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Dear Joanna

Certification as Impact Analysis Equivalent – 2023 Climate Change Authority Review of the National Greenhouse and Energy Reporting Legislation

I am writing to certify that the independent review by the Climate Change Authority (**Attachment A**) undertook a process and analysis that, when considered in conjunction with supplementary analysis and regulatory burden estimate prepared by the department, is equivalent to an Impact Analysis (IA) for the proposed amendments to the National Greenhouse and Energy Reporting (NGER) scheme for the estimation of fugitive methane emissions from coal extraction from open cut coal mining.

The attached Climate Change Authority (CCA) review made 25 recommendations for targeted improvements to the NGER scheme. One of these was to *“Phase out Method 1 estimation methodologies for fugitive methane emissions, including as a matter of urgency for the extraction of coal in open cut coal mining.”* (Recommendation 15). Consistent with this recommendation, the government has prioritised proposed amendments to the NGER scheme to phase out Method 1 for open cut coal mining. Based on data reported in 2022-23, the proposed amendments will address over 90% of the emissions reported using that Method 1. The government will respond to the recommendation as it relates to the phase out of Method 1 for estimating other fugitive methane emissions in its full response to the CCA review in mid-2024.

The Impact Analysis Equivalent covers the scope of the policy proposal with the exception of details on the selection of the proposed NGER scheme amendments as the best option, and how the proposed amendments would be implemented and evaluated. To address these gaps in the analysis I also certify the attached supplementary information document (**Attachment B**). Therefore I am satisfied that, with this addition, the scope of the certified documents matches the policy proposal.

I certify these documents adequately address all seven IA questions, and are submitted to the Office of Impact Analysis for the purposes of satisfying the regulatory impact analysis requirements of a major decision point.

The estimated regulatory burden to business, community organisations or individuals of the proposed amendments is quantified in the table below, based on the Australian Government's *Regulatory Burden Measurement* framework, industry feedback and publicly available information. No regulatory burden is expected to be incurred by individuals or community organisations. The regulatory burden estimates for the business sector are indicative and presented as a range, rather than an average, of the estimated regulatory costs for all affected facilities in each of the two key stages in the proposed amendments' implementation ('transitional' and 'ongoing').

This approach is necessary due to the considerable variability of affected facilities, the facility-specific emissions measurement requirements of the proposed amendments, and the absence of publicly available information regarding the cost and time required to implement the amendments in each of the affected facilities. Much of the information needed to calculate an average will only become available during the transitional stage. The ranges for 'transitional' and 'ongoing' costs stages are based on industry feedback, including cost estimates for affected facilities based on three categories. These categories estimated cost based on different coal mine seam lengths ('strike length'), and the assumption that the longer the strike length the more complex a mine's geology and gas resource, and therefore the higher the regulatory burden. Publicly available information on the affected facilities' strike length was then used to determine an indicative range of estimated regulatory burden.

For the same above-mentioned cost and time variability reasons, the 'Transitional' estimate in the table is presented as an aggregate rather than annual figure. The majority of affected facilities are expected to transition within 2 years however some may incur these costs over a longer transition period if they satisfy the requirements for a temporary extension of time to transition to Method 2 or 3. The 'Ongoing' estimates in the table are presented as an indicative annual range based on the above-mentioned three categories of mine-type. They reflect estimated indicative costs to all affected facilities from the annual preparation and assurance of annual fugitive methane emissions estimates based on the facility-specific gas models developed in the 'transitional' stage.

While the regulatory burden estimate for business is material it has a high degree of uncertainty with regard to each affected facility, due to information paucity and variability between affected facilities. The regulatory burden can also be considered in the context of the sector's contribution to Australia's fugitive methane emissions and operating profits. In financial year 2022-23 Australia's coal mine sector operating profits before tax were \$73.3 billion¹. In financial year 2021-22, open-cut mines fugitive methane emissions accounted for 9 million tonnes carbon dioxide equivalent.

Further detail on these estimates, including estimates for the other options considered, is provided on pages 9-11 of [Attachment B](#).

¹ Australian Bureau of Statistics (2022-23), *Australian Industry*, ABS Website, accessed 6 June 2024.

Regulatory burden estimate table

Regulatory cost estimates of proposed amendments (from business as usual): transitional and ongoing				
Change in costs (\$ million)	Business	Community organisations	Individuals	Total change in costs
Total, by sector	\$	\$0	\$0	\$
<i>Transitional*</i>	80-100			80-100
<i>Ongoing**</i>	3-4			3-4

* Costs expected to be incurred over one or more years to complete the preparatory work required to transition affected facilities to annual reporting using emission estimation Method 2 or 3.

** Costs expected to be incurred on an annual basis in the reporting of emissions estimates using Method 2 or 3, once transition is completed.

Accordingly, I am satisfied that the attached documents are consistent with the *Australian Government Guide to Policy Impact Analysis*.

Yours sincerely

Kushla Munro

Deputy Secretary

Department of Climate Change, Energy, the Environment and Water

[Date] ~~10 June~~ 7 June 2024

Attachment A: Independent review for certification

Attachment B: Supplementary Impact Analysis, Amendments to the National Greenhouse and Energy Reporting Scheme: open cut coal mining

Independent review for certification

Climate Change Authority (2023), *2023 Review of the National Greenhouse and Energy Reporting Legislation*, December 2023. Available at:

<https://www.climatechangeauthority.gov.au/sites/default/files/documents/2023-12/2023%20NGER%20Review%20-%20for%20publication.pdf>

Amendments to the National Greenhouse and Energy Reporting Scheme: open cut coal mining

Supplementary information to the Impact Analysis Equivalent

June 2024

Introduction

This supplementary Impact Analysis has been prepared by the Department of Climate Change, Energy, the Environment and Water (the department) to inform Australian Government legislative decisions in regard to the enhancement of fugitive methane emissions estimation from the extraction of coal at open-cut mines in the National Greenhouse and Energy Reporting (NGER) scheme.

This supplementary analysis complements the certification by the department that the Climate Change Authority (CCA) 2023 review of the NGER legislation has undertaken process and analysis equivalent to an impact analysis (IA) for these legislative decisions. The Office of Impact Analysis (OIA) found the scope of the independent review covered questions 1 to 5 of the Impact Analysis Framework, and recommended that a supplementary impact analysis be prepared to address questions 6 and 7 of that Framework; specifically:

- What is the best option from those you have considered and how will it be implemented?
- How will you evaluate your chosen option against the success metrics?

This supplementary analysis also provides a summary of additional stakeholder consultation undertaken by the department on the proposed legislative decisions, and feedback received through that process.

Background

National Greenhouse and Energy Reporting (NGER) scheme

The NGER scheme is Australia's national system for reporting greenhouse gas emissions, energy consumption and energy production by Australian corporations.

The NGER scheme is a key data source which supports Australia's international and domestic reporting obligations and informs domestic climate and energy policies. Emissions reported under the NGER scheme underpin the operation of the Safeguard Mechanism. The Safeguard Mechanism requires Australia's highest greenhouse gas emitting facilities (those that emit more than 100,000 tonnes carbon dioxide equivalent in a year) to reduce their emissions in line with Australia's emission reduction targets of 43% below 2005 levels by 2030 and net zero by 2050.

NGER scheme legislation includes:

- the *National Greenhouse and Energy Reporting Act 2007* (the Act);
- the *National Greenhouse and Energy Reporting Regulations 2008* (the Regulations); and
- the *National Greenhouse and Energy Reporting (Measurement) Determination 2008* (the Measurement Determination).

The NGER scheme requires the reporting of greenhouse gas emissions from:

- the combustion of fuel for energy;
- the extraction, production, flaring, processing and distribution of fossil fuels, and from carbon capture and storage ('fugitive emissions');
- industrial processes where a mineral, chemical or metal product is formed using a chemical reaction that generates greenhouse gases as a by-product, as well as emissions of hydrofluorocarbons and sulphur hexafluoride resulting from their use by certain industries; and
- waste disposal – either in landfill, from management of wastewater or from waste incineration.

Companies are required to register under the NGER scheme if the emissions, energy production or energy consumption from facilities within their operational control exceed specified thresholds.

In most instances, the NGER scheme allows reporters to choose from a number of emissions estimation methods to accommodate their individual circumstances. Available methods align with Intergovernmental Panel on Climate Change emission estimation guidelines adopted under the UN Framework Convention on Climate Change and Paris Agreement.

Methods are ranked by number, with higher numbered methods in-principle providing greater accuracy but requiring more active measurement effort. Emissions sources can have one or more available methods, including:

- Method 1, which typically involves the use of default emission factors,
- Methods 2 and Method 3, which involve greater use of facility-specific information, and
- Method 4, which requires direct measurement of emissions.

The requirements of Methods 1 to 3 differ for each source for which they are available. The requirements of Method 4, wherever available, are set out in Part 1.3 of the Measurement Determination, which specifies standards to be met regarding positioning of equipment, frequency of monitoring, and how to determine gas concentrations and flow rates.

The NGER scheme is administered by the Clean Energy Regulator (the Regulator). Further information on NGER scheme reporting is available at the [Regulator's website](#).

Each year the department reviews and updates the NGER scheme as part of its continuous improvement program and in response to feedback from users and other stakeholders. These updates are also informed by the CCA's five-yearly review of the NGER scheme. The CCA's last review of the NGER scheme was released in December 2023. See pp 4-5 for further detail on this review.

Current policy settings: estimation of fugitive methane emissions from open cut coal mines

Division 3.2.3 of the Measurement Determination provides for the estimation of 'fugitive' greenhouse gas emissions, including methane, from the extraction of coal from open-cut mining. Currently NGER scheme reporters have the option of estimating fugitive methane emissions from open-cut mines in accordance with Method 1, 2 or 3.

- Method 1: applies state-specific emissions factors to facility-level activity data (tonnes of methane (CO₂-e) per tonne of run-of-mine coal extracted).
- Method 2: involves estimating the total gas contained by gas bearing strata, modelled, sampled and analysed in accordance with the Australian Coal Industry's Research Program (ACARP) guidelines and relevant Australian Standards.
- Method 3: is the same as Method 2, with an increased expectation in regard to standards used.

Methods 2 and 3 are equivalent to the highest (most sophisticated) Intergovernmental Panel on Climate Change (IPCC) method tier. Australia is the only country in the world to use such a method tier for the estimation of fugitive methane and carbon dioxide from coal extraction from open-cut mines.

In financial year 2022-2023 (FY2023), 37 facilities (including 21 facilities covered by the Safeguard Mechanism) used Method 1 and 39 (including 27 Safeguard Mechanism facilities) used Method 2 to estimate fugitive methane emissions from open-cut mines. No facilities currently use Method 3. Safeguard Mechanism facilities accounted for around 92% of fugitive methane emissions reported using Method 1 in FY2023.

The 2023 Climate Change Authority review

The CCA review found that the NGER scheme is integral to meeting Australia's international energy and emissions reporting obligations, tracking progress on emissions reductions and informing climate change policy development. It made 25 recommendations focused on further enhancements to the NGER scheme's methane emissions measurement, reporting and verification; data transparency; coverage; and administration.

The review included a recommendation to *"Phase out Method 1 estimation methodologies for fugitive methane emissions, including as a matter of urgency for the extraction of coal in open cut coal mining."* (Recommendation 15). Consistent with this recommendation, the government has prioritised proposed amendments to the NGER scheme regarding Method 1 for the estimation of fugitive emissions from the extraction of coal from open cut coal mines. The government will respond to the recommendation as it relates to the phase out of Method 1 for estimating other fugitive methane emissions in its full response to the CCA review.

The CCA review is certified as an Impact Analysis Equivalent for the purpose of this legislative proposal. The review describes the policy problem that is being addressed through the proposed NGER scheme amendments, the objectives of government intervention and provides recommendations for policy change. Extensive consultation was undertaken to inform the review and the department has undertaken further targeted and public consultation on the government's legislative proposal to implement the review's recommendation (see Annex A).

Supplementary Information document

This document:

- Is intended to inform understanding of the final design of 2024 amendments to the NGER scheme to further enhance the estimation of fugitive methane emissions from the extraction of coal from open cut coal mines,
- Provides supplementary information to the CCA review, which has been certified as an Impact Analysis Equivalent, in particular:
 - outlines the two options considered to implement the CCA review recommendation 15 as it relates to open-cut coal mines,
 - addresses the Impact Analysis questions not covered by the CCA review:
 - What is the best option from those you have considered and how will it be implemented?
 - How will you evaluate your chosen option against the success metrics?
 - outlines further consultation undertaken by the department (see Annex A),
 - is Certified by the department.

What is the best option from those you have considered and how will it be implemented?

Two options were considered for implementing the CCA Review’s recommendation 15 in relation to the phase out of Method 1 for estimating fugitive methane emission from open cut coal mines.

These options were compared with the reference (business-as-usual) option, reflecting the current policy settings for the NGER scheme. These options are summarised in Table 1 and provided in more detail below.

Table 1: Summary of Policy Options

Policy option	Policy setting
Reference option (BAU)	<ul style="list-style-type: none"> No amendments made to the NGER Measurement Determination. Facilities may continue to report emissions using Method 1, 2 or 3.
Option 1 (Method 1 repealed for all)	<ul style="list-style-type: none"> Method 1 is repealed from the NGER Measurement Determination with all facilities required to use Method 2 or 3.
Option 2 (Method 1 repealed for Safeguard facilities only)	<ul style="list-style-type: none"> Method 1 is phased out for Safeguard Mechanism facilities: <ul style="list-style-type: none"> from 1 July 2025, Safeguard Mechanism facilities that produced more than 10 million tonnes of coal in FY2023 must estimate fugitive methane emissions from open-cut mines using Method 2 or 3; from 1 July 2026, all remaining Safeguard Mechanism facilities must estimate fugitive methane emissions from open-cut mines using Method 2 or 3. A facility can apply to the Clean Energy Regulator for a limited extension of time to transition to Method 2 or 3 if it satisfies prescribed requirements.

Option 2 was identified as the preferred option. This decision was informed by the analysis contained within the Impact Analysis Equivalent (CCA review), further analysis of the options undertaken by the department with regard to the differences in facility and emissions coverage, regulatory burden, and implications for the accuracy of emissions data. Feedback from additional stakeholder consultation undertaken by the department (Annex A) was also considered.

This option best supports the objective of enhancing the accuracy of fugitive methane emissions reported by facilities from the extraction of coal from open-cut mines, while minimising regulatory burden on business. A summary of this assessment is set out below.

By maintaining the status quo, the reference option does not achieve the objective of enhancing the accuracy of reported fugitive methane emissions from open-cut mines. Nor is it consistent with the CCA review Recommendation 15 to phase out Method 1 methods for fugitive methane emissions estimation.

Both Options 1 and 2 would support the objective of enhancing the accuracy of reported fugitive methane emissions from open-cut mines because both options would require facilities currently using Method 1 to transition to Method 2 or 3. Method 1 provides a simple, low-cost option for estimating fugitive methane emissions from open-cut mines. Method 1 estimates an open-cut mine's fugitive methane emissions by applying state-specific emissions factors prescribed in the Measurement Determination to facility-level activity data (quantity of run-of-mine coal extracted during the reporting year). The emission factors are based on best available data sources, including state government petroleum datasets and methane flux studies, to derive the average methane content of coal across a given state. Such emission factors do not reflect the mine-specific methane content, which can vary both between coal basins and within the same basin.

In contrast, Methods 2 and 3 would enhance the accuracy of reported fugitive methane emissions through the use of facility-specific data. The methods require the development of a mine-specific model for the in-situ methane in place prior to extraction. This model is used to estimate the fugitive emissions of methane each year when extracting coal from the open-cut mine. Modelling, sampling and analysis must be conducted in accordance with the Australian Coal Industry's Research Program (ACARP) guidelines and relevant Australian Standards. Key components of these methods are set out below and provided in further detail in the Regulator's *Estimating emissions and energy coal mining guideline* (cer.gov.au).

- A framework for data collection, including borehole sampling and gas testing of coal and gas bearing strata, which ensures representative and unbiased sampling. Third parties are used for gas sampling and testing. The "Estimator" (see below) must also be satisfied that the competence and approach taken by those performing the required sampling and testing meets appropriate standards, and that finding documented.
- Guidelines and standards for data analysis and interpretation.
- An approach for estimating gas in near-surface zones characterised by very low gas contents.
- Guidelines on utilising the collected data to produce a model of gas distribution describing the gas content and composition with a defined three-dimensional volume. The process and supporting data for the modelling must also undergo a documented independent peer review by an appropriate professional and demonstrate due diligence.
- Guidelines on estimating the emissions released from the in-situ gas stock as blocks of strata within the mine are extracted for coal production.
- Minimum qualifications of persons ("Estimator") who are permitted to estimate emissions

from an open-cut mine using the higher order method. It should be evidenced, through the creation and storage of appropriate documentation, that the Estimator (either an individual or a team) used meets the professional and qualification requirements set out in the ACARP guidelines.

- NGER scheme reports are subject to rigorous monitoring and compliance measures administered by the Clean Energy Regulator, including desktop reviews, Greenhouse and energy audits, site visits and data analysis to identify anomalies and reporting errors. Further information on the Regulator's approach to monitoring and compliance is available at [Our compliance approach | Clean Energy Regulator \(cer.gov.au\)](https://www.cer.gov.au/our-compliance-approach).

When Options 1 and 2 were compared, Option 2 was found to better support the objective of enhancing the accuracy of fugitive methane emissions reported by facilities from the extraction of coal from open-cut mines through design features that could be expected to promote higher compliance while minimising regulatory burden and addressing stakeholder concerns to the greatest extent possible. These design features are summarised below:

Prioritisation of facilities covered by the Safeguard Mechanism

Based on FY2023 data, Option 1 would require 37 facilities to access the same limited pool of physical equipment and qualified personnel simultaneously in order to comply with the requirements of Methods 2 or 3. These requirements are materially different to Method 1, and in large part must be completed prior to the commencement of the reporting year.

Option 2 reduces the number of affected facilities seeking to access those resources to 21 (43% reduction). It therefore better supports the submission of high quality Method 2 or 3-consistent emissions data by mitigating the risk of incorrect application of the method due to delays in accessing necessary resources.

This approach would still realise a significant increase in fugitive emissions estimated using Method 2 or 3, given Safeguard Mechanism facilities accounted for 92% of fugitive methane emissions reported using Method 1 in FY2023. Prioritising enhanced accuracy in emissions reporting by such facilities is also consistent with the important role the Safeguard Mechanism plays in the achievement of Australia's national emission reduction targets.

Staged phase out of Method 1

In addition to prioritising Safeguard Mechanism facilities for transition to Methods 2 or 3, Option 2 staggers those facilities' transition over two years. A small number of Safeguard Mechanism facilities that each produced more than 10 million tonnes of run-of-mine coal in FY2023 (latest reported year) would be required to apply Methods 2 or 3 from 1 July 2025. All remaining facilities covered by the Safeguard Mechanism would be required to apply Methods 2 or 3 from 1 July 2026.

This staged phase out approach would achieve a material increase in emissions reported using Methods 2 or 3 in FY2026. Based on FY2023 data, the facilities that would transition in the first year

of the phase out reported around 41% of fugitive methane emissions estimated using Method 1 in that year. The approach would also better promote compliance and enhanced accuracy in reported emissions compared to Option 1 by spreading the demand for equipment and personnel over two years and recognising that the time required to complete the transition will vary from facility to facility.

Provision for temporary extension of time to transition to Methods 2 or 3

Option 2 includes provision for the NGER scheme administrator, the Regulator, to provide a facility a temporary extension of time to transition to Methods 2 or 3. The Regulator would have the discretion to provide such an extension where a facility has provided evidence that demonstrates reasonable efforts have been made to transition but a genuine need remains for a temporary extension to avoid incorrect application of the method that could impact the accuracy of the reported emissions estimates.

This aspect of Option 2 reflects consultations with industry stakeholders. Industry advised that, based on more than 10 years' experience in implementing Method 2 and their understanding of affected facilities varied circumstances, it was possible that some facilities may encounter difficulties meeting the transition timeframes for implementing Method 2 or 3 despite best efforts. Potential difficulties were stated to include issues accessing drilling equipment, laboratories and qualified personnel in a timely fashion, weather delaying drilling, complex or extensive ore bodies requiring significant or repeated rounds of sampling and analysis, and the need to complete related federal and state regulatory processes within the proposed timeframes.

Regulatory burden

Option 2 would be expected to result in lower regulatory burden on individual facilities and the industry as a whole, compared to Option 1. Staging the phase out should help dampen increases in the cost of equipment and personnel that otherwise could have been driven by requiring all facilities to transition over the same time period. By excluding non-Safeguard Mechanism facilities, which in FY2023 were responsible for under 8% of Method 1 emissions, Option 2 addresses stakeholder concerns that the proposal could impose compliance costs on those facilities that were disproportionate to the enhancement in emissions accuracy achieved through transition to Method 2.

While the design of Option 2 will minimise regulatory costs to individual facilities, the material difference between Method 1 and Methods 2 and 3 will result in an increase in regulatory costs for each facility required to apply those methods. The estimated regulatory burden for each policy option is provided in Table 2, along with the number of facilities impacted based on FY23 NGER scheme reported data and the proportion of emissions reported using Method 1 in FY23, which would be covered by the transition to Methods 2 or 3.

No regulatory burden is expected to be incurred by individuals or community organisations. As the Reference Option represents Business as Usual, that option imposes no additional regulatory

burden on business. The estimated costs to business from Options 1 and 2 are based on the Australian Government's *Regulatory Burden Measurement* framework, industry feedback and publicly available information. Estimated costs are separated into the two key stages in the implementation of Options 1 and 2:

- "Transitional costs": incurred by a facility prior to commencing estimation of fugitive methane emission in accordance with Methods 2 or 3. They are costs to a facility associated with acquiring data on its gas resource and then completing a gas assignment model. Examples of these costs include acquisition of drilling rig, sample testing/laboratory and technical and assurance/review services. Some of these costs may also be incurred at different times in the future for various reasons including mine expansions and changes to mine design/plan.
- "Ongoing costs": incurred each year by a facility to fulfil requirements under Methods 2 or 3 to report fugitive methane emissions from coal extraction for a given reporting year by applying the above gas assignment model. Examples of these costs include technical resources to prepare the annual emissions estimate and related assurance activities.

The regulatory burden estimates in Table 2 for each of the above two stages are indicative and presented as a range rather than an average of the estimated costs for all affected facilities. This approach is necessary due to the considerable variability of affected facilities, the facility-specific emissions measurement requirements of the proposed amendments, and the absence of publicly available information regarding the cost and time required to implement the amendments in each of the affected facilities. Much of the information needed to calculate an average would only become available during the transitional stage.

The ranges in Table 2 are based on industry feedback, including cost estimates for affected facilities based on three categories. These categories estimated cost based on different coal mine seam lengths ('strike length'), and the assumption that the longer the strike length the more complex a mine's geology and gas resource, and therefore the higher the regulatory costs. Publicly available information on the affected facilities' strike length was then used to determine an indicative range of estimated regulatory burden. For the same above-mentioned cost and time variability reasons, the 'Transitional' estimate in Table 2 is presented as an aggregate rather than annual figure. The majority of affected facilities are expected to transition within 2 years however some may incur these costs over a longer transition period if they satisfy the above-mentioned requirements for a temporary extension of time to transition to Method 2 or 3. The 'Ongoing' costs in Table 2 are presented as an indicative annual range, also based on the above-mentioned three categories of mine-type.

While the regulatory burden estimates are material they have a high degree of uncertainty with regard to each affected facility, due to information paucity and variability between affected facilities. The regulatory burden can also be considered in the context of the sector's contribution to Australia's fugitive methane emissions and the value of its production. In financial year 2022-23

Australia’s coal mine sector profits before tax were \$73.3 billion². In financial year 2021-22, open-cut mines fugitive methane emissions accounted for 9 million tonnes carbon dioxide equivalent. Submissions from industry to the NGER scheme public consultation on the proposed amendments did not raise potential regulatory burden as an obstacle to implementation.

As indicated in Table 2 and mentioned above, regulatory burden costs associated with Option 1 would be expected to be higher on both an individual facility and sectoral basis than Option 2. Option 1 would result in an additional 16 facilities competing for the same limited pool of equipment and technical personnel required to implement Methods 2 or 3. Such a situation could be expected to place upward pressure on regulatory costs, however the exact quantum of the increase cannot be reliably determined given the range of cost inputs and complexity of predicting the magnitude of price increases across those inputs.

Table 2: Regulatory burden estimates with the estimated proportion of emissions reported using Method 1 for each option where affected facilities are determined on the basis of FY23 data.

Policy option	Estimated regulatory cost to all affected facilities (\$million)	No. of facilities affected (FY2023 data)	Estimated proportion of emissions reported by affected facilities using Method 1 (FY2023)
Reference option (BAU)	0	0	0
Option 2: Preferred (Method 1 repealed for Safeguard facilities only)			
<i>Transitional costs (a)</i>	80-100	21	92%
<i>Ongoing annual costs (b)</i>	3-4	21	92%
Option 1 (Method 1 repealed for all facilities)			
<i>Transitional costs (a)</i>	80-100+	37	100%
<i>Ongoing annual costs (b)</i>	3-4+	37	100%

(a) Estimated and indicative range of costs expected to be incurred over the course of one or more years.

(b) Estimated and indicative range of costs expected to be incurred on an annual basis after transitional arrangements completed.

² Australian Bureau of Statistics (2022-23), *Australian Industry*, ABS Website, accessed 6 June 2024.

Implementation

Implementation

The chosen option (Option 2) will be implemented through an amendment to Division 3.2.3 of the Measurement Determination. This amendment will be made on 1 July 2024 and will take effect as follows:

- From 1 July 2025, all facilities covered by the Safeguard Mechanism that reported more than 10 million tonnes of run-of-mine coal was extracted during FY2023 must estimate fugitive methane emissions from open-cut mines using Method 2 or 3.
- From 1 July 2026, all remaining facilities covered by the Safeguard Mechanism must estimate fugitive methane emissions from open-cut mines using Method 2 or 3.
- The Regulator will be provided the discretion to extend the transition period in relation to a particular facility where it is satisfied, based on evidence provided by that facility, that reasonable efforts have been made to transition within the prescribed timeframe, but a genuine need remains for a temporary extension to avoid non-compliance.

Figure 1 summarises the implementation timeline.



Figure 1: Implementation timeline.

Risks to implementation and mitigation measures

There are three main risks to the implementation of phasing out Method 1 for open cut coal mines: a lack of familiarity with Methods 2 or 3 leading to incorrect application of the methods; insufficient equipment and personnel to meet demand; and the complexity of transition for particular facilities.

These risks and the associated mitigation measures are summarised in Table 3 and explained in greater detail below.

Table 3: Summary of risks to implementation and associated mitigation measures

Risk	Likelihood	Impact	Mitigation measure
Lack of familiarity with the methods	Moderate	Low	<ul style="list-style-type: none"> Regulator's education, monitoring, compliance and enforcement arrangements, ranging from guidance material and workshops to the requirement to resubmit non-compliant data
Insufficient equipment and personnel to meet demand	Moderate	High	<ul style="list-style-type: none"> Option 2 spreads demand for equipment and personnel over two years and provides discretion for Regulator to extend transition period
Unanticipated complexity or scale of facility operations	Low	Low	<ul style="list-style-type: none"> The Regulator will have discretionary power to extend the transition period for a particular facility based on genuine need

Lack of familiarity with the methods

Poor compliance is a possibility when a facility applies a method for the first time. As discussed previously, the requirements for compliance with Methods 2 and 3 are materially different to those for Method 1. It is noted, however, that the methods have been in use by the industry for over 10 years and around 40% of the facilities that will be required to transition to Methods 2 or 3 are owned by companies that use Method 2 for other open-cut mine facilities.

The Regulator has over 10 years' experience in supporting facilities' compliance with Method 2. Compliance will continue to be promoted through the Regulator's education, monitoring compliance and enforcement arrangements. These arrangements include helping scheme participants to understand how to comply with their obligations through tools such as guidance documents, workshops, discussion forums and web-based frequently asked questions (FAQs), as well as an overall approach to deter, detect and respond to non-compliance to ensure ongoing scheme integrity.

Supply of required equipment and insufficient personnel to meet demand

Industry stakeholders have advised that the pool of equipment and personnel required for compliance with Methods 2 and 3 may not be sufficient to meet the needs of all facilities within the transition period.

Option 2 is designed to spread demand for such resources across two years to mitigate this risk. In addition, this option makes provision for the Regulator to extend the transition period for a

particular facility where it is satisfied, based on evidence provided by that facility, that reasonable efforts have been made to transition within the prescribed timeframe, but a genuine need remains for a temporary extension to avoid incorrect application of the method that could impact the accuracy of the reported emissions estimates.

Complexity of facility transition

Industry stakeholders have advised that the transition period may be insufficient for facilities in complex situations, including facilities with complex or extensive ore bodies that will require significantly more sampling and analysis than simpler ore bodies to produce a reliable and representative model of the mine's gas content and composition.

These situations are expected to be limited, with mitigation taking the form of the Regulator's discretionary power to extend the transition period for a particular facility where it is satisfied, based on evidence provided by that facility, that reasonable efforts have been made to transition within the prescribed timeframe, but a genuine need remains for a temporary extension to avoid incorrect application of the method that could impact the accuracy of the reported emissions estimates.

How will you evaluate your chosen option against the success metrics?

The objective of this amendment to the NGER scheme is to enhance the accuracy of facility-level emission estimations from open cut coal mines. Industrial facility-level emissions and energy data from the NGER scheme are integral to the development, implementation and monitoring of climate policy, including the Safeguard Mechanism, Australian Carbon Credit Units scheme, national net zero and sectoral decarbonisation plans and mandatory corporate climate-related financial disclosure requirements, as well as implementation of international and domestic emissions and energy reporting obligations under the Paris Agreement and *Climate Change Act 2022*. As such, effective evaluation of this amendment is critical.

The success of this amendment will be monitored through the following metrics.

Compliance

Compliance with Method 2 or 3 will be determined through the Regulator's monitoring, compliance and enforcement program. The Regulator monitors compliance with the NGER scheme through systematic analysis of reported data for qualitative or quantitative errors and through consideration of findings from its annual audit program. Where reporting errors are identified and confirmed, the Regulator may require that the data is corrected through resubmission. In its monitoring and compliance activities, the Regulator will prioritise reporters who are implementing Method 2 for the first time and will continue its current practice of publishing quarterly Compliance Updates which includes information on compliance activities associated with the NGER scheme.

Transition rates

A high rate of transition to Method 2 or 3 will indicate a small number of facilities seeking extensions for transition. This will be monitored by the Regulator who will have the discretionary power to grant such extensions.

The Government is publicly consulting on proposed amendments that would make information on this metric publicly available. It has proposed introducing a requirement for the Regulator to publish by 15 April each year the methods used by facilities to estimate fugitive methane emissions from coal mining, as well as oil and gas sector activities.

Use of the reported data

NGER scheme facility level data is used in the national inventory when there are sufficient facility-specific estimates for a specific basin. In the absence of a sufficient sample of data, the inventory applies default values (i.e. Method 1) to mitigate possible bias in estimates. High transition rates and compliance will enable facility level data to be incorporated into the national inventory within a reasonable timeframe.

Achievement of this metric will be publicly transparent as Australia's annual national inventory report to the United Nations (UN) describes data sources used in the estimation of fugitive emissions from open cut coal mines. Use of reported data will be subject to UN technical review under the United Nations Framework Convention on Climate Change (UNFCCC) and the Paris Agreement.

Departmental and external review

In addition to the above success metrics, the Department reviews and updates the NGER scheme each year as part of its continuous improvement program and in response to feedback from users and other stakeholders. The implementation of Option 2 will form a part of future annual review, by feedback from reporters, the Clean Energy Regulator and the broader community. Every five years, the annual update is also informed by the Climate Change Authority's review of the operation of the NGER scheme legislation. The Authority's next review of the NGER scheme is expected in 2028.

Annex A: Additional consultation undertaken by the department

In addition to the extensive consultation undertaken through the Impact Analysis Equivalent, detailed on page ii of the CCA review, the department conducted further stakeholder consultation to inform the approach to implementing CCA Recommendation 15 as it relates to the phase out of Method 1 for the estimation of fugitive methane emissions from the extraction of coal from open-cut mines.

An outline of the department's consultation activities and feedback is provided below.

Targeted consultation

Over January to May 2024, the department sought views from the peak industry body, community interest groups, government agencies and members of the scientific community on CCA Recommendation 15 and options for its implementation in relation to open-cut coal mines.

Stakeholders either supported or did not oppose of the removal of Method 1, however, feedback was mixed regarding timing of the phase out. Some stakeholders sought phase out from 1 July 2024, while the peak industry body shared concerns that phase out within 3 to 5 years may present difficulties for some facilities. Such difficulties were stated to include issues accessing drilling equipment, laboratories and qualified personnel, delay due to weather, sampling complex or extensive ore bodies and completing related state regulatory processes.

Public consultation

Over 29 April to 24 May 2024, the department invited public submissions on the proposed legislative amendment to implement CCA Recommendation 15 in relation to open-cut mines (Option 2). The proposed amendment was included in the department's *National Greenhouse and Energy Reporting (NGER) scheme: 2024 Proposed Amendments consultation paper* made available on the department's website. Awareness of the public consultation was raised through social media and email notification of NGER scheme facilities, the peak industry body and community interest groups.

23 submissions on the proposed legislative amendment were received. 12 submissions supported the amendment as proposed. One submission supported the proposed phase out of Method 1 but suggested that, rather than applying the second tranche to all Safeguard Mechanism facilities, it should apply to open-cut mines that produced an (unspecified) lower run-of-mine coal per annum than 10 million tonnes. Other submissions supported the approach to the phase out of Method 1 but proposed it occur over a longer time period, in conjunction with a review or phase out of

Method 2, or the development of higher order emissions estimation methods. The CCA review of the NGER scheme made recommendations in regard to the review of Method 2 and the development of higher order methods for all fugitive methane emission sources. The government response to all CCA review recommendations is scheduled.

