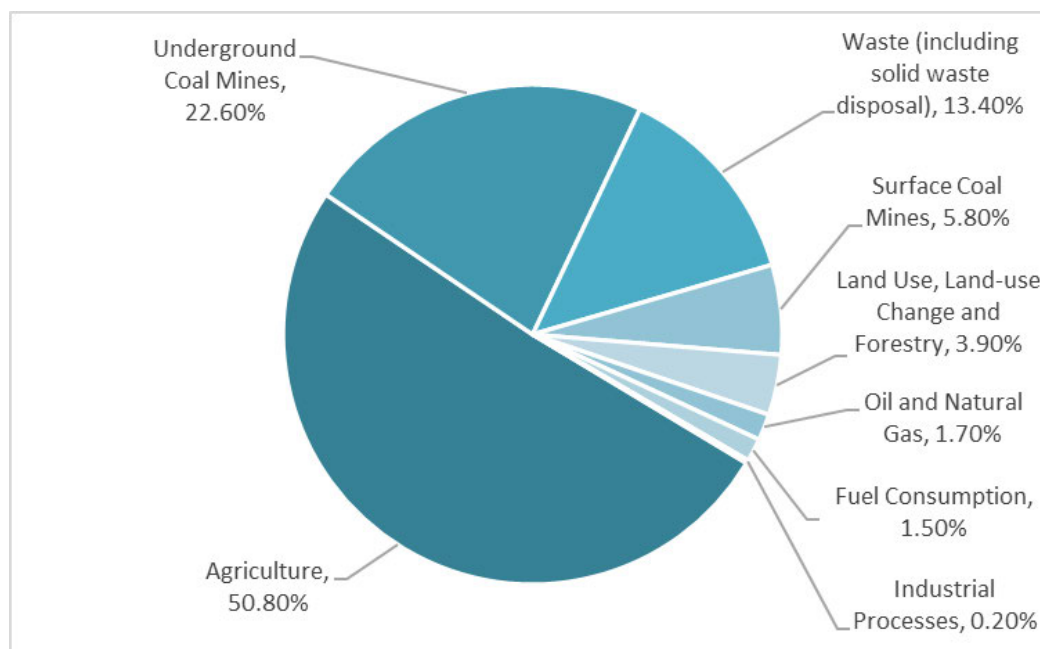
In comparison to the reduction in emissions from the NSW Resources Sector as outlined above (Section 2.10), the NZC (2025) summarised the NSW agricultural sector's progress on emission reduction since 2005 as follows:

The latest Inventory shows that since 2005, NSW has made limited progress in reducing emissions from the agriculture sector. ...

NSW and Australian Government emissions reduction initiatives continued to be rolled out in this sector in 2023–24. However, without accelerated efforts from governments and agricultural producers, the sector is unlikely to significantly contribute to the state's primary emissions reduction targets for 2030 and 2035, and it is likely to be the largest source of remaining emissions in 2050.

Methane destruction in the open cut sector is likely to be significantly more costly on a \$/tonne basis than from underground mines (i.e. where key methane emission sources are typically more localised, potentially accessible from adjacent underground workings, and/or already managed in pre-drainage and/or ventilation air). Open cut coal mines typically have much lower gas contents, and the ability to drain or abate methane is therefore inherently more limited.

Chart 3
Key Sources of Methane Emissions in NSW (2022)



Source: (NSW EPA, 2025d)

In comparison to NSW agricultural emissions (approximately 50% of methane emissions), the fugitive methane emissions of all open cut coal mines in NSW are dramatically lower (i.e. approximately 6% of methane emissions) (Chart 3), yet are proposed to face disproportionately greater regulatory pressure.

The fact that some 50% of NSW fugitive methane emissions are currently largely outside of the NSW EPA's current regulatory reach (and also outside of the reach of the reformed Commonwealth Safeguard Mechanism) does not, in Peabody's view, obviate the need for the NSW Government to consider questions of equitability in its proposed actions to reduce NSW fugitive methane emissions.

On this basis, any measures proposed by the EPA targeted at open cut coal mine methane emissions should only be directed at individual sites with markedly higher in-situ methane volumes and concentrations than are typically observed in NSW open cut contexts (refer Section 4.3).

3 GENERAL FEEDBACK ON THE REFORM PACKAGE

3.1 WHOLE-OF-GOVERNMENT APPROACH IS IMPERATIVE

In addition to the potential duplication of emission reduction requirements with the Commonwealth (Section 2.3), the proposed reform package as a whole (i.e. three EPA consultation documents) represents significant and material additional administrative and commercial imposts on existing coal mining operations in NSW, in aggressive timeframes. These issues are explored further in the sections below.

However, irrespective of Peabody's reservations about the planned timing and individual aspects of the draft reform package, for the EPA's ultimately adopted reforms to be implemented practically, significant additional co-operation and integration of NSW and Commonwealth regulatory agencies will be required than is currently evident to facilitate the proposed reforms.

In particular, Peabody is of the view that any additional requirements on underground mines to conduct pre-feasibility studies and/or implement methane abatement on ventilation air systems would need to be informed by prior resolution by Resources NSW of the safety requirements that will be applied under NSW legislation and publication of suitable Safety Guidance Documentation for each/any potentially applicable methane destruction technologies (e.g. Regenerative Thermal Oxidisers [RTOs]).

The process and timing for the publication of Safety Guidance Documentation and its relevance to the timing of the Mitigation Guide should be included in the next revision.

For underground mines in the Southern Coalfield that may be located within the relevant controlled Water Catchments (e.g. Metropolitan Coal Mine), whole-of-Government resolution of safety and associated surface infrastructure requirements/exclusion zones would need to be resolved with the positive involvement of Water NSW.

In many cases the installation of such methane destruction technologies or installations will never have been contemplated in previous State Significant Development or Part 3A approvals and may require additional modifications under the NSW *Environmental Planning and Assessment Act 1979*. As the EPA would be aware, the complexity of the NSW approvals processes for major projects often results in modification applications taking years to prepare, be assessed, ultimately be determined and associated secondary approvals to be obtained and biodiversity offset obligations resolved.

To leave each mine site to attempt to wade through the safety implications of the installation of new methane destruction technologies and to attempt to resolve various competing legislative requirements individually with the Resource Regulator and a long list of other interested NSW regulators and Government-owned entities at each mine site would be highly inefficient, significantly increase costs for proponents and delay methane destruction technology implementation at sites where such actions are ultimately found to be reasonable and feasible.

In addition, the NSW Government's explicit support for continued coal mining in NSW is required in order for proponents to make investment decisions on abatement projects with very significant capital costs.

Individual NSW regulatory agencies and semi-Government or Government-owned entities appear to have widely varying opinions of whether coal mining should continue to occur, which influences the level of constructive regulatory engagement.

In particular, the development and implementation of technologies such as RTOs will require significant upfront capital expenditure. Even if these technologies can, under certain scenarios, consistently treat methane at a lower cost per tonne of CO₂-e than the cost of offsets, proponents are unlikely to commit to these investments if there is uncertainty as to whether operations will be supported to continue in the medium to long term.

Similarly, long replacement cycles of major mining fleets means transition to lower emitting technologies is inherently gradual and dependent on alignment with equipment purchasing cycles. Certainty from the NSW Government would enable proponents to more confidently execute such investment decisions over time. Investment and procurement decisions made today will shape the sector's emissions profile and production capacity for the next decade.

Peabody understands that the *Strategic Statement on Coal Exploration and Mining in NSW* (NSW Government, 2021) (the Strategic Statement) is likely to be updated at some stage to reflect further evolution of the NSW Government's view of the industry.

Peabody suggests that revision of the Strategic Statement should provide clear direction to proponents, regulatory Agencies and Government-owned entities as to the NSW Government's stance for the continuation of coal production in NSW.

Any updated Strategic Statement should also specifically describe whether the NSW Government supports the continued production of coal from all existing coal mining regions of the state, including the underground mining operations in the Southern Coalfields such as Metropolitan Mine, which has been operating since the 1880s and supports domestic manufacturing at Bluescope's Port Kembla Steelworks operations.

Clarity from the NSW Government on support (or otherwise) for existing coal mining operations continuing would particularly assist in signalling to all interested parties that the industry should be supported in its efforts to continue to reduce the greenhouse gas intensity of coal production in NSW, as has demonstrably occurred since 2005 (Figure 1, Chart 4).

3.2 COMMERCIAL REALITIES

In the *Sector Pathways Review*, the Commonwealth Climate Change Authority (CCA) examined potential technology transition and emissions pathways in six key emission sectors to support Australia's transition to net zero emissions by 2050 (CCA, 2024). Part 1 of the *Sector Pathways Review* addresses the Resources sector, which incorporates Australian mining, oil and gas industries (CCA, 2024).

Key findings of Part 1 of the *Sector Pathways Review* (Resources) of potential relevance to the EPA reform package include (CCA, 2024a):

Decarbonisation of the (Resources) sector requires widespread electrification, and deployment of fugitive abatement technologies in oil, gas and coal mining operations.

...

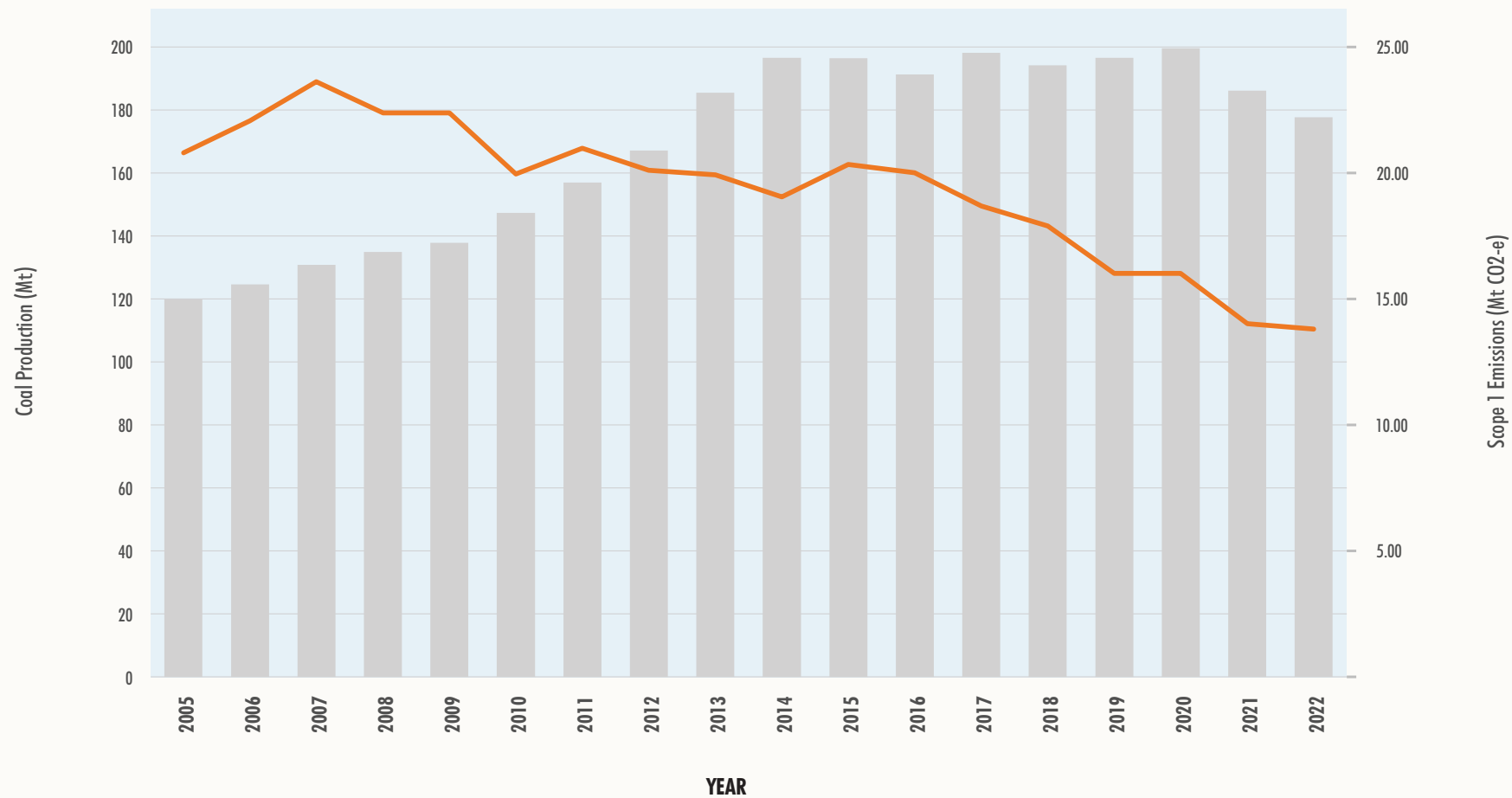
Electrification can play a significant role in reducing emissions from fuel combustion in the sector. Electric mining haulage and equipment is at pilot scale, with widespread adoption expected after 2030.

...

Based on available technologies, several sources of emissions across the sector are expected to remain largely unabated while the activities continue. There are few opportunities to significantly reduce fugitive emissions from surface coal mines.

...

Barriers to electrification and deployment of fugitive abatement measures across the sector include high upfront capital costs, integration challenges within existing facilities and the lack of access to a sufficient firm supply of renewable electricity.



Source: Chh DCCCEW (2024); NZC (2024)



NSW Coal Production and Resources Sector
Scope 1 Emissions 2005-2022

Chart 4

Proponents of mining development and existing Safeguard facilities need to weigh up many alternative options for the deployment of limited available capital. In the case of international companies such as Peabody, this includes considering alternative coal markets, producing countries and states. Potential capital-intensive emission abatement measures must be weighed against mine life, production schedules, and global competitiveness. The risk of deploying significant capital on emerging or maturing abatement technologies that have not yet been commercially deployed at full-scale in Australia needs to be considered against deploying this capital in alternative jurisdictions that are less restrictive.

For the NSW Government this could have the unfortunate effect of driving ongoing investment in mining operations offshore with detrimental impacts on employment, domestic coal supply (thermal and metallurgical) and state revenue.

With respect to operational costs, the EPA's draft reform package includes suggested mandates on low carbon diesel fuel percentages in 2030, 2035 and 2040.

The following sub-section explores some of the financial implications and marginal abatement cost of some alternative diesel products in a simple case study.

The findings of this case study highlight that the economically rational solution at present would be to offset a portion of a site's diesel fuel emissions via ACCUs, rather than implement a percentage of an alternative low-carbon diesel at significant incremental operational cost and incurring extreme marginal abatement costs.

3.2.1 Diesel Fuel Case Study

The draft Greenhouse Gas Mitigation Guide proposes incremental replacement of conventional fossil diesel with alternative low carbon diesel. All NSW coal mines that emit more than 25,000 t CO₂-e would be expected to utilise 5% low carbon diesel by July 2030, 10% by July 2035 and 25% by July 2040 unless an exemption or time extension is sought and granted by the EPA.

The draft Greenhouse Gas Mitigation Guide lists various low carbon diesel alternatives including biodiesel, renewable diesel, renewable methanol, renewable hydrogen and methane utilisation (drainage gas).

The EPA notes in the draft Greenhouse Gas Mitigation Guide that there is an existing capacity for biofuel production facilities in NSW, Queensland and Victoria to help meet the 2030 low carbon fuel target of 5%.

Biodiesel is generally blended with conventional diesel in ratios such as B5 (5% biodiesel) and B20 (20% biodiesel). Compatibility with diesel engines, particularly large mining haul trucks, varies considerably, and Original Equipment Manufacturer (OEM) warranty treatment of the use of biodiesel can vary depending on the blend and the manufacturer.

Peabody is of the view that encouraging use of biodiesel as a low-carbon fuel replacement for mining applications is not a viable long-term strategy for NSW. The percentage of biodiesel that can be safely used in existing, conventional diesel engines, major capital equipment for a mine, is inherently limited (and may also have implications for fuel efficiency). Given the ongoing, very significant existing capital investment in conventional major diesel capital equipment with long operational lives (i.e. typically >10 years and up to 25 years inclusive of rebuilds), encouraging local development of a low carbon diesel fuel industry for a fuel that cannot be used at high blend rates in conventional engines would naturally lead to an implementation dead-end, while only achieving modest carbon abatement.

Renewable diesel is commercially available in NSW, imported in limited volumes and is technically suitable as a “drop-in” replacement for conventional diesel. Renewable diesel is chemically very similar to conventional diesel and can be used directly in existing diesel engines at blend rates up to 100% without modification, unlike traditional biodiesel (IEA, 2021).

Renewable diesel is typically produced from an oil feedstock (vegetable oil such as soybean, palm or rapeseed, or waste oils such as animal fats and used cooking oils) which is reacted with hydrogen in the presence of a catalyst to modify the hydrocarbons to produce renewable diesel (IEA, 2024). Many manufacturers of major mining equipment/engines have already endorsed the use of renewable diesel at blend rates up to 100% (Cummins, 2023 Cummins, 2024a; Neste, 2024; Liebherr, 2024).

Domestic production capacity of renewable diesel is currently very limited, with supply dependent on imports or the development of new Australian facilities. Transport for NSW summarises the potential benefits, and status, of renewable diesel as follows (Transport for NSW [TfNSW], 2024):

- *Depending on the feedstock used, renewable diesel can reduce lifecycle greenhouse gas emissions by 60-80% per unit of energy, and tailpipe emissions by around 4%. ...*
- *Although there is a growing number of biorefineries proposed, particularly in Western Australia, there are still significant challenges to renewable diesel production or supply in Australia.*

Given the limited domestic production capacity and the growing interest in renewable diesel across various sectors, any additional supply that enters the market is likely to be shared across multiple industries. This includes not only road transport but also maritime and other sectors exploring decarbonisation pathways.

Importantly, the Australian Government has recently committed \$1.1 billion to support and stimulate domestic production of low carbon liquid fuels (LCLF), which includes renewable diesel, sustainable aviation fuels, and e-fuels (noting no support for biodiesel), explicitly recognising that mining is among the “hard-to-abate” sectors (Commonwealth DCCEEW, 2025).

Apart from certainty of future supply, the key constraint on the potential broadscale use of renewable diesel in the mining industry is its current high cost.

However, Peabody is of the strong view that low-carbon diesel replacements that can be used at up to 100% blend rates in conventional engines and do not pose risks to equipment warranties are likely to be much more viable as replacement fuels in the medium to long-term, and on this basis development of a renewable diesel industry in NSW should be strongly prioritised over production of biodiesel.

Other fuels such as renewable methanol and renewable hydrogen and methane utilisation technology remain at early stages of commercial readiness for the mining industry, requiring significant infrastructure, cost reductions, and supply chain development before they could support broadscale deployment.

Peabody is also currently considering the relative cost and potential fuel efficiency gains of adopting a premium diesel product at Wilpinjong, however, it is understood that EMM Consulting Pty Ltd (EMM) does not consider premium diesel offers significant efficiency benefits, and it is excluded from the analysis below on that basis (EMM, 2025).

Fuel Costs and Relative Marginal Cost of Abatement

Peabody has engaged with its fuel supplier for the Wilpinjong Coal Mine to assess the cost of some low carbon diesel alternative solutions (excluding premium diesel as per the discussion above).

Carbon-neutral diesel can be achieved through the purchase and retirement of Australian Carbon Credit Units (ACCUs), either by the supplier or directly by Peabody. Carbon-neutral fuels are already supplied in bulk by major Australian fuel providers, including Viva Energy and Ampol, and are certified under the Australian Government's Climate Active scheme.

Table 2 provides a summary of the relative emission abatement and associated indicative current relative fuel costs on the basis that the Wilpinjong Coal Mine currently consumes approximately 50 million litres of diesel per year. Note the indicative Scope 1 carbon abatement for biodiesel and renewable diesel has been calculated based on how each fuel is currently recognised in Table 8 of the *Australian National Greenhouse Gas Accounts Factors 2025* (Commonwealth DCCEEW, 2025).

Table 2 highlights that the simplistic low-carbon fuel mandates as suggested in the draft EPA reform package may force proponents to embark on carbon reduction solutions (or spend significant time and money justifying not adopting these solutions) which are simply not economically rational, as much lower marginal abatement cost emission reduction options would likely be available in the near-term (including offsets using ACCUs).

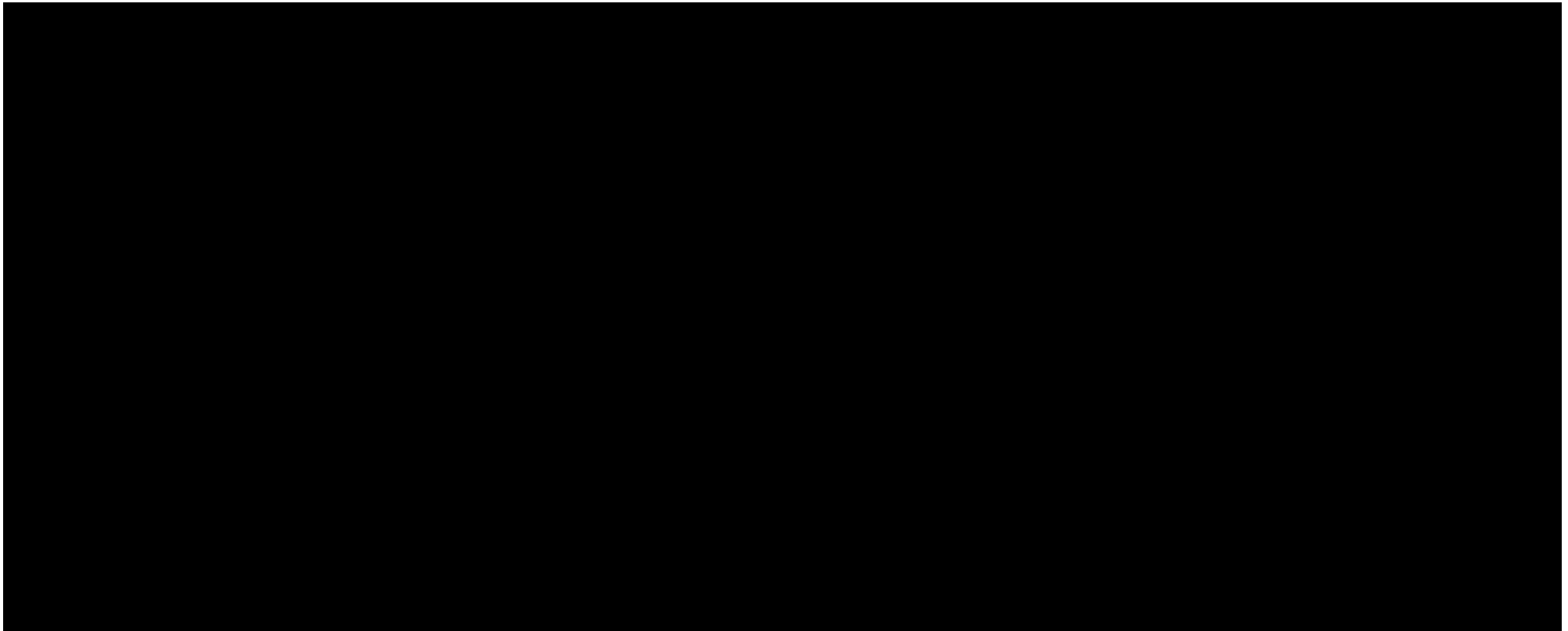
Carbon-neutral diesel would deliver up to 100% net emission reduction at marginal abatement cost that is linked to offset costs incurred under the Safeguard Mechanism (i.e. the market in ACCUs). In comparison, renewable diesel and biodiesel offers a relative net lifecycle emission reduction of approximately 74% and 65% (rather than up to 100% when compared to offsetting using ACCUs) as there are still emissions associated with feedstock cultivation, processing, transport and combustion (U.S. Department of Energy [DOE], 2024a; 2025). While the use of renewable diesel or biodiesel on site would eliminate some Scope 1 emissions for the mine that uses the fuel (i.e. direct fuel combustion for the percentage of low carbon fuel adopted), some upstream (Scope 3) total lifecycle emissions for these fuels would still occur upstream of the mine if these fuels are produced in NSW. Noting that Scope 3 emission factors for these fuels in the *Australian National Greenhouse Gas Accounts Factors 2025* are currently not estimated due to no or limited data being available (Commonwealth DCCEEW, 2025).

It should be noted that the current cost of renewable diesel is reflective of the lack of Australian supply chains, lack of economies of scale and no material Australian production. It does not preclude this fuel becoming significantly more cost-effective in the future as the current supply hurdles are overcome. A more effective pathway in the near term would be the voluntary adoption of low-carbon diesel through industry–government partnerships or subsidies, while renewable diesel fuel supply chains continue to develop in NSW. Peabody considers that development of a renewable diesel industry in NSW should be pursued by the Commonwealth, State Governments and industry.

Biodiesel pricing for B5 (i.e. 5% biodiesel) shows a marginal cost of abatement that is currently somewhat better than renewable diesel but is still very expensive. However, as discussed previously, uptake in conventional diesel engines is limited by blending constraints, fuel quality standards and potential impacts on engine performance and warranties. Further uptake beyond B5 (i.e. B10, B20 or B100) would require significant engine augmentation and would present material capital investment requirements, warranty and reliability issues that are not currently being considered in the EPA reform package.

This analysis highlights the potential risks to NSW industry viability and productivity associated with the State imposing additional and potentially regressive emission reduction controls on existing Safeguard facilities that already have nationally consistent emission reduction obligations set under a “market-based” scheme established under overarching Commonwealth legislation.

Table 2
Indicative Relative Emission Abatement and Associated Relative Diesel Fuel Costs – Wilpinjong Coal Mine



3.3 APPROVAL REALITIES

Peabody does not foresee material environmental approvals constraints on trialling and/or adopting low-carbon alternative fuels to operate conventional fleet should they be reasonable and feasible for a site, providing they do not pose additional safety or hazardous goods/storage risks.

However, in many cases the installation of new methane destruction technologies or installations and/or the introduction of new zero-emission major equipment and associated augmentations (e.g. additional power supply electricity transmission lines and distribution) will not have been contemplated in previous State Significant Development or Part 3A approvals and may require various additional modifications or approvals under the NSW *Environmental Planning and Assessment Act 1979*.

As the EPA would be aware, the complexity of the NSW approvals processes for major projects often results in modification applications taking years to prepare, be assessed, ultimately to be determined and associated secondary approvals to be obtained and biodiversity offset obligations resolved.

For underground mines in the Southern Coalfield that may be located within the relevant controlled Water Catchments (e.g. Metropolitan), these approval processes typically take even longer and are more contentious and difficult for proponents to resolve in a timely manner.

Any implementation timeframes that are introduced in the EPA's reform package need to be reflective of contemporary approvals realities in the NSW mining sector and this reinforces the need for whole-of-Government integration of any EPA reform package (Section 3.1).

4 DOCUMENT SUBMISSIONS

4.1 PROPOSED CLIMATE CHANGE LICENSEE REQUIREMENTS

4.1.1 General Document Feedback

The document largely provides an overview of the context and other components of the draft EPA reform package and sets out the timetable for implementation.

Peabody's primary comment on this document is that the significant role that existing Safeguard facilities are projected to have (by NSW DCCEEW, 2025) in achieving NSW's emission reduction targets in the Resources Sector should be acknowledged, and the package of draft documents and associated requirements should reflect the existing obligations upon Safeguard facilities and be adjusted accordingly.

These aspects are explored in Sections 2, 3 and 4.3 of this submission.

4.1.2 Consultation Questions

Question 1

Should underground coal mines in the Western Coalfields be required to continuously monitor methane concentrations from ventilation shafts for reporting purposes given the low methane content? Are there instances where this requirement would not be practical or feasible for specific underground mines?

Response

Peabody does not currently have an underground mine located in the Western Coalfield.

Our general comment is that continuous methane concentration monitoring in ventilation air is relatively common in industry, whereas continuous flow monitoring of ventilation air can be problematic to achieve and maintain (and flow rates are typically much less variable).

On this basis we suggest adoption of a hybrid approach where methane concentrations can be continuously monitored, and ventilation flow rates can be intermittently monitored. The NSW EPA should retain all flexibility allowable under the National Greenhouse and Energy Reporting Scheme (NGERS) methods for the calculation of fugitive emissions from underground coal mines. The NGERS methods are reviewed annually, and the consideration of measurement approaches for reporting purposes is actively contemplated and would avoid potential duplicative processes.

Question 2

The EPA is seeking feedback on the proposed time frames for the Annual Climate Change Emissions Report and Climate Change Mitigation and Adaptation Plans. Are these time frames suitable in light of NGERS and Safeguard Mechanism reporting obligations? Are there other factors the EPA should be aware of?

Response

Peabody notes that if all coal mines and Safeguard facilities are required to prepare Climate Change Mitigation and Adaptation Plans (CCMAPs) and 10-year emission projections by 31 October 2026, in compliance with applicable EPA guidance material this is likely to pose a significant body of work for industry and its supporting specialists.

The proposed EPA reform package represents potential additional administrative, commercial and approvals imposts on industry in NSW that is duplicative and/or additional to the existing Australian Government system (i.e. the Safeguard Mechanism) and existing consultation between industry and the NZC. The timing for implementation needs to be reflective of the complexity and potentially very onerous nature of the new requirements.

4.2 CLIMATE CHANGE MITIGATION AND ADAPTATION PLANS: PROPOSED MITIGATION REQUIREMENTS

4.2.1 General Document Feedback

Peabody supports the EPA's proposed approach that a single CCMAP could be prepared for multiple sites across NSW, and that the relevant proponent could focus abatement resources where the highest level of emissions reduction could be achieved.

For example, it may be more economically efficient to employ additional methane destruction at an underground mine, rather than introduce a proportion of low-carbon diesel fuel at a separate open cut mine.

Care is needed to ensure that the various aspects of the draft reform package (e.g. the proposed EPA expectations for progressive introduction of low carbon diesel emission mandates), do not undermine prioritising those potential alternative abatement measures that are the most economically efficient (i.e. have the lowest marginal abatement cost).

4.2.2 Consultation Questions

Question 1

Can you suggest other existing plans similar to CCMAPs that the EPA could reference?

Response

Sites that have addressed the Large Emitter Guide in an approvals process may have prepared much of the materials required for a CCMAP.

Question 2

The EPA has heard from some licence holders that publishing 10-year emission estimates may reveal commercially sensitive information. Do you have any suggestions for how to meet the intent of this requirement without publishing commercially sensitive information?

Response

For sites that have been through a recent approvals process, BAU emission estimates will already have been published. Emissions Intensity Determinations of the Clean Energy Regular are also already available online.

However, Peabody agrees that publication of Pre-Feasibility Assessment or reasonable and feasible evaluations on emission reduction opportunities by individual companies may reveal commercially sensitive information such as existing contracted product coal prices, internal return on investment benchmarks, or the relative profitability and costs of individual mining operations.

The EPA needs to ensure that wherever such commercially sensitive information is not already in the public domain, that this reform package does not force its publication. It is also noted that the NZC is already undertaking economy-wide and Safeguard facility modelling of emissions and projected reduction opportunities.

Projecting mine emissions ten years into the future is inherently uncertain, as production models are continually adjusted in response to customer specifications, market pricing, and broader operational or geopolitical factors. This variability significantly limits the reliability of publishing long-term, site-specific forecasts. A more accurate and practical approach would be to publish projected net emission intensity targets, rather than total emissions, as intensity measures are not affected by production variability.

Question 3

Is there any additional information that would help licensees create their CCMAPs?

Response

To assist licensees in preparing CCMAPs, it would be valuable for the EPA to provide clear templates and worked examples. This would give proponents greater certainty about the level of detail and structure expected. In addition, guidance on how to address and present uncertainty in forecasting would support more transparent and robust assessments (i.e. emission ranges are more likely to reflect on-ground complexities rather than specific annual targets).

Further clarity on reasonable and feasible tests and clear guidance on the application of alternative measures, such as the use of offsets would be a sensible inclusion.

Another important consideration is the focus of absolute emission targets in CCMAPs.

Peabody considers that emissions intensity targets (for example, rolling five-year average emissions intensity in CO₂-e per tonne of ROM) are more meaningful for individual sites than absolute emissions targets (i.e. total tonnes CO₂-e per annum). A decrease in emissions intensity reflects improved performance per tonne of coal produced, whereas changes in absolute emissions can be influenced by varying production rates and may not reflect genuine operational improvements.

4.3 PROPOSED GREENHOUSE GAS MITIGATION GUIDE FOR NSW COAL MINES

4.3.1 General Document Feedback

The draft Greenhouse Gas Mitigation Guide requires an independently verified pre-feasibility assessment to seek an exemption from the proposed EPA abatement requirements and commencement dates.

EPA trigger levels (that require either mandatory implementation or an independently verified pre-feasibility assessment to seek an exemption) should be carefully calibrated to avoid forcing industry to expend significant time and funds to justify not implementing a measure that is patently not going to be reasonable and feasible at an individual site.

Given the limited number of greenhouse gas abatement specialists available with the deep technical expertise in these fields, the EPA should avoid tying up most of the available industry expertise in expensive technical studies that are not advancing on-ground abatement actions.

These suggestions are explored further below.

Measures Directed at Methane

The draft Greenhouse Gas Mitigation Guide requires a pre-feasibility assessment independently verified by a fugitive methane expert to seek an exemption from the proposed EPA fugitive abatement requirements and commencement dates. Further guidance on the qualifications necessary to meet the criteria are necessary. Given the limited number of greenhouse gas abatement specialists available, it may prove doubly burdensome for an operator to identify resources that are independent.

The methane abatement criteria set out in Section 2.3 of the draft Greenhouse Gas Mitigation Guide are based upon triggers described in tonnes CO₂-e/year (i.e. either 25,000t/annum or 100,000t/annum of CO₂-e, depending upon the requirement).

To have triggers for investigation of methane abatement opportunities based upon gross CO₂-e/year values will result in some sites with high CO₂ emissions having to unnecessarily conduct expensive and time-consuming methane pre-feasibility assessments, where there is no reasonable likelihood of methane abatement being a reasonable and feasible control at that site. Wilpinjong Mine has very low methane concentration in its mined coal seam, resulting in fugitive emissions comprised predominantly from CO₂. In this instance, a pre-feasibility assessment would serve as a reallocation of resources that could be allocated for identifying and assessing opportunities for material emission abatement.

Any Greenhouse Gas Mitigation Guide triggers for methane abatement pre-feasibility assessment should be based upon specific methane emission trigger levels, not gross CO₂-e emissions.

Measures Directed at Diesel Emissions

The draft Greenhouse Gas Mitigation Guide requires a pre-feasibility assessment independently verified by a diesel emissions expert to seek an exemption from the proposed EPA incremental low carbon fuel requirements, or zero emission fleet mandates and associated commencement dates.

As illustrated in the case study at Section 3.2.1 above, based upon Peabody's understanding of relative current prices, adoption of low carbon diesel fuels will be unlikely to be a reasonable and feasible emission reduction solution until there is significant change to the availability and pricing of low carbon diesel fuels in Australia. Further, the qualifications of a diesel emissions expert may be sufficient to assess the technical aspects of a low-carbon fuel implementation but may not be broadly or suitably qualified to assess impacts on financial implications for the company as it balances investment priorities for emission mitigation across its NSW and broader Australian portfolio.

It is important therefore, that the EPA does not force industry to conduct detailed pre-feasibility studies at every major coal mine, where a simple case study based upon current prices illustrates the proposed fuel mandate currently would be contrary to good abatement practice (i.e. to pursue the lowest cost and most effective emission abatement actions).

Feedback on this aspect of the draft Greenhouse Gas Mitigation Guide should not be construed as opposition to the development of low carbon diesel in NSW, as Peabody supports the development of a low carbon diesel industry in Australia and a renewable fuels strategy for NSW. In California, where there is a low-carbon fuel standard (California Air Resources Board, 2020) and a major renewable fuels industry (NSW Department of Primary Industries, 2020), renewable diesel and conventional diesel reportedly had only limited price differentials in 2024 (U.S. DOE, 2024b). Also in California, Rio Tinto successfully transitioned 100% of its heavy machinery (including haul trucks and loaders) from fossil diesel to renewable diesel in at its borax mine in Boron (Rio Tinto, 2023). Peabody merely supports flexibility in timing and method of implementation, underpinned by material support from the government to ensure suppliers are equipped to meet demand.

With respect to the proposed 2040 mandate for the introduction of zero emissions major equipment, opportunities for implementation will not only be guided by the commercial availability of such equipment, but also the applicability of such equipment to an individual mine's geology and mining methods, the availability and cost of supporting infrastructure such as increased site electricity supply, and the mine life, major capital equipment purchasing timeframes and associated payback periods. The proposed 75% requirement from 2040 as set out in the draft Greenhouse Gas Mitigation Guide would appear to be highly unlikely to occur in practice, based on progress to date.

Measures Directed at Scope 2 Emissions

Peabody suggests that the EPA should focus its reforms on Scope 1 emissions of industry, as to impose potential constraints or expectations on Scope 2 emissions for mining projects would be more efficiently addressed at the electricity generation sector's Scope 1 emissions.

Additional expenditure by the mining industry on renewable electricity generation when the progressive decarbonisation of the NSW electricity grid is occurring anyway under Australian and State policy direction is potentially inefficient.

4.3.2 Consultation Questions

Question 2.1

If surface mines were required to pre-drain gassy seams and destroy methane before mining commences, what factors would impact feasibility?

Response

Geological variability across NSW coalfields is significant, and this strongly affects the presence and relative concentrations of methane in coal seams at surface operations. In many open cut contexts, total coal seam gas concentrations are low relative to underground mining contexts and the total volume of methane present is such that pre-drainage and destruction would not be a reasonable and feasible abatement action.

The complexity and duration of the NSW approvals also has potential implications for the implementation of pre-drainage programs in open cut mines at any sites with materially high gas concentrations. The high upfront capital cost of open cut degassing activities, combined with approvals and return-on-investment risks, may reduce the likelihood that open cut extensions are pursued.

As noted in Section 2.4, fugitive methane from surface mines (5.8%) represents a relatively small proportion of NSW methane emissions compared to underground mining (22.6%) and agriculture (50.8%) (Chart 3). From a cost-effectiveness perspective, fugitives at surface mines are not the most efficient or impactful emission source to target.

Developing a value proposition for the pre-drainage and destruction of methane in open cut coal mines will also be dependent upon the accounting methodology utilised for the deduction of pre-drained methane from the estimation of fugitive emissions. The success of the methane destruction would be dependent upon the ratio of methane to carbon dioxide present within the coal seam, and the placement and development of wells to optimise gas drainage, amongst other factors. This may be technically challenging or cost-prohibitive for operators in comparison to the purchase of emissions offsets.

Peabody's Wilpinjong Mine operates in an area of the coal seam in which there is low methane concentrations. The facility's emission intensity determination under the Safeguard Mechanism is the second lowest amongst coal mines in Australia. Open cut mines with low methane concentration or low overall emission intensity would more effectively contribute to emission reduction targets through other means. Consideration of technical and financial feasibility for specific emission reduction technology is an undue burden and cost that could limit the facility's capacity to determine more appropriate emission reduction measures.

Question 3.1

Should the EPA progress a regulatory requirement for 2.5% of fuel used at NSW coal mines to be a low carbon alternative to fossil diesel by 2027?

Response

As outlined in Section 3.2.1, while low-carbon diesel alternatives such as renewable diesel have technical potential to act as drop-in replacements, the key barriers at present include cost and supply availability.

Peabody does not support the development of biodiesel relative to the significantly greater potential of renewable diesel (Section 3.2.1)

Domestic production of renewable diesel is very limited, and reliance on imports introduces significant risks of supply chain disruption and price volatility.

The diesel fuel case study (Section 3.2.1) illustrates that the current cost of renewable diesel is prohibitively high compared to conventional diesel, resulting in extreme marginal abatement costs relative to other available measures such as offsets. Introducing a regulatory mandate in the near term could divert limited industry resources away from higher abatement priorities that deliver more effective and lower-cost emissions reductions.

A more effective pathway would be voluntary adoption of low-carbon diesel through industry-government partnerships/subsidies while renewable diesel fuel supply chains develop in NSW.

Question 3.2

Can coal mines transition to low or zero emissions large mining machinery and low carbon alternatives to fossil diesel sooner?

Response

As highlighted in Section 3.2, decarbonisation of the mining sector will require widespread electrification and deployment of fugitive abatement technologies, but the transition to low or zero emissions large mining equipment remains constrained by technology maturity that is not anticipated to be available until after 2030 (CCA, 2024). At present, hydrogen and battery-electric haul trucks and loaders are at pilot scale internationally and have not yet reached commercial readiness for broad deployment in Australia.

The lack of enabling infrastructure at existing mine sites, such as large-scale charging capacity or hydrogen supply is a significant barrier. Establishing this infrastructure would require significant investment and time, and in many cases would not have been contemplated under existing development approvals (Section 3.3).

Given the long replacement cycles of major mining fleets (10–15 years, often extended through rebuilds), the transition is inherently gradual and dependent on alignment with equipment purchasing cycles. This underlines the importance of policy clarity from the Government, as investment and procurement decisions made today will shape the sector's emissions profile and production capacity for the next decade. This should be addressed in an updated Strategic Statement describing whether the NSW Government supports the continuation of coal mining.

Peabody acknowledges the value of pilot trials to build operational knowledge, however broad deployment is unlikely to be feasible until commercial readiness improves. Further, early adopters may arise to implement specific emission mitigation technologies that are well-adapted specifically to the emissions profile, geology and mining methodology. These too will be valuable opportunities to derisk both technical and financial feasibility but may not fully espouse the unique limitations that mine operators may face in similar implementation. In contrast, the structure of the Safeguard Mechanism motivates mine operators to determine a pathway to decarbonisation based on cost and applicability to the characteristics of each facility.

Any transition is also contingent on the continued decarbonisation of the NSW electricity grid.

For these reasons, while pilot programs should be encouraged, mandating timing requirements for large-scale deployment of zero-emissions fleets is currently premature.

Question 3.3

What are the barriers and opportunities?

Response

Barriers:

- Low-carbon fuel availability in Australia is currently limited, with renewable diesel in particular subject to high cost and import reliance (Section 3.2).
- Infrastructure such as charging networks, electricity supply and hydrogen supply is not established at NSW mine sites and would require significant capital investment.
- Long fleet replacement cycles (10–15 years) set the pace of potential transition.
- Additional approvals may be required for new infrastructure (Section 3.3).

Opportunities:

- Government co-investment in pilot trials could help build operational experience and accelerate deployment once technology is commercially ready.

- Progressive decarbonisation of the NSW grid will be critical to support electrification of mine fleets.
- Co-location with renewable generation offers future potential to directly supply zero-emission machinery.

Question 4.1

Should the EPA have any requirements/expectations for coal mining companies about reducing minor sources of scope 1 emissions?

Response

No, typically minor sources of scope 1 emissions comprise less than 1% of Peabody's Scope 1 emissions in New South Wales per annum. These sources of emissions result from gas insulated switchgears and circuit breakers, as well as the combustion of oil and grease from equipment. Efforts to reduce these sources may compromise the efficient operation of equipment and pose very little opportunity for material contribution to NSW emission reduction targets.

Peabody considers that regulatory focus should remain on the major contributors to emissions, particularly methane, where meaningful reductions can be achieved, rather than on minor sources that will not materially influence NSW's progress towards net zero.

Question 5.1

Do you have any suggestions about scope 2 requirements for EPA licensees to help inform our future work on scope 2 emissions?

Response

Peabody considers that the EPA should focus its reforms on Scope 1 emissions (Section 4.3.1). Placing additional requirements on Scope 2 emissions within mining projects would be inefficient, as these are more appropriately addressed at the electricity generation sector's Scope 1 emissions, particularly given the progressive decarbonisation of the NSW grid under existing Commonwealth and State policies. Additional expenditure by the mining industry on renewable electricity generation risks duplicating measures already being driven at the grid level.

It is therefore recommended that Scope 2 emissions be attributed to the generator, rather than the mine.

Question 5.2

How should the decarbonisation of the grid be considered, if EPA expectations for scope 2 are to be established?

Response

If the EPA is to establish any expectations around Scope 2 emissions, these should focus on proactive measures within a mine's influence, such as sourcing renewable electricity through carbon-neutral supply agreements.

Any requirements should also take into account regional grid constraints, recognising that access to renewable supply would vary across different geographic regions of NSW.

Question 6.1

Should the guide include expectations for coal mine companies to address certain scope 3 emissions? For example, an expectation that mines use green explosives?

Response

Scope 3 emissions sit outside the direct operational control of mining companies and are therefore complex to regulate. The majority of these emissions arise from the end use of coal by customers, and imposing regulatory requirements on mines in relation to customer destinations or consumption patterns would create unnecessary friction while delivering minimal or no impact on NSW's emission reduction targets. Reducing NSW's coal exports is also very unlikely to alter global coal consumption, as the international electricity generators and steelmakers would simply be forced to source their coal requirements from other jurisdictions.

Question 7.1

Do you have any suggestions to improve the robustness and transparency of the pre-feasibility assessment process, and to reduce compliance costs for licensees?

Response

Peabody considers that the proposed pre-feasibility process, in its current form, is not fit-for-purpose as it may impose disproportionate NSW administrative and compliance burdens when cost-effective emission reductions are already occurring and will continue to accelerate due to the existing Commonwealth Safeguard Mechanism.

To improve the robustness and transparency of the pre-feasibility assessment process while minimising compliance costs, Peabody suggests the following:

- Adoption of a standardised EPA template with clear criteria, to ensure consistency across industry submissions.
- A tiered assessment framework, allowing simpler requirements or exemptions for smaller projects or sites with limited abatement potential using relevant metrics where available (e.g. methane abatement assessments should be based on methane trigger thresholds rather than CO₂-e thresholds [Section 4.3.1]).
- Publication of high-level pre-feasibility outcomes for test-cases in conjunction with enabling other mines to reference these findings to avoid duplicating work already undertaken (Section 4.3.1).

Question 7.2

Should the exemptions process outline the circumstances in which an exemption does not need to be sought on specific technical feasibility grounds?

Response

The exemptions process should clearly outline the circumstances in which an exemption does not need to be sought on specific technical feasibility grounds. For example, when applying ventilation air methane destruction requirements, clear thresholds should be established in concentration limits, minimum methane volume thresholds, or defined economic cut-offs. This approach would reduce unnecessary administrative burdens for mines with low methane emissions or limited abatement potential.

Pragmatic exemption thresholds should be applied to all mitigation measures proposed in the NSW Coal Mine Mitigation Guide.

Question 7.3

Any exemptions issued by the EPA would be made public. Should any of the information in the pre-feasibility assessment be made public?

Response

Peabody supports public disclosure of high-level outcomes from pre-feasibility assessments to provide transparency. However, detailed technical and financial inputs should remain confidential, as their release could expose commercially sensitive information (Section 4.2.2).

Question 7.4

Should there be an avenue for public input into the exemptions process and, if so, how? Is the publication of CCMAPs and progress against CCMAPs sufficient to provide transparency?

Response

Peabody considers that the publication of CCMAPs and reporting on progress against them already provides an appropriate level of transparency. Introducing an additional layer of public consultation into the exemptions process would risk delaying approvals and significantly increase compliance burdens without delivering meaningful benefits.

Given the highly technical nature of exemption assessments, consultation beyond the EPA would provide limited value to a non-technical audience. A more constructive approach would be for the EPA to consult with relevant specialists to inform its decision-making. For example, advice for methane mitigation measure exemptions should be sought from independent fugitive emissions specialists if required.

Question 7.5

Could grounds for an exemption include reducing the equivalent level of scope 1 and 2 emissions on site?

Response

Peabody supports a flexible approach. If equivalent reductions in Scope 1 or Scope 2 emissions can be achieved elsewhere on site, or through the use of offsets, this should be considered valid grounds for an exemption. This would allow emissions to be considered on a net basis while allowing operators to pursue the most practical and cost-effective abatement measures. This approach aligns with the use of offsets under the Safeguard Mechanism, allowing emissions to be considered on a net basis while enabling operators to pursue the most practical and cost-effective abatement measures.

5 CONCLUSION

According to the NZC (2025) the NSW Resources Sector has already demonstrated measurable progress in reducing greenhouse gas emissions and is the only sector achieving an average annual reduction rate of approximately 2%, which is aligned with the decline required to meet NSW's net zero pathway between 2005 and 2030 (Section 2.1).

Projections from NSW DCCEEW support that through the application of the Safeguard Mechanism it results in the NSW coal sector largely achieving the NSW legislated economy wide net emissions targets for 2030, 2035 and 2050 *in the absence of any additional NSW policy augmentation* (Section 2.2).

It is critical that the NSW EPA considers the commercial realities and approvals framework within which mining operations operate (Section 3.3). Reforms should be applied equitably across all major emitting sectors. In particular, the Agriculture Sector is responsible for approximately half of NSW methane emissions of the State and therefore should be subject to comparable regulatory attention (Chart 3).

Proposed reforms should also be targeted carefully. Scope 1 emissions are the direct responsibility of the mining companies, whereas Scope 2 emissions are captured under the Scope 1 reporting of electricity generators. Focusing on Scope 2 within the Resources Sector risks double-counting, creating regulatory inefficiency and disincentivising long term electrification strategies.

The introduction of prescriptive renewable fuel mandates would be inconsistent with best-practice abatement methodology, which prioritises measures on the basis of lowest marginal abatement cost. As demonstrated in the case study, mandatory low-carbon fuel use under current pricing structures would lead to perverse outcomes, diverting resources away from more effective abatement strategies (i.e. currently through the use of offsets).

Peabody's comments on the proposed new EPA requirements for NSW's large greenhouse gas emitters below have four main components aimed *at reducing additional duplicative regulatory burden on our mining operations in NSW*.

These are as follows:

1. Co-ordination of all major NSW Government agency activities on the future of the coal sector, abatement expectations and associated requirements.
2. Avoiding simplistic CO₂-e triggers for additional methane abatement related obligations and replacing these with triggers that are methane-specific and suitably differentiated for the differing contexts of open cut and underground operations.
3. Recognising the material economic implications of potentially introducing simplistic renewable fuel mandates on industry. Any mandate should allow for the application of equivalent diesel fuel consumption reduction measures, and/or the equivalent application of offsets (i.e. ACCUs) based on a site-specific reasonable and feasible assessment conducted by the operator.
4. Providing feedback on the practicality of key components of individual draft EPA consultation documents.

The proposed EPA reform package represents potential additional administrative, commercial and approvals imposts on industry in NSW that is duplicative and/or additional to the existing Australian Government system (i.e. the Safeguard Mechanism). The timing for implementation needs to be reflective of the complexity and potentially very onerous nature of the new requirements.

Peabody appreciates the opportunity to provide feedback on the draft reform package and would be happy to engage further with the EPA on any of the comments provided.

6 REFERENCES

California Air Resources Board (2020) *Low Carbon Fuel Standard*.

Website: <https://ww2.arb.ca.gov/sites/default/files/2020-09/basics-notes.pdf>

Clean Energy Regulator (2025b) Emissions intensity determination data for safeguard facilities.

Website: <https://cer.gov.au/markets/reports-and-data/safeguard-data/emissions-intensity-determination-data>

Commonwealth Department of Climate Change, Energy, the Environment and Water (2025) *New production incentive for low carbon liquid fuels*

Website: <https://www.dcceew.gov.au/about/news/new-prod-incentive-low-carbon-liquid-fuels#:~:text=The%20Australian%20Government%20has%20committed%20%241.1%20billion%20to,encourage%20production%20of%20low%20carbon%20liquid%20fuels%20%28LCLF%29.>

Commonwealth Climate Change Authority (2024) *Sector Pathways Review*.

Cummins Inc. (2023) *Cummins Announces Approval of Unblended Renewable Diesel Use in all Industrial HighHorsepower Engines (August 25)*.

Website: <https://www.cummins.com/news/releases/2023/08/25/cummins-announces-approval-unblendedrenewable-diesel-use-all-industrial>

Cummins Inc. (2024a) *Frequently asked questions on HVO fuel*.

EMM Consulting Pty Ltd (2025) *Greenhouse Gas Mitigation at NSW Coal Mines Literature Review and Industry Scan*.

Government of Western Australia (2024a) *Greenhouse Gas Emissions Policy for Major Projects*

Website: <https://www.wa.gov.au/system/files/2024-10/greenhouse-gas-emissions-policy-major-projects.pdf>

Government of Western Australia (2024b) *Greenhouse Gas Emissions Policy for Major Projects*

Website: <https://www.wa.gov.au/government/publications/greenhouse-gas-emissions-policy-major-projects>

International Energy Agency (2021) *Biofuels*.

Website: <https://www.iea.org/reports/renewables-2021/biofuels?mode=transport®ion=World&publication=%202021&flow=Consumption&product=Ethanol>

International Energy Agency (2024) *Energy Technology Perspectives Clean Energy Technology Guide*.

Liebherr (2024) *HVO fuel at Liebherr*.

Website: <https://www.liebherr.com/en-us/group/products/solutions/hvo-at-liebherr/hvo-at-liebherr-3782022>

Net Zero Commission (2024) *2024 Annual Report*.

Website: <https://www.parliament.nsw.gov.au/tp/files/190092/Enclosure%201%20-%20Net%20Zero%20Commission%202024%20Annual%20Report.pdf>

New South Wales Department of Climate Change, Energy, the Environment and Water (2025) *Net Zero Emissions Modelling 2024 Projections update*.

Prepared for as a consultation presentation by NSW DCCEEW.

New South Wales Environment Protection Authority (2025a) *Proposed Climate Change Licensee Requirements*.

New South Wales Environment Protection Authority (2025b) *Climate Change Mitigation and Adaptation Plans: Proposed Mitigation Requirements*.

New South Wales Environment Protection Authority (2025c) *Proposed Greenhouse Gas Mitigation Guide for NSW Coal Mines*.

New South Wales Environment Protection Authority (2025d) *Improving measurement of fugitive methane emissions*.

New South Wales (2021) *Strategic Statement on Coal Exploration and Mining in NSW*.

Neste Corporation (2024) *Approved by engine manufacturers and ready for use*.

Website: <https://www.neste.com/products-and-innovation/neste-my-renewable-diesel/oem-approvals>

Rio Tinto (2023) *Rio Tinto U.S. Borax becomes first open pit mine to transition to renewable diesel*.

Website: https://www.riotinto.com/en/news/releases/2023/rio-tinto-u_s_-borax-becomes-first-open-pit-mineto-transition-to-renewable-diesel

Transport for NSW (2024) *Renewable Diesel*.

Website: <https://www.transport.nsw.gov.au/operations/freight-hub/towards-net-zero-emissions-freightpolicy/knowledge-hub/renewable-diesel>

Peabody Energy Corporation (2022) *Peabody Statement on Climate Change*.

Peabody Energy Corporation (2025) *2024 Sustainability Report*.

United States Department of Energy (2024a) *Renewable Diesel*.

Website: <https://afdc.energy.gov/fuels/renewable-diesel>

United States Department of Energy (2024b) *Clean Cities and Communities Alternative Fuel Price Report*.

Website: https://afdc.energy.gov/files/u/publication/alternative_fuel_price_report_july_2024.pdf

United States Department of Energy (2025) *Biodiesel Vehicle Emissions*.

Website: <https://afdc.energy.gov/vehicles/diesels-emissions>