EXPLANATORY STATEMENT

Issued by the authority of the Minister for Climate Change and Energy

National Greenhouse and Energy Reporting Act 2007

National Greenhouse and Energy Reporting Legislation Amendment (Best Practice Emissions Intensities Update) Instrument 2024

Background

The *National Greenhouse and Energy Reporting Legislation Amendment (Best Practice Emissions Intensities Update) Instrument 2024* (the Amendment Instrument) updates the *National Greenhouse and Energy Reporting (Safeguard Mechanism) Rule 2015* (the Safeguard Rules) and the *National Greenhouse and Energy Reporting (Measurement) Determination 2008* (the Measurement Determination).

The *National Greenhouse and Energy Reporting Act 2007* (the NGER Act), *National Greenhouse and Energy Reporting Regulations 2008* and the Safeguard Rules, alongside the *Carbon Credits (Carbon Farming Initiative) Rule 2015* (CFI Rule) and the *Australian National Registry of Emissions Units Regulations 2011*, provide the legislative framework for the Safeguard Mechanism.

Overview of the Safeguard Mechanism

The Safeguard Mechanism is the Australian Government's policy for reducing emissions at Australia's largest industrial facilities. It limits the net emissions of certain facilities—those that produce more than 100,000 tonnes of covered emissions each year. The Safeguard Mechanism commenced in 2016. It was reformed in 2023 to ensure that covered facilities contribute to meeting Australia's emission reduction targets, while strengthening their competitiveness as the world moves to net zero.

The *Safeguard Mechanism (Crediting) Amendment Bill 2023* was passed on 30 March 2023. It amended the NGER Act and other legislation, to establish the framework to give effect to key elements of the Australian Government's reforms, such as introducing credits to the scheme to provide an incentive to facilities to go beyond their baselines. Much of the detail of the Safeguard Mechanism is set out in legislative rules, primarily the Safeguard Rules. The reformed Safeguard Mechanism commenced on 1 July 2023.

The Safeguard Mechanism sets emissions limits —known as baselines—on the greenhouse gas emissions of those facilities. These baselines will decline gradually, on a trajectory consistent with achieving Australia's emission reduction targets of 43 per cent below 2005 levels by 2030 and net zero by 2050. The Safeguard Rules provide detail on the calculation of those baselines, which includes the use of production variables and default emissions intensity numbers. Baselines are production-adjusted, meaning that they increase and decrease as a facility's production varies.

Production variables and emissions intensity numbers have been part of the Safeguard Mechanism since its inception in 2016. Production variables generally represent the output of a facility (e.g. tonnes of aluminium). Default emissions intensities are set at an industry average level.

The Australian Government conducted a review of production variables to help to ensure that a comprehensive set of suitable production variables are in place for setting Safeguard Mechanism baselines and that production variable definitions support incentives for decarbonisation. The review resulted in updates to production variables and certain default emissions intensities that came into effect on 7 October 2023 and 26 April 2024.

The update on 26 April 2024 also set the first tranche of international best practice benchmarks (referred to as 'benchmarks' or 'best practice EI'), which were foreshadowed during the reform process. International best practice benchmarks specify emissions intensities for use by new facilities and facilities producing new products when setting baselines.

Overview of the Measurement Determination

The National Greenhouse and Energy Reporting scheme (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 NGER scheme legislation includes the NGER Act; the *National Greenhouse and Energy Reporting Regulations 2008*; and the Measurement Determination. It provides the technical detail of the methods for the estimation of greenhouse gas emissions and the production and consumption of energy within the NGER scheme.

Purpose

The Government's reforms to the Safeguard Mechanism will reduce emissions at Australia's largest industrial facilities and maintain their international competitiveness as the world decarbonises. Aligned with this, the Amendment Instrument amends the Safeguard Rules to:

- insert best practice emissions intensity numbers for certain production variables;
- make changes to certain definitions for the purposes of changing the production variables;
- insert new production variables with specified best practice emissions intensity numbers;
- insert one default emissions intensity number;
- introduce new publishing requirements for the Clear Energy Regulator to increase transparency;

- make technical amendments to the Safeguard Rules to help ensure the policy outcomes of the Safeguard reforms are achieved.

The Amendment Instrument also makes some updates to the Measurement Determination that were not included in the *National Greenhouse and Energy Reporting (Measurement) Amendment (2024 Update) Determination 2024*. These updates amend an equation related to methane emissions from landfills and update some location-based factors related to the estimation of scope 2 emissions from the consumption of purchased or acquired electricity.

Legislative Authority

The amendments to the Safeguard Rules are made under section 22XS of the NGER Act. Section 22XS of allows the Minister to, by legislative instrument (and subject to subsections (22XS(1A) and (2)), make rules prescribing matters:

- required or permitted by the Act to be prescribed by the safeguard rules; or
- necessary or convenient to be prescribed for carrying out or giving effect to the safeguard provisions.

The amendments to the Measurement Determination were made under section 10 of the NGER Act, which provides for the Minister to determine methods, or criteria for methods, for the measurement of (a) greenhouse gas emissions; (b) the production of energy; and (c) the consumption of energy.

Compliance with Legislative Conditions

The conditions set out in subsection 22XS(1A) of the NGER Act require the Minister to be satisfied of certain requirements relating to safeguard outcomes, as set out in the Act. The Minister has considered and is satisfied that the Amendment Instrument is consistent with each of the safeguard outcomes in paragraphs 3(2)(b), (c) and (d) of the NGER Act, being the achievement of:

- total net safeguard emissions for all of the financial years between 1 July 2020 and 30 June 2030 not exceeding a total of 1,233 million tonnes of carbon dioxide equivalence;
- net safeguard emissions declining to:
    - no more than 100 million tonnes of carbon dioxide equivalence for the financial year beginning on 1 July 2029; and
    - zero for any financial year to begin after 30 June 2049; and
- the 5-year rolling average safeguard emissions for each financial year that begins after 30 June 2024 being lower than the past 5-year rolling average safeguard emissions for that financial year.

The Minister has considered and is satisfied that the Amendment Instrument takes into account the safeguard outcomes in paragraphs 3(2)(e) and (f) of the NGER Act, being:

- the responsible emitter for each designated large facility has a material incentive to invest in reducing covered emissions from the operation of the facility; and
- the competitiveness of trade-exposed industries is appropriately supported as Australia and its regions seize the opportunities of the move to a global net zero economy.

A 'designated large facility' as mentioned in paragraph 3(2)(e) of the NGER Act refers, in effect, to facilities covered by the Safeguard Mechanism.

Pursuant to s 22XS(1B), the Minister's Statement of Reasons was published on the website of the Department of Climate Change, Energy, the Environment and Water (the department) and is included at **Attachment C**.

Consistent with s 22XS(2), the Amendment Instrument does not:

- create a civil or criminal offense,
- create powers of arrest, detention, entry, search or seizure,
- impose a tax,
- appropriate money from the consolidated fund, or
- amend the NGER Act.

Consultation

The department released an exposure draft of the Amendment Instrument for public consultation from 25 May 2024 to 14 June 2024.

There were 22 submissions, including 15 submissions from businesses, 4 from industry associations, one from a state government, one from a non-government organisation, and one from an individual. All non-confidential submissions were published on the department's website.

Changes were made to the final Amendment Instrument in response to submissions. These changes are detailed against relevant provisions in **Attachment A**.

Changes to the Amendment Instrument compared to the exposure draft include changes to the 'primary iron', 'primary steel' and 'continuously cast carbon steel products and ingots of carbon steel (manufacture of carbon steel from cold ferrous feed)' that relate to the treatment of cold ferrous feed and imported coke oven coke; changes to the 'rare earths processing' production variable; and changes to the best practice emissions intensity numbers for 'renewable aviation kerosene' and 'renewable diesel'.

The final Amendment Instrument also includes provisions to address some issues that were identified after the exposure draft was released. These include updates to section 17, section 40, section 42, and the default emissions intensity for the 'petajoule-kilometres of natural gas

distribution' production variable. The department consulted with gas distributors covered by the Safeguard Mechanism regarding the update to the default emissions intensity.

The international best practice emissions intensity numbers were calculated in accordance with the *Guidelines for setting international best practice benchmarks* (the Guidelines) which are published on the department's website[1]. The department consulted on draft guidelines between 19 July 2023 and 11 August 2023 and received 44 submissions from businesses, industry groups, environmental groups and individuals, and all non-confidential submissions are published on the department's website.

The Government considered emerging international methane emissions standards in setting the best practice emissions intensity numbers for the production variables in the coal, oil and gas sectors. The Department compared the standards set in the UNEP's Metcoal Methane Partnership and Oil and Gas Methane Partnership 2.0 to the relevant final benchmarks, finding they more stringent than the emerging international methane emissions standards.

Production variable definitions and default emissions intensity values were determined in accordance with the *Framework for developing default production variables and emissions-intensity values* (the Framework Document)[2]. This document was first consulted on in 2019 and has been updated to reflect the reforms to the Safeguard Mechanism.

An exposure draft of the *National Greenhouse and Energy Reporting (Measurement) Amendment (2024 Update) Determination 2024* and accompanying consultation paper were released for public consultation from Monday 29 April to Friday 24 May 2024. The updates to the Measurement Determination in the Amendment Instrument were covered in this consultation paper.

Regulatory Impact

In accordance with *The Australian Government Guide to Regulatory Impact Analysis*[3], a Regulatory Impact Analysis (RIA) is mandatory for decisions made by any Australian Government entity if that decision is likely to have a more than minor impact on businesses, community organisations, individuals, or any combination.

The regulatory impacts of the reforms to the Safeguard Mechanism were assessed as part of the RIA published in May 2023, and the setting of best practice emissions intensity values as

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[1] In June 2024, the Guidelines were available at: https://www.dcceew.gov.au/climate-change/publications/benchmark-guidelines-setting-international-best-practice

[2] In June 2024, the Framework Document was available at: https://www.dcceew.gov.au/climate-change/publications/framework-developing-production-variables-default-emissions-intensity-values

[3] In June 2024, the former Australian Government Guide to Regulatory Impact Analysis was published alongside the new *Australian Government Guide to Policy Impact Analysis* (the latter came into effect from 1 March 2023) at: https://oia.pmc.gov.au/resources/guidance-impact-analysis/australian-government-guide-policy-impact-analysis

well as technical and minor amendments made by the Amendment Instrument are an important step in implementing the reforms. The Office for Impact Analysis has been consulted (ref OIA23-05903) and confirmed that an RIA is not required for the amendments to the Safeguard Rules.

The regulatory impacts of amendments to the Measurement Determination have been assessed as minor by the Office of Impact Analysis (ref OIA24-06759).

Details and Operation

The Amendment Instrument is a legislative instrument within the meaning of the *Legislation Act 2003*. The instrument commences on the day after it is registered on the Federal Register of Legislation. Details of the Amendment Instrument, including commencement details, are set out in **Attachment A.**

The Amendment Instrument is subject to disallowance under section 42 of the *Legislation Act 2003.* However, the Amendment Instrument is exempt from sunsetting by regulations made for the purposes of paragraph 54(2)(b) of the *Legislation Act 2003*, which effectively provides that any legislative instrument that is prescribed by regulation for the purposes of that paragraph is exempt from sunsetting. Item 42A(b) in the table in section 12 of the *Legislation (Exemptions and Other Matters) Regulation 2015* prescribes a rule made under section 22XS of the NGER Act for that purpose. As such, the Amendment Instrument is exempt from sunsetting being a rule made under section 22XS of the NGER Act.

As outlined above, the NGER Act establishes both a national system for reporting greenhouse and energy information and the Government's Safeguard Mechanism. Importantly, it prescribes the emissions and/or energy thresholds that trigger a corporation's reporting obligations. Its objectives are designed to directly support compliance with Australia's international obligations, including under the Paris Agreement. As outlined in the explanatory statement to the *Legislation (Exemptions and Other Matters) Amendment (Sunsetting and Disallowance Exemptions) Regulation 2016*, which implemented the sunsetting exemption for instruments made under section 22XS of the NGER Act, the Amendment Instrument has the primary purpose of giving effect to international obligations that are long-term and enduring, and as such it remains appropriate that they are exempt from sunsetting. This also enhances the investment certainty for the scheme, given the long-lived nature of the facilities and assets covered by the Safeguard Mechanism.

Statement of Compatibility with Human Rights

The Amendment Instrument is compatible with the human rights and freedoms recognised or declared under section 3 of the *Human Rights (Parliamentary Scrutiny) Act 2011.* A statement of compatibility is set out in **Attachment B**.

ATTACHMENT A

Details of the National Greenhouse and Energy Reporting Legislation Amendment (Best Practice Emissions Intensities Update) Instrument 2024

Section 1 – Name of Instrument

This section specifies the name of the Legislative Instrument as the *National Greenhouse and Energy Reporting Legislation Amendment (Best Practice Emissions Intensities Update) Instrument 2024* (the Amendment Instrument).

Section 2 – Commencement

This section provides that the Legislative Instrument commences on the day after registration on the Federal Register of Legislation.

Section 3 – Authority

This section specifies that the Legislative Instrument is made under section 22XS of the *National Greenhouse and Energy Reporting Act 2007* (the NGER Act). The power to make legislative instruments under this subsection includes the power to amend or revoke instruments that have already been made, with any doubt about this resolved by subsection 33(3) of the *Acts Interpretation Act 1901*.

Section 4 – Schedules

This section provides that the *National Greenhouse and Energy Reporting (Safeguard Mechanism) Rule 2015* (the Safeguard Rules) are amended, or repealed, as set out in the amendments outlined at Schedule 1.

Schedule 1— Amendments

National Greenhouse and Energy Reporting (Measurement) Determination 2008

Item 1

Updates the second equation in paragraph 5.15(4) of the Measurement Determination to replace the acronym 'CEA' with 'CEL'. This aligns with changes made by the *National Greenhouse and Energy Reporting (Measurement) Amendment (2024 Update) Determination 2024* to achieve consistent use of the term 'collection efficiency limit' and corrects a drafting error.

Item 2

Provides that amendments made by this instrument to the Measurement Determination apply in relation to the financial year starting 1 July 2024 and later financial years. These amendments will therefore apply in relation to a financial year starting prior to commencement of this instrument. This application is necessary and appropriate in order to

ensure that emissions reporting requirements are consistent and reflect the best available data. No person will be disadvantaged by this application as the substance of the amendments was included in a package of proposed amendments which were the subject of customary public consultation in May 2024, and submission of NGER scheme reports for the financial year starting on 1 July 2024 is not required until the end of October 2025 (see NGER Act paragraph 19(6)(d)). In particular, the scope 2 emissions factors are not relevant to the application of the Safeguard Mechanism, which only relates to covered scope 1 emissions.

Item 3

Makes a routine annual update to emission factors and residual mix factors prescribed in Part 6 of Schedule 1 of the Measurement Determination (*Indirect (scope 2) emission factors and residual mix factors for consumption of electricity*). These factors are applicable when using the location-based method under section 7.2 of the Measurement Determination to estimate scope 2 emissions from the consumption of electricity from the main grid in a state or territory.

National Greenhouse and Energy Reporting (Safeguard Mechanism) Rule 2015

Item 4

Item 4 introduces a new subsection 17(6) which, to avoid any doubt, clarifies that audit reports conducted for Emissions Intensity Determinations meet the requirements of reasonable assurance engagements consistent with the *National Greenhouse and Energy Reporting (Audit) Determination 2009* (NGER Audit Determination 2009) and that the audit team leader is a registered Category 2 auditor under the NGER regulations. This reflects that the conclusions already required by subsection 17(3) are 'reasonable assurance conclusions' that can only be provided in accordance with those requirements and processes set out in the NGER Audit Determination.

This subsection mirrors the wording for auditing requirements that applied to baseline determination applications prior to the Safeguard Mechanism reforms and is currently referenced in section 80 of the *Carbon Credits (Carbon Farming Initiative) Rule 2015.* The re-introduction of this drafting will make clear on the face of the legislation that Emissions Intensity Determinations undergo an appropriate level of scrutiny.

Item 5

Item 5 repeals and substitutes subsection 39(3) to insert additional requirements for non-manufacturing facilities when calculating their revenue for the purpose of applying for a trade-exposed baseline-adjusted determination. In addition to requiring the use of the Australian accounting standards (defined in section 4 of the Safeguard Rules to be the accounting standards in force under section 334 of the *Corporations Act 2001*) as in force at the end of the first financial year, the rule amendment requires non-manufacturing facilities to also calculate revenue in accordance with the EBIT Guidelines in force at that time. All

previous requirements for non-manufacturing facilities when calculating revenue have been retained.

This requirement is being introduced as stakeholders have provided information to the Government establishing that the Australian accounting standards alone do not provide sufficient direction to enable non-manufacturing facilities to accurately calculate revenue at a facility level or sufficiently accommodate a range of organisational structures. Although the EBIT Guidelines were originally intended only to be used by manufacturing facilities to calculate their EBIT, the guidance provided is agnostic to whether a facility is a manufacturing facility or non-manufacturing facility. The EBIT Guidelines therefore provide an appropriate reference for non-manufacturers to ensure revenue is calculated accurately and assist resolving ambiguity that would occur if only Australian accounting standards were referenced.

Subsection 22XS(4) of the NGER Act allows the Safeguard Rules to apply, adopt or incorporate matters contained in other instruments, as in force or existing at a particular time or as in force from time to time. Subsection 22XS(5) ensures the provision in subsection (4) is enabled despite subsection 14(2) of the *Legislation Act 2003* which provides that an instrument cannot apply, adopt or incorporate any matter contained in an instrument or other writing as in force or existing from time to time, unless a contrary intention appears.

Subsections 37(7) and 37(8) of the Safeguard Rules provide for the Secretary of the department responsible for the administration of the NGER Act to make the EBIT Guidelines, and for them to be published on the department's website. These Guidelines are intended to be administrative in nature and not a legislative instrument, but the Regulator has regard to them when assessing an application for a determination that a facility is a trade-exposed baseline-adjusted facility.

In August 2024, the EBIT Guidelines could be freely accessed from: https://www.dcceew.gov.au/climate-change/emissions-reporting/national-greenhouse-energy-reporting-scheme/safeguard-mechanism

Item 6

Item 6 inserts new subsection 39(3A) which mirrors existing subsection 37(3) to state that the EBIT Guidelines prevail over the Australian accounting standards to the extent of any inconsistency. This is because the guidelines are more specific to provide clarity to the entities making the relevant applications and resolve ambiguity that would be created by only applying the Australian accounting standards.

Item 7

Item 7 introduces a new subsection 40(4) which, to avoid any doubt, clarifies that audit reports conducted for trade-exposed baseline-adjusted determination applications meet the requirements of reasonable assurance engagements consistent with the NGER Audit Determination 2009 and that the audit team leader is a registered Category 2 auditor under

the NGER Regulations. This reflects that the conclusions already required by subsection 40(3) are 'reasonable assurance conclusions' that can only be provided in accordance with those requirements and processes set out in the NGER Audit Determination.

This subsection mirrors the wording for auditing requirements that applied to baseline determination applications prior to the Safeguard Mechanism reforms and is currently referenced in section 80 of the *Carbon Credits (Carbon Farming Initiative) Rule 2015*. The re-introduction of this drafting will make clear on the face of the legislation that trade-exposed baseline-adjusted determinations undergo an appropriate level of scrutiny.

Item 8

Item 8 updates subparagraph 42(2)(a)(iv) by changing "greenhouse gases" to "covered emissions of greenhouse gases". This updates a requirement that must be met for the Regulator to make a trade-exposed baseline-adjusted determination, so that it relates to covered emissions (rather than total emissions), reflecting the original intent of this provision.

Item 9

Item 9 introduces a new subsection to section 72 that requires the Clean Energy Regulator to publish, by 15 April each year, the methods that each Safeguard Mechanism facility used to estimate each source of fugitive methane emissions from coal mining, oil and natural gas activities, for the previous financial year.

Item 10

Item 10 adds new section 93, containing application and transitional provisions related to the Amendment Instrument. It provides that baselines for the financial years 2023-24 and 2024-25 reflect best practice emissions intensity values in force immediately after the commencement of the Amendment Instrument. It also provides that baselines for the financial year 2024-25 reflect default emissions intensity values in force immediately after the commencement of the Amendment Instrument.

In addition, it provides that if a default emissions intensity for the gaseous hydrogen production variable is being used in relation to a baseline for 2023-24, the default emissions intensity value in force immediately after the commencement of the Amendment Instrument should be used. This reflects that there was not a default emissions intensity for gaseous hydrogen that had been specified prior to the Amendment Instrument.

Item 11

Item 11 inserts a best practice emissions intensity number for 'ammonia' into Schedule 1.

Consistent with the Guidelines, the number is based on a supplementary approach as suitable global data was not available and the relevant domestic data set produced a number that was lower than the equivalent number for hydrogen production. This was considered inappropriate, as ammonia production requires hydrogen to be produced as an intermediate step.

The supplementary approach uses the same engineered calculation that was used for the hydrogen best practice number. It is based on gas-fuelled steam methane reforming technology, which was assessed as being the lowest emissions-intensity commercial hydrogen production (that is, not a pilot or demonstration plant and not receiving significant subsidies). The engineered number assumes a best practice efficiency of the steam methane reforming reaction of 80%; a methane destruction efficiency of 98%; and no carbon capture and storage.

It also assumes the process for transforming hydrogen to ammonia is a combination of waste heat recovery and electrification. If there are additional emissions from generating electricity at the facility, this is covered by the on-site electricity production variable. If grid electricity is used, these are scope 2 emissions and not covered by the Safeguard Mechanism. The treatment of on-site electricity generation is consistent for all facilities across the Safeguard Mechanism.

As the calculation of the number did not depend on international data, consideration of an adjustment for Australian conditions was not required.

Item 12

Item 12 inserts a best practice emissions intensity number for urea into Schedule 1, which is referred to by its other name ‘carbamide’.

Consistent with the Guidelines, the number is based on a supplementary approach as suitable global or domestic data was not available.

The supplementary approach uses an engineered calculation. The calculation assumes the best practice heating process is electric or waste heat recovered, while compression is fuelled by natural gas. It assumes a best practice compressor efficiency of 85% for the compression of ammonia and carbon dioxide in the urea making process.

As the calculation of the number did not depend on international data, consideration of an adjustment for Australian conditions was not required.

Item 13

Item 13 inserts Part 9A into Schedule 1 to include a new production variable for ‘phosphoric acid’, which is applicable to a facility that conducts the activity of producing phosphoric acid from phosphate bearing minerals. The definition has been determined consistent with the Framework Document. The metric is kilolitres of 100% equivalent phosphoric acid contained in a solution where the concentration of phosphoric acid is greater than 70% by weight.

For a known weight of phosphoric acid, its volume may be calculated using a density of 1.8686 t/m^3 at 25 °C and atmospheric pressure.

The production variable is not applicable to a facility which further processes the phosphoric acid into monoammonium phosphate or diammonium phosphate, as the respective production variables include the production of phosphoric acid.

Consistent with the Guidelines, a best practice emissions intensity number for 'phosphoric acid' is also included in this item. The number is based on suitable data from five international facilities located in the United States. According to the Guidelines, the combined production of these five facilities should be compared to the relevant Australian production to confirm the selection of the facilities. However, for 'phosphoric acid' there is no relevant Australian production, therefore five facilities are used.

The Guidelines state that adjustments for Australian conditions will be made if the relevant international facility has characteristics impossible to replicate in Australia, and this has a material impact on achieving best practice emissions intensity; and that geology and climate are relevant. Adjustments for Australian conditions were not required given the geology and climate of the international facilities were equivalent to conditions in Australia.

Item 14

Item 14 updates the definition of sodium cyanide to change the term 'hydrogen isocynanine' where it appears in the definition to 'hydrogen cyanide'.

Item 15

Item 15 inserts a best practice emissions intensity number for 'manganese ore' into Schedule 1. The number is based on the top 10 per cent of Australian industry performance, as Australian mines were found to be less emissions-intensive than international mines with suitable data.

Consistent with the Guidelines, an emissions intensity was calculated as the production-weighted average of the data from the two lowest emissions intensity mines with suitable data in the world. This consisted of one mine in Australia and one mine in South Africa. This emissions intensity was higher than the emissions intensity of the top 10 per cent of Australian performance, which was calculated using the same data that was used to calculate the default emissions intensity for run-of-mine manganese ore. As such, the emissions intensity corresponding to Australian performance sets the best practice number for 'manganese ore'.

As the calculation of the number did not depend on international data, consideration of an adjustment for Australian conditions was not required.

Item 16

Item 16 inserts a best practice emissions intensity number for 'lithium ore' into Schedule 1. Consistent with the Guidelines, the best practice number is based on the top 10 per cent of Australian industry performance, as suitable data could not be found globally for lithium ore

mining. The number was calculated using the same data that was used to calculate the default number for 'lithium ore'.

As the calculation of the number did not depend on international data, consideration of an adjustment for Australian conditions was not required.

Item 17

Item 17 updates the definition of the 'stabilised crude oil (integrated extraction and stabilisation)' production variable to refer to both the reservoir carbon dioxide production variables in sections 35 and 35A of Schedule 1.

Item 18

Item 18 inserts a best practice emissions intensity number for 'processed natural gas (processing only)' into Schedule 1. Consistent with the Guidelines, the number is based on a production-weighted average of the emissions intensity of three gas processing plants. Two are in Norway and one is in the United Kingdom. These were found to be the least emissions-intensive sites globally with suitable data.

The production of the lowest emissions intensity facility was greater than Australia's relevant total production. While the lowest emissions intensity facility could therefore have been used on its own, consistent with the Guidelines, additional facilities were used for the calculation to produce a more representative number. Two additional facilities were included because the production of the next lowest emissions intensity facility was comparatively very small so did not materially contribute to a more representative number.

The Guidelines state that adjustments for Australian conditions will be made if the relevant international facility has characteristics impossible to replicate in Australia, and this has a material impact on achieving best practice emissions intensity; and that geology and climate are relevant. Given there is no universal correlation between the climate temperature and energy requirement for gas processing, on balance it was concluded that adjusting for Australian climatic conditions is unnecessary for 'processed natural gas (processing only)'.

The best practice number published in the Amendment Instrument (0.000243) has increased from the number (0.000178) that was consulted on in a December 2023 exposure draft *National Greenhouse and Energy Reporting (Safeguard Mechanism) Amendment (Production Variables Update) Rules (No. 2) 2023* due to refining the information on the processing facilities that process gas from multiple gas fields.

Item 19

Item 19 amends the integrated natural gas production variable ('processed natural gas (integrated extraction and processing'), so that it can be used together with the non-integrated natural gas production variable ('processed natural gas (processing only'). This accommodates a facility that processes gas extracted at the facility *and* third-party gas.

Item 20

Item 20 inserts a best practice emissions intensity number for 'processed natural gas (integrated extraction and processing)' into Schedule 1. The number is based on a production-weighted average of the emissions intensity of two gas processing plants in Norway and the United Kingdom. These were found to be the least emissions-intensive sites globally with suitable data.

The production of the lowest emissions intensity facility was less than 25 per cent of relevant Australian production and including two facilities meant that total production was greater than Australia's total production. Two facilities were used for the calculation to produce a more representative number.

The Guidelines state that adjustments for Australian conditions will be made if the relevant international facility has characteristics impossible to replicate in Australia, and this has a material impact on achieving best practice emissions intensity; and that geology and climate are relevant. The number has not been adjusted for Australian conditions, since geological conditions enabling sufficient pressure to extract the resource without compression are replicable in Australia's offshore assets.

The best practice number in the Amendment Instrument (0.000394) has increased from the number (0.000319) that was consulted on in a December 2023 exposure draft *National Greenhouse and Energy Reporting (Safeguard Mechanism) Amendment (Production Variables Update) Rules (No. 2) 2023* due to more complete information on a facility undertaking drilling alongside extraction.

Item 21

Item 21 inserts a best practice emissions intensity number for 'liquefied natural gas (from unprocessed natural gas)' into subsection 32(6) of Schedule 1.

Section 4.7 of the Guidelines provides for supplementary approaches to be considered in circumstances where historical data is either not available, or not suitable for use in calculating benchmarks. Suitable data could not be found globally for this production variable, so consistent with the Guidelines, a supplementary approach was taken. As such, the best practice emissions intensity number was calculated by taking the sum of the best practice emissions intensity numbers for 'natural gas processing (processing only)' and for 'liquefied natural gas (from processed natural gas)'.

The best practice number published in the Amendment Instrument (0.000876) has increased from the number (0.000801) that was consulted on in the December 2023 exposure draft *National Greenhouse and Energy Reporting (Safeguard Mechanism) Amendment (Production Variables Update) Rules (No. 2) 2023*. The previous value had taken the sum of the best practice emissions intensity numbers for 'natural gas processing (integrated extraction and processing)' and for 'liquefied natural gas (from processed natural gas)'. The

number should not include the emissions from gas extraction. The change is also due to subsequent changes in the best practice numbers of these two production variables.

Item 22

This item updates the definition of coke oven coke so that it can be produced from material other than coal. This enables coke oven coke to be produced from feedstocks with lower emissions intensity, such as biomass, charcoal and coal blends.

Item 23

Items 23, 24 and 25 update the 'primary iron' production variable so that it appropriately reflects technologies that reduce the amount of coke oven coke required to make metallic iron products, when coke oven coke is imported to the facility.

Item 23 updates subsection 39(4) of Schedule 1 by updating an equation for the tonnes of metallic iron products, so that the equation reads:

metallic iron products = $Q_p + (1 - 0.108\ c)\ Q_i$

This equation applies when the amount of coke oven coke imported into the facility to produce the metallic iron products is equal to or greater than 5% of the total amount of coke oven coke consumed in carrying on the primary iron production activity. This update incorporates a variable *c* into the equation, which is defined in item 24. When $c = 1$, the equation is the same as the equation before this amendment (which specified that the metric was equal to $Q_p + 0.892\ Q_i$).

Item 24

Item 24 updates subsection 39(4) of Schedule 1 by inserting the definition of *c*, which is used in the equation updated by item 23.

If the facility is using a production process that uses coke oven coke and requires less than 0.4 tonnes of coke oven coke to produce a tonne of metallic iron products for the majority of its iron production, item 24 defines *c* to be equal to the number of tonnes of coke oven coke required to produce a tonne of metallic iron products for the facility, divided by 0.468. The number 0.468 is an estimate of tonnes of coke oven coke required to make a tonne of steel, which was used to derive the equation for metallic iron products that is modified by item 23.

If the facility is using a production process that uses coke oven coke and requires more than 0.4 tonnes of coke oven coke to produce a tonne of metallic iron products for the majority of its iron production, item 24 defines *c* to be equal to 1.

Item 25

Item 25 updates the example in subsection 39(4) of Schedule 1 to reflect the updates in items 23 and 24.

Item 26

Item 26 updates the definition of section 41 of Schedule 1, which defines the primary steel production variable.

Subsection (1) is updated to indicate that the metric is subject to the adjustments in both subsections (4) and (5). Subsection (4) is the existing adjustment to the metric as a result of imported coke oven coke, which if applicable, should be done before applying the adjustment in subsection (5).

This item adds a clarification to subsection (2) stating that the iron feed material relevant to this production variable may include, but not be solely comprised of, cold ferrous feed. When the iron feed material is solely comprised of cold ferrous feed, the 'continuously cast carbon steel products and ingots of carbon steel (manufacture of carbon steel from cold ferrous feed)' is applicable instead. This item also adds a sentence to the note in subsection (3) stating this.

Subsection (4) erroneously referred to the "primary iron production activity". This item fixes this error so that subsection (4) now refers to the "primary steel manufacturing activity".

This item also updates subsection (4) so that the 'primary steel' production variable appropriately reflects technologies that reduce the amount of coke oven coke required to make metallic iron products, when coke oven coke is imported to the facility. The update means that if a facility significantly reduces the amount of coke required to produce steel, the imported coke adjustment is reduced by a corresponding amount. A prospective way to decarbonise steel production involves the use of an electric smelting furnace, which would involve the use of a small amount of coke that may need to be imported. The update would ensure that the adjustment accurately reflects the amount of coke used.

The equation for the "tonnes of continuously cast carbon steel products and ingots of carbon steel" is updated so that the right-hand side of the equation is $Q_p + (1 – 0.1\ c)\ Q_i$.

This equation applies when the amount of coke oven coke imported into the facility to produce the metallic iron products is equal to or greater than 5% of the total amount of coke oven coke consumed in carrying on the primary steel production activity. This update incorporates a variable *c* into the equation, whose definition is also introduced by this item. When $c = 1$, the equation is the same as the equation before this amendment (which specified that the metric was equal to $Q_p + 0.900\ Q_i$).

If the facility is using a production process that uses coke oven coke and requires less than 0.4 tonnes of coke oven coke to produce a tonne of continuously cast carbon steel products and ingots of carbon steel for the majority of its steel production, *c* is defined to be equal to the number of tonnes of coke oven coke required to produce a tonne of continuously cast carbon steel products and ingots of carbon steel for the facility, divided by 0.446. The number 0.446 is an estimate of tonnes of coke oven coke required to make a tonne of steel, which was used to derive the equation for metallic iron products that is modified by item 23.

If the facility is using a production process that uses coke oven coke and requires more than 0.4 tonnes of coke oven coke to produce a tonne of continuously cast carbon steel products and ingots of carbon steel for the majority of its steel production, *c* is equal to 1.

New subsection (5) adjusts the metric for tonnes of 'primary steel' production depending on the amount of cold ferrous feed used in the primary steel manufacturing activity.

The Safeguard Mechanism treats primary steel production differently (with a higher default emissions intensity) to steel production from cold ferrous feed, reflecting that to decarbonise steel production it is necessary and important to decarbonise primary steel production. This update is consistent with this approach when higher levels of cold ferrous feed are used for primary steel production. It ensures that the baseline allocation for primary steel, which includes making iron from iron ore feeds, appropriately reflects primary steel production at the facility.

The subsection would only be relevant when the level of cold ferrous feed exceeds 35 per cent. If this occurs, then the production metric for primary steel would be reduced by the amount corresponding to this excess, with the balance of any steel production added to the 'continuously cast carbon steel products and ingots of carbon steel (manufacture of carbon steel from cold ferrous feed)' production variable. In this way, there is no limit on scrap usage in practice and all steel production would be assigned to one of the steel production variables.

The per cent level of cold ferrous feed is calculated in terms of the mass of cold ferrous feed compared to the total mass of iron ore feed and cold ferrous feed that is used as an input to the primary steel manufacturing activity. This does not include cold ferrous feed produced by the facility, which is clarified in new subsection (6). This approach reflects feedback that the iron content of a quantity of scrap metal is not always known, and feedback that because steelmaking facilities are highly integrated, there could be some complexity involved with determining whether cold ferrous feed produced by the facility counts as an input to the primary steel manufacturing activity.

The parameter $CCF_{adj}\%$ is the key element of the equation in subsection (5). It is calculated as the percent of the mass of the cold ferrous feed in the total iron feed mass of the combined iron ore and cold ferrous feeds, adjusted by subtracting 35%. The calculation of $CCF_{adj}\%$ does not include cold ferrous feed produced by the facility, as is clarified in new subsection (6). As such, $CCF_{adj}\%$ is what is left after subtracting 35% from the percentage quantity that is compared to 35% at the start of subsection (5).

The example in subsection (5) illustrates how this equation works. Note 1 highlights that any steel that does not count towards the primary steel metric due to subsection (5) automatically meets the requirements of the cold ferrous feed steel production variable in section 44.

This item also renumbers previous subsection (5), which specifies the default emissions intensity of continuously cast carbon steel products and ingots of carbon steel, to new subsection (7).

Following consultation this provision was changed from an iron content basis to a mass basis. Feedback indicated that iron content of different types of cold ferrous feeds is not consistent and is not always known. Additionally, measuring the mass of cold ferrous feed input to the iron and steelmaking process is important, with practical limits based on the mass of cold ferrous feed that can be added while maintaining the thermal balance of the process.

The threshold percentage was converted from an iron content basis to a mass basis, as well as increasing to apply to both the iron and steelmaking steps of the process (the exposure draft limit reflected the steelmaking step only).

Item 27

This item updates the cold ferrous feed steel production variable in section 44 of Schedule 1 to reflect the updates to the primary steel production variable in item 26. The purpose of the updates is to ensure that any steel produced as part of the primary steel manufacturing activity that does not count towards the primary steel metric because the level of cold ferrous feed (by mass) exceeded 35 per cent of total feed, instead counts towards the cold ferrous feed steel production variable.

Subsections (1) and (2) are updated so that the metric applies to both the steel produced from the manufacture of carbon steel from cold ferrous feed at the facility (consistent with the original production variable), as well as the relevant steel produced from the primary steel manufacturing activity. The relevant steel corresponds to the reduction in the 'primary steel' production variable metric from subsection 41(5), which relates to the adjustment for the level of cold ferrous feed co-processed with iron feed material.

Subsection (2) states that the production variable is applicable to a facility that (a) conducts the activity of the manufacture of carbon steel from cold ferrous feed; or (b) if subsection 41(5) applies to the facility – the primary steel manufacturing activity at the facility. As contemplated by the equation in subsection (3), the production variable is applicable to a facility for which both (a) and (b) are applicable.

Subsection (3) sets out what the metric is when subsection 41(5) applies to the facility. It states that the metric is the sum of the tonnes of steel produced as part of carrying on the manufacture of carbon steel from cold ferrous feed at the facility (such as from an electric arc furnace dedicated to scrap recycling), plus any steel produced from carrying on the primary steel manufacturing activity that did not count towards the 'primary steel' production variable, due to subsection 41(5).

Item 28

This item updates the default emissions intensity for 'petajoule-kilometres of natural gas distribution' from 0.254 CO_2-e to 0.196 CO_2-e per petajoule-kilometre. The update to the default emissions intensity is consistent with the intent that pipeline lengths relevant to the production variable should include the lengths of service pipelines as well as the mains pipelines in a gas distribution network. When the default was originally calculated, some of

the data used in the calculation did not include service pipeline lengths, and the default has accordingly been updated.

Item 29

Item 29 inserts a best practice emissions intensity number for ‘non-metallic mineral quarrying’ into Schedule 1.

Consistent with the Guidelines, the number is based on the top 10 per cent of Australian industry performance, as Australian mines were found to be less emissions-intensive than international mines with suitable data. The number was calculated using the same data that was used to calculate the default emissions intensity number for ‘non-metallic mineral quarrying’.

As the calculation did not depend on international data, consideration of an adjustment for Australian conditions was not required.

Item 30

Item 30 inserts a best practice emissions intensity number for ‘copper anode’ into Schedule 1. The number is based on a production-weighted average of the emissions intensity of two copper smelters in Spain and Australia. These were found to be the least emissions-intensive sites globally with suitable data.

The production of the lowest emissions intensity facility was less than 25 per cent of relevant Australian production and including two facilities meant that total production was greater than 25 per cent of relevant Australian production. Two facilities were used for the calculation to produce a more representative number.

The Guidelines state that adjustments for Australian conditions will be made if the relevant international facility has characteristics impossible to replicate in Australia, and this has a material impact on achieving best practice emissions intensity; and that geology and climate are relevant. The number has not been adjusted for Australian conditions, since the conditions at the relevant international facility are comparable to Australian conditions.

Item 31

Item 31 inserts a best practice emissions intensity number for ‘primary nickel products from nickel bearing inputs’ into Schedule 1.

Consistent with the Guidelines, the number is based on a supplementary approach, calculated as the sum of the best practice emissions intensity numbers for ‘intermediate nickel products from nickel bearing inputs’ and ‘primary nickel products from imported intermediate nickel products’

Suitable data was found for international facilities with lower emissions intensities. However, using the data for these facilities would result in a lower number for ‘primary nickel products from nickel bearing inputs’ compared to ‘primary nickel products from imported intermediate

nickel products'. The Guidelines state that international best practice benchmark emissions intensities should be set in a way that is consistent with four principles that underpin the Framework Document, namely that production variables and emissions intensities should be effective, consistent, practical and robust. Consistent with the Guidelines, the resulting number is not proposed to be used, as publishing a lower number for the activity of producing primary nickel from nickel bearing inputs compared with producing primary nickel from intermediate nickel products would not treat facilities and industries consistently.

As the calculation did not depend on international data, consideration of an adjustment for Australian conditions was not required.

Item 32

Item 32 inserts a best practice emissions intensity number for 'primary nickel products from imported intermediate nickel products' into Schedule 1. Consistent with the Guidelines, the number is based on the top 10 per cent of Australian industry performance, as suitable data could not be found globally for 'primary nickel products from imported intermediate nickel products'. The key challenge related to accurately apportioning emissions among outputs of different nickel concentration at a nickel refinery.

The number was calculated using the same data that was used to calculate the default emissions intensity number for 'intermediate nickel products from nickel bearing inputs'.

As the calculation did not depend on international data, consideration of an adjustment for Australian conditions was not required.

Item 33

Item 33 inserts a best practice emissions intensity number for 'intermediate nickel products from nickel bearing inputs' into Schedule 1. Consistent with the Guidelines, the number is based on the top 10 per cent of Australian industry performance, as suitable data could not be found globally for 'intermediate nickel products from nickel bearing inputs'. The key challenge related to accurately apportioning emissions among outputs produced from different feedstocks at a nickel refinery.

The number was calculated using the same data that was used to calculate the default emissions intensity number for 'intermediate nickel products from nickel bearing inputs'.

As the calculation did not depend on international data, consideration of an adjustment for Australian conditions was not required.

Item 34

Item 34 inserts a default emissions intensity number for 'gaseous hydrogen' into Schedule 1.

There was limited information of domestic exported gaseous hydrogen production at the time of the calculation however it was noted gaseous hydrogen would be produced in significant quantities as an intermediate product at Australian fertiliser and refinery plants. Given the

lack of emissions and production data, the number was calculated consistent with the *Guidance on supplementary approaches to determine default emissions intensity values*[4], which is the companion document to the Framework Document. For consistency, the default number was calculated using the same supplementary approach used to set the best practice emissions intensity number.

The supplementary approach uses an engineering calculation based on gas-fuelled steam methane reforming technology, which is the applicable technology for fertiliser production and refineries. The best practice number assumed a best practice efficiency of the steam methane reforming reaction of 80%; a methane destruction efficiency of 98%; and no carbon capture and storage. The default number assumed an efficiency at the lower end of theoretical performance at 65%; a methane destruction efficiency of 98%; and no carbon capture and storage.

Item 35

Item 35 inserts a best practice emissions intensity number for 'renewable aviation kerosene' into Schedule 1.

Section 4.7 of the Guidelines provides for supplementary approaches to be considered in circumstances where historical data is either not available, or not suitable for use in calculating benchmarks. Suitable data was not available for this production variable, given the production of renewable aviation kerosene is globally an emerging industry, so a supplementary approach is proposed.

Feedback on the exposure draft indicated that the emissions intensity for renewable aviation kerosene should be close to the emissions intensity for 'renewable diesel'. The new best practice emissions intensity number for renewable aviation kerosene reflects analysis of the emissions intensities for overseas facilities that produce both types of fuel. This analysis suggested that the difference in emissions intensities between each type of fuel should be around 0.013 t CO_2-e per kilolitre. The best practice emissions intensity number for renewable aviation kerosene in the Amendment Instrument (0.717 t CO_2-e per kilolitre) was set by adding 0.013 t CO_2-e per kilolitre to the best practice emissions intensity number for renewable diesel.

The Guidelines state that adjustments for Australian conditions will be made if the relevant international facility has characteristics impossible to replicate in Australia, and this has a material impact on achieving best practice emissions intensity; and that geology and climate are relevant. These factors do not materially impact the emissions intensity of renewable aviation kerosene production, so an adjustment was not made.

[4] The supplementary approaches are described in a guidance document published on the Department's website: www.dcceew.gov.au/climate-change/publications/framework-developing-production-variables-default-emissions-intensity-values

Item 36

Item 36 inserts a best practice emissions intensity number for ‘renewable diesel’ into Schedule 1.

Section 4.7 of the Guidelines provides for supplementary approaches to be considered in circumstances where historical data is either not available, or not suitable for use in calculating benchmarks. Suitable data was not available for this production variable, given the production of renewable diesel is globally an emerging industry, so a supplementary approach is proposed.

Benchmarking data from the Low Carbon Fuel Standard (LCFS), administered by the California Air Resources Board (CARB), was used for the calculation. The LCFS publishes facility level ‘carbon intensity’ for the entities producing renewable diesel. The ‘carbon intensity’ is calculated, reported and verified for each type of feedstock the facility processes. The data does not include production information so unsuitable for the standard calculation approach set out in the Guidelines. An estimate for facility level emissions intensity was determined by averaging the carbon intensity of the feedstocks used at each facility. The benchmark was calculated by taking the average of the facility level emissions intensity of the five facilities with suitable data that had the lowest emissions intensity of renewable diesel production.

The best practice emissions intensity number in the Amendment Instrument has increased to 0.704 t CO_2-e per kilolitre compared to the exposure draft (which had a draft benchmark of 0.558 t CO_2-e). The updated benchmark for renewable diesel reflects the removal from the calculation of a facility which co-processes biological feedstocks with fossil fuels in a refinery, for which the production variable would not be suitable; the addition of a new facility to replace the facility removed from the calculation; and the correction of an error where tailpipe emissions were subtracted twice.

The Guidelines state that adjustments for Australian conditions will be made if the relevant international facility has characteristics impossible to replicate in Australia, and this has a material impact on achieving best practice emissions intensity; and that geology and climate are relevant. These factors do not materially impact the emissions intensity of renewable diesel production, so an adjustment was not made.

Item 37

Item 37 inserts a new production variable ‘rare earth processing’ and corresponding best practice emissions intensity number in Part 51 of Schedule 1. Consistent with the Framework Document, the production variable is applicable to a facility that conducts the activity of producing separated rare earth products through the transformation of metal ore.

The metric makes use of some definitions introduced in new section 105 of Schedule 1. This section defines ‘primary rare earth elements’ to mean praseodymium (Pr), neodymium (Nd), terbium (Tb), and dysprosium (Dy); ‘primary rare earth oxides’ to mean oxides of primary

rare earth elements or mixtures of one or more primary rare earth elements and oxides of primary rare earth elements; and ‘separated primary rare earth products’ to mean semi-separated or individual primary rare earth compounds.

New section 106 of Schedule 1 defines the rare earth processing production variable. The metric for the production variable is defined in subsection (1) to be total primary rare earth oxide equivalent contained in separated primary rare earth products that have weight by weight primary rare earth oxide greater than 90 per cent; are suitable quality and concentration as an input to a metallisation process; and are of saleable quality.

Subsection (2) sets out that this production variable is applicable to a facility that conducts the activity of producing separated primary rare earth products through the transformation of metal ore.

The draft production variable in the exposure draft was much broader and could include oxides of any rare earth element. Following consultation, the scope of the production variable metric was narrowed to the quantity of neodymium, praseodymium, terbium and dysprosium, which have been defined as ‘primary rare earth elements’. These four rare earth elements were determined to be the target products of the relevant facilities which underpin the business case and operation of the facilities.

This change reflects feedback on the exposure draft that suggested a broadly defined production variable may introduce inconsistencies in how best practice emissions intensities are derived and applied because the calculation would mainly reflect the processing of more abundant but low-value elements like Lanthanum (La) and Cerium (Ce). In addition, LaCe oxide is not an input to a metallisation process and may not have been consistent with the production variable definition. Basing the emissions intensity of the production variable on these primary rare earth elements enables a fairer comparison of the relevant facilities.

The best practice emissions intensity value has been calculated based on the suitable data for an international facility in Malaysia. Additionally, consistent with the Guidelines, to ensure the best practice value is representative two facilities under development in Australia were included based on forecast data provided as part of environmental approvals, ASX announcements and public reports. Using forecast data is an approach described in section 4.7 of the Guidelines on supplementary approaches.

The number has not been adjusted for Australian conditions, since the geologic conditions at the relevant international facility are comparable to Australia in terms of processing metal ores rather than ion absorption clays.

Item 38

Item 38 adds ‘kilolitres of phosphoric acid’ and ‘tonnes of total primary rare earth oxide equivalent contained in separated primary rare earth products’ to the table of trade exposed production variables that are also manufacturing production variables in Schedule 2.

ATTACHMENT B

Statement of Compatibility with Human Rights

Prepared in accordance with Part 3 of the Human Rights (Parliamentary Scrutiny) Act 2011

National Greenhouse and Energy Reporting Legislation Amendment (Best Practice Emissions Intensities Update) Instrument 2024

This Legislative Instrument is compatible with the human rights and freedoms recognised or declared in the international instruments listed in section 3 of the *Human Rights (Parliamentary Scrutiny) Act 2011*.

Overview of the Legislative Instrument

The *National Greenhouse and Energy Reporting Legislation Amendment (Best Practice Emissions Intensities Update) Instrument 2024* makes technical amendments to the *National Greenhouse and Energy Reporting (Safeguard Mechanism) Rule 2015* (the Safeguard Rules) and the *National Greenhouse and Energy Reporting (Measurement) Determination 2008* (the Measurement Determination).

The amendments to the Safeguard Rules insert best practice emissions intensity numbers, inserts new production variables, make changes to existing production variables and adds new and updated default emissions intensity numbers.

These production variables and emissions intensities are part of the Safeguard Mechanism's robust, legislated framework that limits the emission of large industrial facilities. These limits—known as baselines—are declining on a trajectory to meet Australia's international commitments that Australia's emissions reduction targets are 43 per cent below 2005 levels by 2030 and net zero by 2050. These changes help to ensure that a comprehensive set of suitable production variables are in place for setting Safeguard Mechanism baselines and that production variable definitions support incentives for decarbonisation.

The amendments also introduce new publishing requirements for the Clear Energy Regulator to increase transparency and make technical changes to help ensure the policy outcomes of the Safeguard reforms are achieved.

The amendments to the Measurement Determination update an equation related to methane emissions from landfills and update some location-based factors related to the estimation of scope 2 emissions from the consumption of purchased or acquired electricity.

Human rights implications

This Legislative Instrument does not engage any of the applicable human rights or freedoms.

Conclusion

This Legislative Instrument is compatible with human rights as it does not raise any human rights issues.

The Hon Chris Bowen MP

Minister for Climate Change and Energy

ATTACHMENT C

Statement of reasons under s 22XS(1B) of the *National Greenhouse and Energy Reporting Act 2007* (NGER Act) – How the *National Greenhouse and Energy Reporting (Safeguard Mechanism) Rule 2015* as amended by the 2024 Best Practice Emissions Intensities Update delivers the legislated safeguard outcomes

1. In accordance with section 22XS(1A) and (1B) of the NGER Act, this statement sets out my reasons for being satisfied that the *National Greenhouse and Energy Reporting (Safeguard Mechanism) Rule 2015* (**Safeguard Rules**) as amended by the *National Greenhouse and Energy Reporting Legislation Amendment (Best Practice Emissions Intensities Update) Instrument 2024* (**2024 Best Practice Emissions Intensities Update**) is consistent with each of the safeguard outcomes in paragraphs 3(2)(b), (c) and (d), and that they take into account the safeguard outcomes in paragraphs 3(2)(e) and (f), of the NGER Act.

Summary

2. The 2024 Best Practice Emissions Intensities Update makes changes to the Safeguard Rules by adding new production variables (**PVs**), updating existing PVs, setting industry average emission intensities (also referred to as default emissions intensities or **default EIs**), and making technical changes to ensure outcomes are achieved as intended. The changes to PVs and EIs ensure a comprehensive set of suitable PVs are in place for setting Safeguard Mechanism baselines (limits on net emissions), while incentivising low emissions production.

3. The 2024 Best Practice Emissions Intensities Update also makes an amendment to the *National Greenhouse and Energy Reporting (Measurement) Determination 2008* (the **NGER Measurement Determination**). This amendment is made under section 10 of the NGER Act. Because the amendment to the NGER Measurement Determination is not made under section 22XS of the NGER Act, the requirement in section 22XS (1A) does not apply with respect to the amendments to the NGER Measurement Determination.

4. The PVs and default EIs that are the subject of the 2024 Best Practice Emissions Intensities Update, the *National Greenhouse and Energy Reporting (Safeguard Mechanism) Amendment (Production Variables Update) Rules 2023* (**2023 Production Variables Update**) and the *National Greenhouse and Energy Reporting (Safeguard Mechanism) Amendment (Production Variables Update) Rules 2024* (**2024 Production Variables Update**) were reviewed to ensure the PVs are technically correct and the default EIs represent industry average emissions intensities. Taken together, the amended PVs and default EIs better support incentives for decarbonisation by providing a suitable basis for setting baselines that reflect emissions per unit of production.

5. The 2024 Best Practice Emissions Intensity Update also outlines best practice emissions intensities (**best practice EIs**) for 16 PVs. The best practice EIs have been set in accordance with the Guidelines for setting international best practice benchmarks (the **Guidelines**). Best practice EIs are used to set baselines for new facilities and new types of production at existing facilities, at international best practice, adapted for an Australian context. In the absence of international data, domestic data and other supplementary approaches outlined in the

Guidelines can be used. This sends a strong signal to investors that Australia is serious about net zero, and new investments must support this goal.

6. The 2024 Best Practice Emissions Intensities Update also includes a number of technical amendments (summarised in paragraph 22 below) to the Safeguard Rules to clarify the original policy intent and to ensure outcomes are achieved as intended.

7. The Safeguard Rules as amended by the 2024 Best Practice Emissions Intensities Update deliver the required emission reductions consistent with safeguard outcomes 3(2)(b), (c) and (d), while providing strong incentives to reduce onsite emissions at each designated large facility, and supporting the competitiveness of trade exposed industries in accounting for safeguard outcomes 3(2)(e) and (f) of the NGER Act. The Safeguard Rules as amended ensure that:

    a. Enforceable baselines are set for the net emissions of each designated large facility (relevant to safeguard outcome (a) - but noting that this safeguard outcome is not engaged by the requirement in section 22XS(1A) of the NGER Act)

    b. Baselines will decline and are reasonably expected to achieve the 1,233 million tonne 10-year limit on total net Safeguard emissions (referred to as the 'net emissions budget'), including with an appropriate reserve for uncertainty about future emissions (relevant to safeguard outcome (b))

    c. The baseline decline is reasonably expected to result in less than 100 million tonnes of net Safeguard emissions for the financial year beginning on 1 July 2029, and baselines will be set at zero from 30 June 2049 (relevant to safeguard outcome (c))

    d. The incentives created are reasonably expected to result in declining emissions consistent with the 5-year rolling average for each financial year that begins after 30 June 2024 (relevant to safeguard outcome (d))

    e. Strong incentives from baseline decline and Safeguard Mechanism Credits continue to provide a material incentive for the responsible emitter for each designated large facility to invest in reducing covered emissions from the operation of their facilities (relevant to safeguard outcome (e))

    f. Competitiveness of trade-exposed industries is supported, including through trade exposed baseline adjusted provisions (relevant to safeguard outcome (f)).

Definitions

Abbreviation	Definition
2023 Production Variables Update	The *National Greenhouse and Energy Reporting (Safeguard Mechanism) Amendment (Production Variables Update) Rules 2023*
2024 Production Variables Update	The *National Greenhouse and Energy Reporting (Safeguard Mechanism) Amendment (Production Variables Update) Rules 2024*
ACCU	Australian Carbon Credit Unit, which has the same meaning as in the *Carbon Credits (Carbon Farming Initiative) Act 2011.*
Baseline	The baseline emissions number for a facility, as specified in section 22XL of the NGER Act.
Best practice emissions intensity (best practice EI)	Has the meaning defined in section 4 of the Safeguard Rules. i.e., for a production variable for a financial year, means the best practice emissions intensity (if any) specified, in t CO_2-e per unit of the production variable, in relation to the production variable in Schedule 1 as in force at: (a) if the financial year is the financial year beginning on 1 July 2023—the end of the financial year; or (b) otherwise—the start of the financial year.
CO_2-e	Abbreviation for carbon dioxide equivalent, a way of quantifying greenhouse gases to reflect their contribution to climate change compared to a unit of carbon dioxide equivalent. In the NGER Act, the carbon dioxide equivalence of an amount of greenhouse gas, means the amount of the gas multiplied by a value specified in the regulations in relation to that kind of greenhouse gas.
Covered emissions	Has the meaning given by section 22XI of the NGER Act i.e. scope 1 emissions of one or more greenhouse gases, other than emissions of a kind specified in the Safeguard Rules.
Department	Department of Climate Change, Energy, the Environment and Water
Default emissions reduction contribution	For a financial year, has the meaning given by section 31 of the Safeguard Rules.
Designated large facility	A facility covered by the Safeguard Mechanism, as defined in section 22XJ of the NGER Act.
Default Emissions Intensity (default EI)	Has the meaning defined in section 4 of the Safeguard Rules. i.e., for a production variable for a financial year, means the default emissions intensity specified, in t CO_2-e per unit of the production variable, in relation to the production variable in Schedule 1 as in force at the start of that financial year.
EBIT Guidelines	Written guidelines that relate to working out the earnings before interest and tax of a facility for a financial year, as provided for by section 37(7) of the Safeguard Rules.
Emissions intensity determination	A determination made under section 19 of the Safeguard Rules. Emissions intensity determinations set facility-specific EIs for existing facilities.

Abbreviation	Definition
Existing facility	Has the meaning given in section 12(1) of the Safeguard Rules. I.e., a facility is an existing facility if there are one or more historical production variables or transitional production variables for the facility.
Facility	An activity or a series of activities that involve greenhouse gas emissions, the production of energy or the consumption of energy, as defined in section 9 of the NGER Act.
Guidelines	The *Guidelines for setting international best practice benchmarks*, published on the department's web page at: Guidelines for setting international best practice benchmarks - DCCEEW
Historical financial year	Has the meaning defined in section 12(3) of the Safeguard Rules. I.e., a historical financial year is a financial year that started after 30 June 2016 and ended before 1 July 2022.
Historical production variable (historical PV)	Has the meaning defined in section 12(2) of the Safeguard Rules (as amended by the 2024 Best Practice Emissions Intensity Update). I.e., a historical production variable, for a facility, is a production variable that was applicable to the facility, in accordance with Schedule 1, at any time during a historical financial year; and was not a non-commercial production variable for the facility for the historical financial year.
Mt	Million tonnes
NDC	Nationally Determined Contribution under the Paris Agreement
Net covered emissions	Means the total amount, in tonnes of carbon dioxide equivalence, of covered emissions for a particular designated large facility adjusted for the total amount of prescribed carbon units (ACCUs or SMCs) surrendered. The NGER Act established the Safeguard Mechanism to ensure that net covered emissions of greenhouse gases from the operation of a designated large facility do not exceed the baseline applicable to the facility.
Net emissions budget	The 1,233 million tonne limit on net Safeguard emissions for all of the financial years between 1 July 2020 and 30 June 2030 referred to in safeguard outcome (b).
Net emissions number	Has the meaning given by section 22XD of the NGER Act, i.e., the number of tonnes of carbon dioxide equivalence of the total amount of covered emissions of greenhouse gases from the operation of the facility during the period: (a) reduced by surrendered prescribed carbon units; and (b) increased by Australian carbon credit units that were issued in relation to the facility.
Net Safeguard emissions	For a financial year, means the total amount, in tonnes of carbon dioxide equivalence, of net covered emissions from the operation, during the financial year, of all designated large facilities in the financial year, as defined in section 7 of the NGER Act.
New facility	Has the meaning given in section 29(2) of the Safeguard Rules. I.e., a facility is a new facility if there are no historical production variables or transitional production variables for the facility.
NGER Act	*National Greenhouse and Energy Reporting Act 2007*

Abbreviation	Definition
NGER Measurement Determination	*National Greenhouse and Energy Reporting (Measurement) Determination 2008*
Prescribed carbon unit	Has the meaning given by section 22XM of the NGER Act, namely ACCUs and SMCs.
Responsible emitter	The person with operational control of a facility (see further section 22XH of the NGER Act).
Safeguard Mechanism	A mechanism to ensure the net covered emissions of greenhouse gases from the operation of a designated large facility do not exceed the baseline applicable to the facility and ensure that aggregate net covered emissions from the operation of designated large facilities decline. The mechanism is established under Part 3H of the NGER Act.
Safeguard Reforms Amendment Rules	The *National Greenhouse and Energy Reporting (Safeguard Mechanism) Amendment (Reforms) Rules 2023*
Safeguard Rules	*National Greenhouse and Energy Reporting (Safeguard Mechanism) Rule 2015*
Safeguard emissions	For a financial year, means the total amount in tonnes of carbon dioxide equivalence, of covered emissions from the operation, during the financial year, of all designated large facilities for the financial year, as defined in section 7 of the NGER Act.
Scope 1 emissions	Emissions released to the atmosphere as a direct result of an activity, or series of activities at a facility level (sometimes referred to as direct emissions).
SMCs	Safeguard Mechanism Credit units, which are units issued under section 22XNA of the NGER Act.
TEBA facilities	Trade-exposed baseline-adjusted facilities
TEBA determination	Trade-exposed baseline-adjusted determination
Trade exposed facilities	Designated large facilities for which the primary production variable is listed in Schedule 2 of the Safeguard Rules, as amended. The primary production variable for a facility is the production variable that is most significant for its operation, having primary regard to the share of revenue and covered emissions attributable to that production variable.

Abbreviation	Definition
Transitional production variable	Has the meaning given in section 12(4) of the Safeguard Rules. i.e., transitional production variable, for a facility, is a production variable that: (a) was not applicable to the facility, in accordance with Schedule 1, at any time during a historical financial year; and (b) was applicable to the facility, in accordance with Schedule 1, at a time during the financial year beginning on 1 July 2022; and (c) was not a non-commercial production variable for the facility for the financial year beginning on 1 July 2022. A transitional production variable is used for calculating the facility's baseline, and the facility-specific emissions intensity number is set to be equal to the default emissions intensity number for that production variable.

8. Note that numbers in this document designated with an * have been rounded to a whole number. Values may not add to totals due to rounding.

Key legislative provisions

9. Section 22XS of the NGER Act relevantly provides:

    (1A) The Minister must not make safeguard rules unless the Minister is satisfied that those rules:

    (a) are consistent with each of the safeguard outcomes in paragraphs 3(2)(b), (c) and (d); and

    (b) take into account the safeguard outcomes in paragraphs 3(2)(e) and (f).

    (1B) If the Minister makes safeguard rules, the Minister must publish on the Department's website the Minister's reasons for being satisfied that the safeguard rules:

    (c) are consistent with each of the safeguard outcomes in paragraphs 3(2)(b), (c) and (d); and

    (d) take into account the safeguard outcomes in paragraphs 3(2)(e) and (f).

10. Section 3(2) of the NGER Act sets out the safeguard outcomes as follows:

    (2) The second object of this Act is to contribute to the achievement of Australia's greenhouse gas emissions reduction targets by ensuring that each of the following outcomes (the ***safeguard outcomes***) are achieved:

    (a) net covered emissions of greenhouse gases from the operation of a designated large facility do not exceed the baseline applicable to the facility;

(b) total net safeguard emissions for all of the financial years between 1 July 2020 and 30 June 2030 do not exceed a total of 1,233 million tonnes of carbon dioxide equivalence;

(c) net safeguard emissions decline to:
    (i) no more than 100 million tonnes of carbon dioxide equivalence for the financial year beginning on 1 July 2029; and
    (ii) zero for any financial year to begin after 30 June 2049;

(d) the 5-year rolling average safeguard emissions for each financial year that begins after 30 June 2024 are lower than the past 5-year rolling average safeguard emissions for that financial year;

(e) the responsible emitter for each designated large facility has a material incentive to invest in reducing covered emissions from the operation of the facility;

(f) the competitiveness of trade-exposed industries is appropriately supported as Australia and its regions seize the opportunities of the move to a global net zero economy.

Background

Reform to the Safeguard Mechanism

11. The NGER Act establishes a single national framework for reporting and disseminating company information about greenhouse gas emissions, energy production, energy consumption and other information. The Safeguard Mechanism is established under Part 3H of the Act. Together with the reporting obligations under the Act, the Safeguard Mechanism provides a framework for Australia's largest industrial emitters to measure, report and manage their emissions.

12. The Safeguard Mechanism provides a legislated framework that limits the net covered emissions of around 215 large industrial facilities—those with more than 100,000 tonnes of scope 1 (direct) carbon dioxide equivalent (CO_2-e) emissions each year ('designated large facilities' under s 22XJ of the NGER Act). Each year, every designated large facility needs to prove that their net covered emissions for that year are equal to or below their baseline. Each designated large facility reports their emissions to the Clean Energy Regulator, which publishes the results on its website.

13. Since the Safeguard Mechanism commenced on 1 July 2016, reported covered emissions from designated large facilities grew over 4 per cent from 131.3 Mt CO_2-e in 2016-17 to 137.5 Mt CO_2-e in 2021-22[5]

[5] Designated large facility emissions are published by the Clean Energy Regulator at: https://cer.gov.au/markets/reports-and-data/safeguard-facility-reported-emissions-data

14. Under the Paris Agreement, to which Australia is a Party, Parties are required to communicate their Nationally Determined Contribution (NDC) which sets out their emissions reduction commitments. On 16 June 2022, Australia communicated its updated NDC under Article 4 of the Paris Agreement to the United Nations.[6] This updated NDC included confirmation of Australia's commitment to achieve net zero emissions by 2050, and a new, increased 2030 target of 43 per cent below 2005 levels by 2030. The *Climate Change Act 2022* prescribes these commitments into Australian law.

15. On 30 March 2023, Parliament passed the Safeguard Mechanism (Crediting) Amendment Bill 2023. It amended the NGER Act and other legislation, to establish the framework to give effect to key elements of the reforms, such as introducing SMCs to the scheme to provide an incentive to facilities to go beyond their baselines. Much of the detail of the Safeguard Mechanism is set out in legislative rules, primarily the Safeguard Rules.

16. On 3 May 2023, I made a decision to amend the Safeguard Rules to reduce emissions consistent with the legislated targets. The amendments made by the *National Greenhouse and Energy Reporting (Safeguard Mechanism) Amendment (Reforms) Rules 2023* (Safeguard Reforms Amendment Rules) were to support industry to reduce emissions efficiently, and to help them maintain competitiveness as the global economy decarbonises. On the same day, I gave my reasons for being satisfied that the Safeguard Rules as amended by Safeguard Reforms Amendment Rules are consistent with each of the safeguard outcomes in paragraphs 3(2)(b), (c) and (d), and that they take into account the safeguard outcomes in paragraphs 3(2)(e) and (f), of the NGER Act. Those reasons are published on the Department's website in accordance with section 22XS(1B) of the NGER Act.

17. The Safeguard Reforms Amendment Rules, and the reforms made by those rules, commenced on 1 July 2023.

18. As part of the reform to the Safeguard Mechanism, the Government committed to reviewing PVs to ensure they are effective in meeting the emissions reduction objectives of the reforms, including by encouraging facilities to reduce their emissions as well as incentivising production to occur where it is least emissions intensive. As part of the review, the Government has also recalculated certain default EIs associated with PVs to ensure relevance and consistency with the reforms. These PVs and default EIs are an input to the calculations for determining the baseline emissions number for each existing facility.

19. On 29 September 2023 I made the 2023 Production Variables Update and on 22 April 2024 I made the 2024 Production Variables Update. These both amended the Safeguard Rules to update PVs and the 2024 Production Variables Update made the first set of best practice EIs. On the same day for each update, I set out my reasons for being satisfied that the Safeguard Rules as amended by the 2023 Production Variables Update and 2024 Production Variables Update are consistent with each of the safeguard outcomes in paragraphs 3(2)(b), (c) and (d), and that they took into account the safeguard outcomes in paragraphs 3(2)(e) and (f), of the

[6] Australia's Nationally Determined Contribution, available at: https://unfccc.int/sites/default/files/NDC/2022-06/Australias NDC June 2022 Update %283%29.pdf

NGER Act. Those reasons are both published on the Department's website in accordance with section 22XS(1B) of the NGER Act.

Amendments to the Safeguard Rules

20. Section 22XS of the NGER Act empowers me to make rules to implement the Safeguard Mechanism by legislative instrument. These rules may prescribe matters required or permitted by the NGER Act and matters necessary or convenient to be prescribed for carrying out or giving effect to the Safeguard provisions in the NGER Act. The Safeguard Rules are a legislative instrument made under section 22XS(1) of the NGER Act. The 2024 Best Practice Emissions Intensities Update amends the Safeguard Rules.

21. The 2024 Best Practice Emissions Intensities Update makes the following amendments to PVs in the Safeguard Rules:

    a. It amends PVs used for steel production to clarify when steel produced from cold ferrous feed is reported under the corresponding definitions of 'Primary Steel' and 'Continuously cast carbon steel products and ingots of carbon steel (manufacture of carbon steel from cold ferrous feed)'.

    b. It expands the definition of coke oven coke to include other materials that might be carbonised to produce coke other than coal.

    c. It updates the definitions of the primary iron and primary steel production variables regarding an imported coke adjustment, so that the adjustment remains accurate if the facility reduces the amount of coke required to make a tonne of steel.

    d. It inserts two new PVs: phosphoric acid and rare earth processing.

    e. It inserts the default EI for gaseous hydrogen and updates the default EI for gas distribution.

    f. It amends three PVs: processed natural gas (integrated extraction and processing), stabilised crude oil (integrated extraction and stabilisation); and sodium cyanide to ensure they are fit for purpose.

    g. It sets 16 best practice EIs relevant to the oil and gas, mining and metal processing, biofuels and chemical sectors.

22. The 2024 Best Practice Emissions Intensities Update also makes technical amendments to the Safeguard Rules including:

    a. inserting a requirement that when a non-manufacturing facility calculates its revenue for the purpose of applying for a trade-exposed baseline adjusted determination, it is calculated in accordance with the EBIT Guidelines that are in force at the time;

    b. inserting the requirement for the Clean Energy Regulator to publish, by 15 April each year, the methods used by Safeguard Mechanism facilities to estimate each source of fugitive methane emissions from coal mining, oil and natural gas activities, for the previous financial year;

c. inserting a requirement that audit reports conducted for an Emissions Intensity Determinations meet the requirement of reasonable assurance engagements consistent with the NGER Audit Determination 2009 and that the audit team leader is a registered Category 2 auditor under the NGER regulations;

d. clarifying that a reference to "greenhouse gas emissions from the operation of a facility", in a requirement that must be met for the Regulator to make a TEBA determination, relates to covered emissions (rather that total emissions), so that the provision works correctly when applied to facilities where some emissions are not covered, such as landfills; and

e. inserting a transitional provision to ensure the relevant best practice intensity values can be used in 2024-25.

Consultation

23. In June 2023, the Department commenced consultation directly with impacted stakeholders on options to amend certain PVs and EIs. Consultation has been undertaken to understand the best approach to setting PVs and EIs in a way that will encourage, recognise and reward emissions abatement, and appropriately incentivise low emissions production. The Government subsequently consulted on exposure drafts of the 2023 Production Variables Update and 2024 Production Variables Update.

24. The Government consulted on the draft Guidelines from 19 July 2023 to 11 August 2023 and released the final Guidelines on 15 December 2023.

25. On 24 May 2024, the Government released for consultation an exposure draft of the 2024 Best Practice Emissions Intensities Update, with the consultation period open until 5pm on 14 June 2024, with extensions granted on request until 21 June 2024.

26. The Government received 22 formal submissions, comprising 15 submissions from designated large facilities or businesses, 4 from industry associations, 1 from state government, and the remaining from 2 individuals and non-government organisations. The Department will publish non-confidential submissions on its website. Submissions on PVs, default EIs and best practice EI values were broadly supportive of the updates. Submissions raised concerns that the proposed gas Eis were too stringent; argued that the value of two EIs for renewable fuels should be closer together; and suggested that the rare earth best practice EIs were too high, and requested more transparency on how the values were determined. The explanatory statement details how the best practice EIs were developed, including an explanation of how the Guidelines were applied. Technical changes were made to the rare earth processing and steel production variables.

Material on which my decision was based

27. My decision that I was satisfied that the Safeguard Rules as amended are consistent with each of the outcomes in paragraphs 3(2)(b), (c) and (d), and take into account the safeguard outcomes in paragraphs 3(2)(e) and (f) was made after considering a brief from the Department (MS24-000090), which contained the following attachments relevant to this decision:

a. *National Greenhouse and Energy Reporting Legislation Amendment (Best Practice Emissions Intensities Update) Instrument 2024*;

b. Explanatory Statement: National Greenhouse and Energy Reporting Legislation Amendment (Best Practice Emissions Intensities Update) Instrument 2024;

c. Safeguard Mechanism: Prescribed production variables and default emissions intensities– a document that sets out the emissions relevant for determining default and best practice EIs, and emissions relevant for apportioning emissions between PVs in emissions intensity determinations;

d. Safeguard net and gross emissions analysis – Calculations from the Department relating to the Safeguard emissions budget, total baseline emissions, and analysis relating to 5 year rolling average emissions outcomes, based on projections of onsite abatement taken from *Australia's emissions projections 2023*; and

e. A summary of the stakeholder consultations.

Reasons

I am satisfied that the Safeguard Rules as amended are consistent with safeguard outcome (b): that total net safeguard emissions for all of the financial years between 1 July 2020 and 30 June 2030 do not exceed a total of 1,233 million tonnes of carbon dioxide equivalence.

28. The 2024 Best Practice Emissions Intensities Update updates certain PVs and default EIs and inserts new PVs, default EIs and 16 best practice EIs into Schedule 1 of the Safeguard Rules. The updates to default EIs and best practice EIs in Schedule 1 of the Safeguard Rules contribute to updated baseline emission numbers for existing facilities as set out in Division 2, Part 3 of the Safeguard Rules. Best practice EIs will only apply to an existing facility if it begins new production of a PV. The best practice EIs in Schedule 1 will impact the baseline emissions number for a new facility in accordance with the formula set out in section 29 of the Safeguard Rules.

29. Safeguard outcome (b) is engaged because PV definitions, default EIs and best practice EIs are used to calculate Safeguard baselines, which affect net Safeguard emissions, and the Safeguard Mechanism requires designated large facilities to have net emissions below their baseline.

30. The Department has updated its net emissions analysis, which I relied on for my 3 May 2023 statement of reasons, 29 September 2023 statement of reasons and 22 April 2024 statement of reasons, to reflect the effect of the 2024 Best Practice Emissions Intensities Update, and also reflect new data and revised baseline estimates.

31. I have taken the results of the Department's updated net emissions analysis, which is described below, into account to be satisfied that the Safeguard Rules as amended are consistent with safeguard outcome (b). In summary, the updated estimated aggregate baselines will be slightly higher because of the changes to PVs and EIs in the 2024 Best Practice Emissions Intensities Update. However, the updated estimated aggregated baselines will still be under the Safeguard net emissions budget of 1,233 Mt for the period 1 July 2020 and 30 June 2030. Designated large facilities must keep their net emissions below their

baseline and this analysis continues to show that net Safeguard emissions will remain under the maximum of 1,233 tonnes of CO_2-e in safeguard outcome (b).

32. The 1,233 Mt CO_2-e Safeguard net emissions budget for the period 1 July 2020 and 30 June 2030 corresponds to an 821* Mt CO_2-e net emissions budget for the period between 2023-24 to 2029-30, reflecting reported net emissions of 412* Mt between 2020-21 and 2022-23.

33. My Department's net emissions analysis underpinning the 22 April 2024 amendments projected baselines to total net emissions of 802* Mt CO_2-e between 2023-24 to 2029-30 having regard to the changes made by the 2024 Production Variables Update.[7] My Department has updated the net emissions analysis to reflect the updates described in paragraph 30 above, including the 2024 Best Practice Emissions Intensities Update, and this results in an increase in net covered emissions to 805* Mt between 2023-24 to 2029-30.

34. The net emissions analysis I considered in relation to 2024 Production Variables Update allowed for a reserve, to account for uncertainty about future emissions, of 19* Mt CO_2-e.[8] The change in net emissions described above (805 Mt compared to 802 Mt) means that the reserve is now estimated at 16* Mt CO_2-e.

35. Baselines for new facilities under the Safeguard Rules will be set at international best practice EI (as outlined in Part 3, Division 3 of the Safeguard Rules). Net covered emissions from new facilities are estimated at 7* Mt to 2030, compared to 4* Mt in the April statement of reasons. The increase is primarily due to updated data sources and a revised approach to calculating baselines for new entrants which better incorporates production estimates and the impacts of the new best practice emissions intensities.

36. My Department's net emissions analysis accounts for the impact of likely TEBA facilities, which receive a lower baseline decline rate. The 2024 Best Practice Emissions Intensities Update adds phosphoric acid and rare earth oxides to the trade exposed PVs listed in Schedule 2 of the Safeguard Rules. Facilities that have these PV as their primary PV may be eligible for TEBA status. The addition of the PVs will apply to facilities that are not yet designated large facilities. The potential future access to TEBA arrangements by operations which are not yet designated large facilities is mitigated by the existence of the reserve.

37. I am satisfied that the Safeguard Rules as amended are consistent with safeguard outcome (b), for the reasons outlined in paragraphs 29-35 of my 3 May 2023 statement of reasons, having regard to my Department's updated analysis setting out expected net covered emissions of 805* Mt CO_2-e net as a result of the 2024 Best Practice Emissions Intensities Update and the 821* Mt CO_2-e net emissions budget for the period between 2023-24 to 2029-30, described in paragraphs 28 to 36 above.

I am satisfied that the Safeguard Rules as amended are consistent with safeguard outcome (c): that net safeguard emissions decline to (i) no more than 100 million tonnes of carbon dioxide

[7] See paragraph 32 of the statement of reasons of 22 April 2024 for the 2024 Production Variables Update.

[8] See paragraph 33 of the statement of reasons of 22 April 2024 for the 2024 Production Variables Update .

equivalence for the financial year beginning on 1 July 2029; and (ii) zero for any financial year to begin after 30 June 2049

38. My Department's previous April 2024 net emissions analysis based on the Safeguard Rules, as amended by the 2024 Production Variables Update, forecasted that net Safeguard emissions would decline to 96.3 Mt CO_2-e in 2029-30 (taking into account the reserve allowance), which is below 100 Mt CO_2-e.

39. My Department has updated the net emission analysis to reflect the 2024 Best Practice Emissions Intensities Update. Based on these updates, net Safeguard emissions are expected to be 94.2 Mt CO_2-e in 2029-30. Taking into account the reserve allowance, these updates increase net Safeguard emissions in 2029-30 from 96.3 Mt CO_2-e to 97.1 Mt CO_2-e, which is below 100 Mt CO_2-e. The increase is primarily driven by the improvements in calculating baselines for new entrants. As this is below 100 Mt CO_2-e, I am satisfied that the Safeguard Rules as amended are consistent with safeguard outcome (c)(i).

40. As set out in Part 3, Division 5 of the Safeguard Rules, the default emissions reduction contribution for a financial year reduces to zero over the 20 years from 2030-31 to 2049-50, ensuring that aggregate baselines for designated large facilities reach net zero by 2049-50. Part 3, Division 1 of the Safeguard Rules requires that baselines for facilities for a financial year that begins after 30 June 2049 must be zero. The 2024 Best Practice Emissions Intensities Update does not alter this requirement and will not directly impact Part 3, Division 5. Having regard to Part 3 of the Safeguard Rules, I am satisfied the Safeguard Rules, as amended by the 2024 Production Variables Update, are consistent with safeguard outcome (c)(ii).

I am satisfied that the Safeguard Rules as amended are consistent with safeguard outcome (d): that the 5-year rolling average safeguard emissions for each financial year that begins after 30 June 2024 are lower than the past 5-year rolling average safeguard emissions for that financial year.

41. Safeguard outcome (d) requires the 5-year rolling average Safeguard emissions for each financial year that begins after 30 June 2024 to be lower than the past 5-year rolling average Safeguard emissions for that financial year, where the past 5-year rolling average Safeguard emissions is defined as one fifth of the total amount of Safeguard emissions for the 5 financial years previous to the financial year that ended 3 years before the start of the current financial year (for financial years that begin before 1 July 2027), and from the 2027-28 financial year onwards, for the 5 financial years that ended 2 years before the start of the current financial year.

42. *Australia's emissions projections 2023* include projections of onsite abatement at Safeguard facilities based on the central 'progressive industry transition' scenario in modelling commissioned from RepuTex. The Department has updated the gross emissions analysis within the emissions projections to reflect revised baseline estimates as a result of the 2024 Best Practice Emissions Intensities Update. The updated analysis indicates that the 5-year rolling average Safeguard emissions for each financial year that begins after 30 June 2024 is lower than the past 5-year rolling average Safeguard emissions for that financial year (**Table 1**), which is consistent with outcome (d).

Table 1: Projected Safeguard gross emissions – Production Variables Update (Mt CO_2-e)

FY ending	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**
Gross emissions	138.6	136.9	134.6	135.5	133.6	128.4	121.0
5 year rolling average	139.6	137.8	137.3	136.8	135.8	133.8	130.6
Change relative to specified period		three years prior			two years prior		
		-0.9%	-2.8%	-2.8%	-0.7%	-1.0%	-2.2%

Note that numbers in this table have been rounded to one significant figure.

I am satisfied the Safeguard Rules as amended take into account safeguard outcome (e): that the responsible emitter for each designated large facility has a material incentive to invest in reducing covered emissions from the operation of the facility.

43. New facilities have the opportunity to use the latest technology and build world's best practice emissions performance into their design. As part of the reforms to the Safeguard Mechanism, the Government decided new facility baselines will be set at international best practice**,** adapted for an Australian context. This sends a strong signal to investors that Australia is serious about net zero, and new investments must support this goal. The best practice EIs set in 2024 Best Practice Emissions Intensities Update will encourage investors in the mining and metal manufacturing, oil and gas, chemical and biofuel sectors to take up the opportunities to achieve best practice emissions performance. Facilities that achieve covered emissions below the best practice EI can generate SMCs that can be sold to other Safeguard facilities. Facilities with emissions above the best practice EI can make up the difference by, for example, purchasing SMCs from another Safeguard facility that has outperformed its baseline.

44. The 2024 Best Practice Emissions Intensities Update amends the definitions of the production variables relating to steel manufacturing to limit the quantity of cold ferrous feed which can be included in the Primary Steel production variable. This will remove the potential perverse outcome that a facility may primarily be undertaking the production of steel from cold ferrous feed and counting that production under the Primary Steel production variable resulting in a much higher baseline outcome. Inclusion of cold ferrous feed in Primary Steel manufacturing remains a prospective decarbonisation pathway for primary steel producers, and the 35 per cent by mass threshold maintains the incentive and benefit for primary steel producers to pursue this pathway. Steel produced from cold ferrous feed which exceeds the threshold can be reported under the production variable for manufacture of carbon steel from cold ferrous feed.

45. The 2024 Best Practice Emissions Intensities Update expands the definition of coke oven coke to include other materials that may be carbonised to produce coke oven coke. This allows facilities to substitute coal in the coke oven coke using materials other than coal which can be

carbonised into coke. This will allow facilities to reduce the emissions intensity of coke production.

46. The 2024 Best Practice Emissions Intensities Update updates the definitions of the primary iron and primary steel production variables regarding an imported coke adjustment. The update means that if a facility significantly reduces the amount of coke required to produce steel, the imported coke adjustment is reduced by a corresponding amount. A prospective way to decarbonise steel production involves the use of an electric smelting furnace, which would involve the use of a small amount of coke that may need to be imported. The update would ensure that the adjustment accurately reflects the amount of coke that is used and not penalise the steelmaker for using this technology.

47. I am satisfied that the Safeguard Rules as amended take into account safeguard outcome (e), because of the reasons outlined in paragraphs 50-53 of my 3 May 2023 statement of reasons, and because this outcome was taken into account during development of the amendments included in the 2024 Best Practice Emissions Intensity Update as described in paragraphs 43-46 above.

I am satisfied the Safeguard Rules as amended take into account safeguard outcome (f): the competitiveness of trade-exposed industries is appropriately supported as Australia and its regions seize the opportunities of the move to a global net zero economy.

48. Currently, two categories of trade exposed facilities receive assistance to manage competitiveness issues and carbon leakage risks. These categories are 'trade exposed' facilities and TEBA facilities, which are defined in section 4 of the Safeguard Rules.[9] As provided by Part 3, Division 5, Subdivision D, of the Safeguard Rules, the responsible emitter for a facility can apply to the Clean Energy Regulator for the facility to be a TEBA facility, which will be eligible for a discounted decline rate based on a scheme impact metric.

49. The 2024 Best Practice Emissions Intensities Update adds phosphoric acid and rare earth oxides PVs as trade exposed in Schedule 2 of the Safeguard Rule. This means facilities that have any of these PVs as their primary PV may be able to apply to be a TEBA facility, and have their competitiveness appropriately supported as Australia and its regions seize the opportunities of the move to a global net zero economy. For this reason, along with the reasons outlined in paragraphs 54-61 of my 3 May 2023 statement of reasons, I am satisfied the Safeguard Rules as amended take into account safeguard outcome (f).

Other provisions

50. I have had regard to other parts of the Safeguard Rules that support the effective operation of the Safeguard Mechanism regulatory scheme, but which do not otherwise directly relate to the safeguard outcomes. These include Parts 1, 2, 5, and 6 of the Safeguard Rules.

51. The 2024 Best Practice Emissions Intensity Update inserts the requirement for the Clean Energy Regulator to publish, by 15 April each year, the methods used by Safeguard

[9] Trade exposed facilities and TEBA facilities are eligible to access funding under the Powering the Regions Fund.

Mechanism facilities to estimate each source of fugitive methane emissions from coal mining, oil and natural gas activities, for the previous financial year.

52. The 2024 Best Practice Emissions Intensity Update inserts the requirement that audit reports conducted for Emissions Intensity Determinations meet the requirement of reasonable assurance engagements consistent with the NGER Audit Determination 2009 and that the audit team leader is a registered Category 2 auditor under the NGER regulations.

53. The 2024 Best Practice Emissions Intensity Update inserts a requirement for non-manufacturing facilities when calculating their revenue for the purpose of applying for a trade-exposed baseline adjusted determination to undertake the calculation in accordance with the earnings before interest and tax (EBIT) Guidelines in force at that time, with the EBIT Guidelines prevailing to the extent of any inconsistency.

54. The 2024 Best Practice Emissions Intensity Update clarifies that a reference to "greenhouse gas emissions from the operation of a facility" relates to covered emissions (rather than total emissions). This update means the provision will work correctly when applied to facilities where some emissions are not covered – such as landfills. The provision is a requirement that must be met for the Regulator to make a TEBA determination.

55. The 2024 Best Practice Emissions Intensity Update also inserts a transitional provision to ensure the relevant best practice intensity values and default emissions intensity values can be used in 2024-25.

For the reasons above, I, the Hon Chris Bowen MP, Minister for Climate Change and Energy, am satisfied that Safeguard Rules as amended are consistent with the safeguard outcomes in paragraphs 3(2)(b), (c) and (d), and take into account the safeguard outcomes in paragraphs 3(2)(e) and (f), of the NGER Act.

Name and position	Hon Chris Bowen MP, Minister for Climate Change and Energy
Signature	
Date of decision	