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 (Safeguard Mechanism) Amendment (Production Variables Update) Rules 2024

Background

The *National Greenhouse and Energy Reporting Act 2007* (the NGER Act), *National Greenhouse and Energy Reporting Regulations 2008* and the *National Greenhouse and Energy Reporting (Safeguard Mechanism) Rule 2015* (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.

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. Technical amendments were made to the Safeguard Rules in 2023 to update production variables and certain default emissions intensities.

This amendment completes the Government's review of production variables by incorporating new production variables, making changes to existing production variables and

adding new and updated default emissions intensities. The amendment further adds best practice emissions intensity numbers and makes technical changes to ensure that the reformed Safeguard Mechanism operates as intended.

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.

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 purpose of the *National Greenhouse and Energy Reporting (Safeguard Mechanism) Amendment (Production Variables Update) Rules 2024* (the Amendment Rules) is to amend the Safeguard Rules to:

- make changes to certain default emissions intensity numbers;
- insert new production variables with specified emissions intensity numbers;
- insert best practice emissions intensity numbers for certain production variables;
- make changes to certain definitions for the purposes of changing the production variables;
- make changes to certain production variables for the purpose of adjusting the emissions intensity numbers;
- insert new production variables into the lists of trade-exposed production variables; and,
- make technical amendments to the Safeguard Rules to clarify policy matters and help ensure the policy outcomes of the Safeguard reforms are achieved.

Legislative Authority

The Amendment 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.

Compliance with Legislative Conditions

The conditions set out in subsection 22XS(1A) and (1B) of the NGER Act require the Minister to be satisfied of, and take into account, certain safeguard outcomes set out in the Act. The Minister has considered and is satisfied that the Amendment Rules are 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 Rules take 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 Rules do 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 Rules for public consultation from 15 December 2023 to 16 January 2024.

Forty submissions were received from businesses, industry groups, environmental groups and individuals, and all non-confidential submissions were published on the department's website.

Changes were made to the final Amendment Rules in response to submissions, and these are detailed against relevant provisions in **Attachment A.**

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.

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 technical and minor amendments made by this production variable review are an important step in implementing the reforms. The Office for Impact Analysis has been consulted (ref OIA23-05903), and confirmed that a RIA is not required for the decision on the Amendment Rules.

[1] In March 2024, the Guidelines were available at: https://www.dcceew.gov.au/climate-change/publications/benchmark-guidelines-setting-international-best-practice
[2] In March 2024, the Framework Document was available at: www.dcceew.gov.au/climate-change/publications/framework-developing-production-variables-default-emissions-intensity-values
[3] In March 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

Incorporation

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 (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. This enables the Safeguard Rules to take into account current industry standards as in force from time to time, ensuring that measurement of production variables is consistent with the measurement of these quantities for commercial purposes.

As such, the Amendment Rule refers to a document defined as the Safeguard Mechanism document. The Safeguard Rules define the Safeguard Mechanism document as the document of that name published on the Department's website, as in force from time to time. The Amendment Rules do not modify this definition. The Safeguard Mechanism document is incorporated so that responsible emitters can apportion the historical emissions for a facility to its historical production variables in an emissions intensity determination application, so that they can have a facility-specific emissions intensity numbers set.

In March 2024, the Safeguard Mechanism document could be accessed from: https://www.dcceew.gov.au/climate-change/publications/safeguard-mechanism-document.

Details and Operation

The Amendment Rules are 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 Rules, including commencement details, are set out in **Attachment A.**

The Amendment Rules are subject to disallowance under section 42 of the *Legislation Act 2003.* However, the Amendment Rules are 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 Rules are 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. 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 Amending Rules have 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.

Statement of Compatibility with Human Rights

The Amendment Rules are 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 (Safeguard Mechanism) Amendment (Production Variables Update) Rules 2024*

Section 1 – Name of Instrument

This section specifies the name of the Legislative Instrument as the *National Greenhouse and Energy Reporting (Safeguard Mechanism) Amendment (Production Variables Update) Rules 2024* (the Amendment Rules).

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

Item 1

Item 1 amends subsection 11(1) to update the definition of $\boldsymbol{EI_B}$ (which represents best practice emissions intensity number) in the formula for calculating a ***baseline emissions number*** for an existing facility (other than a landfill activity) for a financial year. The update means that if there is not a best practice emissions intensity number for the production variable for the financial year, and the production variable is a historical production variable for the facility and no emissions intensity determination is in place, the emissions intensity number for that facility's production variable would be zero.

This would only apply to facilities that are able to, but do not, apply for an emissions intensity determination for a historical production variable, and where the best practice emissions intensity number would normally apply but has not been set.

If the production variable for a facility is not a historical production variable and there is no emissions intensity determination in place or best practice emissions intensity number for the

production variable for the financial year, then the default industry average emissions intensity number would still apply.

Item 2

Item 2 updates the definition of ***historical production variable*** in subsection 12(2) which relates to the meaning of an ***existing facility***. The amendment clarifies that if there was commercial production in *any* historical financial year, then the facility has a historical production variable, in line with the policy intent. A production variable may still be considered a historical production variable if production was non-commercial (because of testing or piloting activities for example) in a historical year, as long as it was a commercial production variable for any one historical year, which can be any financial year between 2017-18 and 2020-21. Commercial production need not occur in a particular historical financial year to meet the definition of an existing facility.

Item 3

This item inserts a new section 14A into the Safeguard Rules to ensure that if an emissions intensity determination applies to 'primary steel' for a facility, it may also apply (with different emissions intensities) to 'primary iron' and 'continuously cast carbon steel products and ingots of carbon steel (cold ferrous feed)' for that facility, even if 'primary iron' and 'continuously cast carbon steel products and ingots of carbon steel (cold ferrous feed)' are not historical, transitional or related production variables for the facility (as per paragraph 19(3)(a)).

This item, along with item 5, is intended to prevent a facility from being penalised for undertaking new low-emissions ways of making steel. These amendments prevent a facility from becoming worse off from entering into a process associated with the 'primary iron' or 'continuously cast carbon steel products and ingots of carbon steel (cold ferrous feed)' production variable. Under this approach, the facility's emissions intensities corresponding to 'primary iron' and 'continuously cast carbon steel products and ingots of carbon steel (cold ferrous feed)' would differ from the emissions intensity corresponding to 'primary steel'. The emissions intensities for these production variables are calculated by apportioning emissions from primary steel to two new 'steelmaking production variables' in accordance with the ***Safeguard Mechanism document*** published on the Department's website.

Subsection 14A(1) states that if an application for an emissions intensity determination specifies primary steel as a production variable, the application may also provide information about the emissions intensity of iron production, and the emissions intensity of the conversion of that iron into steel. This is achieved by enabling the application to specify, as historical production variables for the facility, two new production variables: 'primary iron (steelmaking)' in new section 39A of Schedule 1 of the Safeguard Rules, which corresponds to iron production; and 'ferrous feed (steelmaking)' in new section 44A of Schedule 1 of the Safeguard Rules, which corresponds to conversion of iron into steel. These production variables, defined in subsection 14A(5) as ***steelmaking production variables***, are only relevant to emissions intensity determinations and are not directly used for calculating baselines. They are linked to production variables that are used for calculating baselines, namely 'primary iron' and 'Continuously cast carbon steel products and ingots of carbon

steel (manufacture of carbon steel products from cold ferrous feed)', in the new section 19A inserted at item 5.

Section 14A(2) clarifies that the steelmaking production variables can be specified as historical production variables when this section applies, even if there was non-commercial production for that production variable in a historical financial year.

Normally, for emissions intensity determinations, emissions can only be apportioned to a single production variable. Subsections 14A(3) and 14A(4) clarify that emissions can be apportioned to both a steelmaking production variable and to the 'primary steel' production variable. This is because the emissions from making primary steel are what is used to determine the emissions intensity of the steelmaking production variables.

Item 4

Item 4 inserts a new subsection 16(2A), which specifies that to avoid doubt, the Safeguard Mechanism document may specify that a particular kind of covered emissions is relevant to the default emissions intensity of a production variable notwithstanding that the specified kind of covered emissions was not taken into account when the default emissions intensity was calculated.

For some production variables, assumptions were made in order to apportion emissions between production variables at some facilities when calculating the default emissions intensity. The effect of this provision is to clarify that when a responsible emitter is determining how to apportion their facility's emissions in an emissions intensity determination application, the Safeguard Mechanism document takes precedence over how the default emissions intensity was originally determined. This means that the responsible emitter can apportion emissions using information that they have access to, and the best information about emissions apportionment can be used.

Item 5

This item inserts a new section 19A, which applies to emissions intensity determinations for primary steel, if the emissions intensity determination application specifies the steelmaking production variables (i.e. 'primary iron (steelmaking)' and 'ferrous feed (steelmaking)') as historical production variables. The item specifies that when the emissions intensity determination for primary steel is made, it would also specify emissions intensities for the 'primary iron' production variable and the 'continuously cast carbon steel products and ingots of carbon steel (manufacture of primary iron carbon steel products from cold ferrous feed)' production variable, and that these production variables are taken to be historical production variables for the facility. The emissions intensities for these production variables would be equal to the emissions intensities for the corresponding steelmaking production variables, which are calculated in accordance with new section 14A inserted by item 3.

Item 6

Item 6 updates section 20 which provides a definition of ***facility-specific emissions intensity number*** for historical production variables, for related production variables and for transitional production variables.

This amendment only updates the definition of facility-specific emissions intensity number of a transitional production variable by updating the note at subsection 20(6). The updated note clarifies that both subsections 91(2) and 92(2) of the Safeguard Rules modify the operation of subsection 20(6) where the transitional production variable for the facility is 'run-of-mine coal', 'reservoir carbon dioxide from existing gas fields', 'natural gas throughput', or 'lithium hydroxide'. Subsections 91(2) and 92(2) clarify that for certain production variables, if they are transitional production variables for a facility, the facility-specific emissions intensity number is equal to the default emissions intensity specified in these provisions (which reflect the default emissions intensities in Schedule 1), even in relation to the 2023-24 financial year, where default emissions intensities for these production variables were either unspecified at the beginning of the financial year, or differed from the value in Schedule 1.

Subsection 92(2) is added by item 17 and is relevant if a facility has lithium hydroxide as a transitional production variable. The default emissions intensity number for 'lithium hydroxide' is being set for the first time in item 69 and it is possible that 'lithium hydroxide' will be identified as a transitional production variable for one or more facilities.

Item 7

Item 7 updates the requirements for a production variable to be a 'related production variable' to another production variable (the 'comparative production variable') in section 23. For related production variables, if a production variable is not a historical production variable for a facility and is related to a comparative production variable that is a historical production variable for the facility, the facility's emissions intensity determination can specify that the related production variable has the same facility-specific emissions intensity as the comparative production variable.

Item 7 clarifies that certain production variables associated with hot-rolling of steel can be related production variables. Specifically, the 'hot-rolled long products (cold ferrous feed)' can be a related production variable to the 'hot-rolled long products produced at primary steel manufacturing facilities' production variable; and the 'hot-rolled flat products (cold ferrous feed)' can be a related production variable to the 'hot-rolled flat products produced at primary steel manufacturing facilities' production variable.

For most production variables, there are four tests provided in subsection 23(2) (and section 23 itself prior to these amendments) to determine whether two production variables can be related.

a. The related production variable is not a historical production variable for the facility; or is a historical production variable for the facility but it was not reasonably practicable for the application for the emissions intensity determination to include the designated historical information about that production variable.

b. The related production variable should be substantially similar to the comparative production variable.

c. The related production variable and comparative production variable should be measured using the same or mutually convertible units.

d. The facility's production of the related production variable should not involve the installation of new equipment that is likely to increase the facility's capacity to increase the total quantity of both production variables by more than 20 per cent (relative to that quantity in the last financial year before the equipment is installed) in any of the years to which the determination is to apply.

For the hot-rolling production variables, the only relevant test is (a), that is, the related production variable should not be a historical production variable for the facility; or if it is a historical production variable for the facility, it was not reasonably practicable for the application for the emissions intensity determination to include the designated historical information about that production variable.

These amendments reflect and clarify that the corresponding hot-rolling production variables are substantially similar, and lift the requirement at (d), regarding whether there is installation of new equipment that is likely to increase the facility's capacity to increase the total quantity of both production variables by more than 20 per cent.

These amendments are relevant in the case that a facility enters into a new less emissions-intensive form of steel production and clarifies that if the new steel production requires the use of a different production variable (the related production variable), to what was used before by the facility for hot-rolling (the comparative production variable) it can use the comparative production variable to set the facility-specific emissions intensity for its hot-rolling operations. Without this provision, moving to the related production variable could affect the facility's baseline in a way that disincentivises low emissions steel production.

The requirement at (d) would not apply to the hot-rolling production variables because this requirement would not be consistent with the policy objective of incentivising investment in new low-emissions types of steel production.

Item 8

Item 8 updates the definition of $NLCH_4$ in subsection 30(1) which is an input into the calculation of the baseline emissions number for a landfill facility for a financial year. The amendment updates the wording so that the definition of $NLCH_4$ refers to 'covered emissions of greenhouse gases' instead of 'scope 1 emissions of greenhouse gases'. This amendment clarifies that the baseline should not include legacy waste emissions. Legacy waste emissions are scope 1 emissions from waste deposited prior to commencement of the Safeguard Mechanism on 1 July 2016, and are therefore not covered emissions under the Safeguard Mechanism.

Item 9

Item 9 updates the definition of $\boldsymbol{ERC_y}$ in subsection 34(1) which is an input into the calculation of the emissions reduction contribution for a trade-exposed baseline-adjusted facility (TEBA facility) for a financial year. This formula calculates the adjusted emissions reduction contribution for a TEBA facility. The amendments update the definition of $\boldsymbol{ERC_y}$ so that it is to equal 1 if there is no default emissions reduction contribution number for the previous financial year specified in the table in section 31. This could occur if the first year of a 'determination that a facility is a trade exposed baseline adjusted facility' made under section 42 (a TEBA determination) is 2023-24, because the table at section 31 does not specify a default emissions reduction contribution number for 2022-23. This item accordingly clarifies that for the equation in subsection 34(1), $\boldsymbol{ERC_y}$ is equal to 1 for 2022-23.

Item 10

Item 10 repeals and replaces the definition of the parameter ***PE*** in subsection 36(1), which is used to calculate the assessed cost impact for manufacturing facilities**.** The parameter PE was previously expressed in terms of 'total number of tonnes of carbon dioxide equivalence of greenhouse gases from the operation of the facility', however the amended definition clarifies that only the emissions covered by the Safeguard Mechanism are included in the calculation. This is important as some facilities have emissions that are not covered by the Safeguard Mechanism.

Item 11

Similar to the previous item, item 11 repeals and replaces the definition of the parameter ***PE*** in subsection 36(4), which is used to calculate the assessed cost impact for non-manufacturing facilities**.** The parameter ***PE*** was previously expressed in terms of 'total number of tonnes of carbon dioxide equivalence of greenhouse gases from the operation of the facility', however the amended definition clarifies that only the emissions covered by the Safeguard Mechanism are included in the calculation. This is important as some facilities have emissions that are not covered by the Safeguard Mechanism.

Item 12

Item 12 clarifies the meaning of ***eligible facility*** in section 58B by updating paragraph 58B(3)(b). The effect of these amendments is that a facility cannot be an eligible facility in the current financial year if any Australian carbon credit units (ACCUs) have been issued in the previous year, in addition to the current year, that are ACCUs attributable to covered emissions reductions at the facility.

The definition of an ***eligible facility*** refers to facilities that are not designated large facilities (a ***designated large facility*** is defined by section 22XJ of the NGER Act to be a facility covered by the Safeguard Mechanism) but which are eligible for issuance of safeguard mechanism credit units (SMCs). It is the original policy intent that SMCs and ACCUs should not be issued for the same reduction in covered emissions because this would double-count the emissions reductions by issuing two types of credit for the same reductions. This exclusion is not required for designated large facilities because subsection 22XK(4) of the

NGER Act increases the net emissions number of such facilities (by adding back the emissions reductions) but not to other facilities (namely, facilities with covered emissions below the 100,000 t CO_2-e Safeguard Mechanism coverage threshold).

Expanding the restriction of eligible facility definition for ACCU issuance in the previous financial year will prevent the double-crediting of SMCs in years that may be covered by the crediting period of the ACCU project but in which there are no ACCU issuances (for example, a project could be credited ACCUs for emissions reductions in two financial years, with all of these ACCUs being issued in a single financial year).

This item also clarifies that the exclusion of facilities from being eligible facilities (for the purposes of SMC issuance) on the basis of ACCU issuance should be limited to ACCUs that are attributable to a reduction in covered emissions of that facility. This aligns with other provisions preventing double-crediting such as section 72B 'Circumstances in which subsection 22XK(4) of the Act does not apply', and subsection 9(9) and section 20 of the CFI Rule. This would allow facilities with ACCU projects that only issue ACCUs for activities that reduce non-covered emissions (such as scope 2 emissions from electricity consumption) to be considered eligible facilities for the purposes of SMC issuance.

Item 13

Item 13 adds further detail to the definition of an ***eligible facility***, to enable a facility that drops below the Safeguard coverage threshold to postpone being an eligible facility for up to three years after the last covered financial year, and still receive SMCs for up to 10 financial years in total. To access this treatment, the facility must not receive SMCs (by being an eligible facility and applying for SMCs) during the period (of up to three years) after the last covered financial year. The intent is to incentivise emissions reduction projects and allow facilities that were previously designated large facilities to be able to receive SMCs for 10 years if they engage in a decarbonisation project that has significant lead times (e.g. up to three years).

For example, a facility was a designated large facility in 2023-24 and the previous four financial years, but not in any subsequent years. The facility was not issued any SMCs in relation to 2024-25, 2025-26 or 2026-27, therefore they may be an eligible facility in the 10 financial years from 2027-28 to 2036-37.

Item 14

Item 14 replaces a reference to subsection 65(1) with a reference to subsection 66(1).

Item 15

Item 15 renumbers a paragraph 71(3)(d) to 71(3)(c).

Item 16

Item 16 replaces the term ‘a baseline’, with the term ‘an emissions intensity’ at subsection 71(4), so that the subsection correctly refers to emissions intensity determinations.

Item 17

Item 17 repeals the application and transition provision in subsection 91(1) that is superseded by these Amendment Rules. This relates to the default emissions intensities in force immediately after the commencement of Schedule 1 to the *National Greenhouse and Energy Reporting (Safeguard Mechanism) Amendment (Production Variables Update) Rules 2023* (2023 Production Variables Update).

Item 18

Item 18 adds a new application and transition provision to clarify that updates to metrics and default emissions intensities added by this instrument would apply for the purpose of setting baseline emissions numbers for the financial year beginning on 1 July 2023.

This item also adds a provision that provides the facility-specific emissions intensity number for ‘lithium hydroxide’ if it is a transitional production variable for a facility.

Item 19

Item 19 updates the default emissions intensity for ‘glass containers’ in Schedule 1, to ensure that it accurately reflects the average emissions intensity of large-scale glass container production in Australia. To calculate an emissions intensity number representative of a sectoral average, the approach set out in the Framework Document was followed using contemporary data from 2018-19 to 2022-23.

Item 20

Item 20 updates the definition of the ***sodium cyanide production activity*** in Schedule 1 so that it no longer requires caustic soda (sodium hydroxide) to be produced at the facility. This reflects production from the main Safeguard-covered facility that produces sodium cyanide and is consistent with how the default emissions intensity was set. The production variable was updated in line with the Framework Document.

Item 21

Item 21 updates subsection 17(3)(b) of Schedule 1 so that that the default emissions intensity for the production variable is per tonne of ‘run-of-mine-coal’ and is accordingly consistent with the metric at subsection 17(1) of Schedule 1 and with the best practice emissions intensity number inserted at item 22.

Item 22

Item 22 inserts a best practice emissions intensity number for ‘run-of-mine coal’ in 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 overseas mines with suitable data.

Consistent with the Guidelines, an emissions intensity was calculated as the production-weighted average of data from the six lowest emissions intensity coal mines in the world with suitable data. The Guidelines state that five facilities should be used, so long as their combined annual production is between 10 and 25 per cent of the combined annual production of all relevant Safeguard facilities. A sixth mine was included so that the total amount of production exceeded 10 per cent of relevant production. This emissions intensity was higher than the emissions intensity corresponding to the top 10 per cent of Australian performance, based on the data used to calculate the default emissions intensity number for 'run-of-mine coal'. As such, the emissions intensity corresponding to the top 10 per cent of Australian performance was used to set the best practice emissions intensity number for 'run-of-mine coal'.

Item 23

Item 23 inserts a best practice emissions intensity number for 'run-of-mine iron ore' in Schedule 1. The number is based on a production-weighted average of the emissions intensity of two iron ore mines, one in Australia and one in Brazil. These were found to be the least emissions-intensive mines globally with suitable data. The combined production of these facilities was greater than 10 per cent and less than 25 per cent of Australia's relevant total production. Including a third facility in the calculation would result in the combined production exceeding 25 per cent. Therefore, consistent with the Guidelines, two facilities were used for the calculation.

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 Brazilian mine were replicable in Australia.

The best practice emissions intensity number published in the Amendment Rules (0.00188) was increased from the number that was published in the Exposure Draft (0.00182) due to more current data.

Item 24

Item 24 updates the note at section 23 in Schedule 1, to remove the superfluous word 'prescribed'.

Item 25

Item 25 inserts a new production variable for 'lithium ore', and the corresponding default emissions intensity in Schedule 1, determined in accordance with the Framework Document. This new production variable would apply to facilities that conduct lithium ore mining through the physical extraction of lithium bearing minerals. This new production variable is intended to differentiate the mining of lithium ore from the 'run-of-mine metal ore'

production variable and ensure consistent treatment with ‘bauxite’, ‘manganese ore’ and ‘iron ore’ production variables. To calculate an emissions intensity number representative of a sectoral average, the approach set out in the Framework Document was followed using contemporary data from 2017-18 to 2021-22.

Item 26

Item 26 includes the new ‘lithium ore’ production variable in the list of activities that are exceptions to the ‘run-of-mine metal ore’ production variable in Schedule 1, to ensure that there is no overlap in application of the ‘lithium ore’ and the ‘run-of-mine metal ore’ production variables.

Item 27

Item 27 inserts a best practice emissions intensity number for ‘run-of-mine metal ore’ in 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 five lowest emissions intensity mines with suitable data that would use this production variable in the world. This included two mines in Australia and three mines in the United States. 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 metal ore. As such, the emissions intensity corresponding to the top 10 per cent of Australian performance was used to set the best practice emissions intensity for ‘run-of-mine metal ore’.

Item 28

Item 28 inserts a best practice emissions intensity number for ‘extracted oil and gas’ in Schedule 1. The number is based on the top 10 per cent of Australian industry performance, as Australian facilities were found to be less emissions-intensive than international facilities with suitable data.

Consistent with the Guidelines, an emissions intensity was calculated based on the production-weighted average emissions-intensity of two oil and gas extraction facilities in the UK and one in Australia. These were found to be the least emissions-intensive sites globally with suitable data. These three facilities result in combined annual production greater than 25 per cent of relevant Australian production. The two lowest emissions intensity facilities have a combined annual production less than 10 per cent. Consistent with the Guidelines, the emissions intensity was calculated using three facilities to produce a more representative number.

The number in the Exposure Draft was calculated using data from a Norwegian facility, in addition to data from the UK facility. The Norwegian facility was not used in the calculation of the revised best practice number because the department became aware of more robust

emissions intensity data for this facility which increased its emissions intensity above the three facilities used to calculate the updated number.

This updated number 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 'extracted oil and gas'. As such, the emissions intensity corresponding to the top 10 per cent of Australian performance was used to set the best practice emissions intensity.

The best practice emissions intensity number published in the Amendment Rules (0.0000360) has accordingly increased from the number that was published in the Exposure Draft (0.0000101).

Item 29

Item 29 inserts a best practice emissions intensity number for 'stabilised crude oil and condensate (stabilisation only)' in Schedule 1. Consistent with the Guidelines, the number is based on the top 10 per cent of Australian industry performance, reflecting that suitable international data was not available. The international data available was for facilities that undertook more processing steps than just crude oil and condensate stabilisation, and it was not possible to apportion emissions between stabilisation and other activities at these facilities.

The emissions intensity of the top 10 per cent of Australian performance was calculated using the same data that was used to calculate the default emissions intensity for 'stabilised crude oil and condensate (stabilisation only)'.

Item 30

Item 30 inserts a best practice emissions intensity number for 'stabilised crude oil (integrated extraction and stabilisation)' in 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 'stabilised crude oil and condensate (stabilisation only)' and 'extracted oil and gas'.

Suitable data was found for United States (US) facilities with lower emissions intensities. However, using the data for these US facilities would result in a lower number for 'integrated extraction and stabilisation of crude oil' compared to 'stabilised crude oil and condensate (stabilisation only)'. 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 was not used, as publishing a lower number for integrated extraction and stabilisation compared with stabilisation only would not treat facilities and industries consistently.

The best practice emissions intensity number published in the Amendment Rules (0.000356) was increased from the number that was published in the Exposure Draft (0.000330) because the final best practice number for 'extracted oil and gas' changed.

Item 31

Item 31 item inserts a best practice emissions intensity number for 'liquefied natural gas (from processed natural gas)' in Schedule 1. The number is based on a production-weighted average of the emissions intensity of two liquified natural gas plants in the US. These were found to be the least emissions-intensive sites globally with suitable data. The number was calculated using emissions data published by the US Environmental Protection Agency and production data published by the US Department of Energy.

The annual production of the lowest emissions intensity facility was over 25 per cent of relevant Australian production. Consistent with the Guidelines, two facilities were used to calculate the number 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. It is well understood in literature that liquifying gas requires less energy at low ambient temperature. However, the facilities used to calculate the number are located on the Gulf Coast of the United States, so are not in a colder climate than Australia, and as such an adjustment was not made.

The best practice emissions intensity number published in the Amendment Rules (0.000633) has increased from the number that was published in the Exposure Draft (0.000482). The best practice number was revised because the department became aware of further relevant emissions data for one of the facilities that increased its emissions intensity.

Item 32

Item 32 repeals and replaces the metric for the 'ethane' production variable at section 33 of Schedule 1, to ensure that ethane produced in petroleum refining and counted as part of the 'petroleum refining' production variable, is not also included in the 'ethane' production variable.

The item also inserts a default emissions intensity number and best practice emissions intensity number for ethane. To calculate an emissions intensity number representative of a sectoral average, the approach set out in the Framework Document was followed using contemporary data from 2016-17 to 2020-21. The best practice emissions intensity number was calculated using the same Australian data, consistent with the Guidelines, as suitable data could not be found internationally for 'ethane'. The key challenge related to accurately apportioning emissions among outputs at a gas processing plant, which typically have several outputs other than ethane. The best practice number is accordingly based on the top 10 per cent of Australian performance.

Item 33

Item 33 repeals and replaces the 'liquefied petroleum gas' (LPG) metric at subsection 34(1) of schedule 1, to ensure that LPG produced in petroleum refining and counted as part of the 'petroleum refining' production variable is not included in the definition and therefore not double counted.

Item 34

Item 34 inserts a best practice emissions intensity number for 'liquefied petroleum gas' in 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 LPG. The key challenge related to accurately apportioning emissions among outputs at a gas processing plant, which typically also have outputs other than LPG.

The number was calculated using the same data that was used to calculate the default emissions intensity number for 'liquified petroleum gas'.

Item 35

Item 35 inserts a best practice emissions intensity number for 'reservoir carbon dioxide' that will apply to new facilities or new production using the production variable at section 35 of schedule 1. The number is based on a production-weighted average of the carbon capture and storage (CCS) rates for two facilities in Norway. These were found to be the least emissions-intensive sites globally with suitable data.

Consistent with the Guidelines, the annual volume of reservoir carbon dioxide stored by these two facilities is more than 10 per cent and less than 25 per cent of relevant Australian production.

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. Geology is relevant for CCS, but the conditions enabling CCS are replicable in Australia given there are CCS projects in Australia.

Item 36

Item 36 updates section 36 in Schedule 1, which contains definitions used in production variables related to steel manufacturing. It removes the definition of the 'integrated iron and steel manufacturing activity' and updates the definition of the ***manufacture of carbon steel from cold ferrous feed*** activity by specifying that it does not include the production of carbon steel products or ingots that are instead produced as part of carrying on the 'primary steel manufacturing activity' at the facility.

Item 37

Item 37 replaces the repealed production variable 'coke oven coke (integrated iron and steel manufacturing)' with the new production variable 'coke oven coke' in Schedule 1. The

production variable only applies to coke oven coke that is exported from the facility, and the facility would no longer be required to be conducting the integrated iron and steel manufacturing activity (whose definition is removed by item 33). The emissions associated with the production of coke oven coke that is not exported would be associated with the new production variables 'primary steel' and 'primary iron'.

Throughout the Safeguard Rules, when something is ***exported from the facility*** it is transferred from the facility to somewhere else. This term is not intended to imply that it would be exported from Australia.

This item inserts the default emissions intensity number for 'coke oven coke'. The number has been determined in line with the calculation method in the Framework Document using data from 2012-13 to 2016-17. Due to reviewing and amending production variable definitions related to steel production and updated data for a domestic facility, the default number published in the Amendment Rules (0.465) decreased slightly compared to the number published in the Exposure Draft (0.466).

Item 38

Item 38 replaces the repealed production variable 'lime (integrated iron and steel manufacturing)' with the new production variable 'lime (steel manufacturing)' in Schedule 1. The new production variable only applies to lime that is exported from the facility, and the facility would no longer be required to be conducting the integrated iron and steel manufacturing activity. This is an intermediate product used for steel production, and the emissions associated with the production of lime that is not exported would be associated with the new production variables 'primary steel' and 'primary iron'.

Throughout the Safeguard Rules, when something is ***exported from the facility*** it is transferred from the facility to somewhere else. This term is not intended to imply that it would be exported from Australia.

This item inserts the default emissions intensity number for 'lime (steel manufacturing)'. The number has been determined in line with the calculation method in the Framework Document using data from 2012-13 to 2016-17. Due to reviewing and amending production variable definitions related to steel production and updated data for a domestic facility, the default number published in the Amendment Rules (0.785) increased slightly compared to the number published in the Exposure Draft (0.762).

Item 39

Item 39 repeals the production variable 'iron ore sinter' and inserts a new production variable 'primary iron' in Schedule 1. Iron ore sinter is an intermediate product used for iron and steel production, and the emissions associated with the production of iron ore sinter would now be associated with the with the new production variables 'primary steel' and 'primary iron'. As sinter is not a product exported from a facility, the production variable is repealed.

Primary iron is an intermediate product used in the production of primary steel, but in some cases can be produced separately and exported from the facility, such as hot briquetted iron or

forms of pig iron. The new production variable only applies to primary iron that is exported from the facility. Primary iron not exported from the facility is assumed to be a feedstock for steel production and the emissions are accordingly associated with the new 'primary steel' production variable. Throughout the Safeguard Rules, when something is ***exported from the facility*** it is transferred from the facility to somewhere else. This term is not intended to imply that it would be exported from Australia.

To account for the varying impurity levels in crude iron products, the quantity of metallic iron production excludes gangue content. Gangue consists of commercially worthless impurities such as silica (SiO_2) and aluminium oxide (Al_2O_3). An example has been added to subsection (1) to demonstrate how gangue content is excluded from calculation of this production variable.

Subsection 39(4) reduces the metric for this production variable when metallic iron is produced from coke oven coke imported to the facility. There is accordingly a multiplier applied to each tonne of metallic iron produced from coke oven coke imported to the facility, which was calculated using data from Australian steelmaking facilities. Without this change, if a facility were to produce metallic iron using coke oven coke imported to the facility, its emissions would be reduced (with its baseline unchanged), but there would be emissions elsewhere to produce the coke.

This item also inserts in subsections 5 and 6 the default emissions intensity numbers and the best practice emissions intensity number for 'primary iron'. 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 primary iron. The number was calculated using the same data that was used to calculate the default emissions intensity for 'primary iron'.

Due to reviewing and amending production variable definitions related to steel production and updated data for a domestic facility, the default number (2.08) and best practice number (1.77) published in the Amendment Rules changed slightly compared to the numbers published in the Exposure Draft (2.07 and 1.75 respectively).

Item 40

Item 40 adds new section 39A to Schedule 1 that defines a new production variable 'primary iron (steelmaking)' in Schedule 1. This production variable, alongside the 'ferrous feed (steelmaking)' production variable, are referred to as the 'steelmaking production variables' and are used by sections 14A and 19A so that a facility that has 'primary steel' as a historical production variable can have an emissions intensity determination that specifies emissions intensities for 'primary iron' and for 'continuously cast carbon steel products and ingots of carbon steel (manufacture of carbon steel from cold ferrous feed)'. This is done by apportioning emissions from 'primary steel' to the steelmaking production variables.

Because 'primary iron (steelmaking)' is used for calculating a facility-specific emissions intensity for 'primary iron', its definition mirrors the definition of 'primary iron' in section 39. However, the relevant metric (in subsection (2)) and activity (in subsections (3) and (4)) are defined differently, so that the production variable corresponds to tonnes of

metallic iron products that are produced as part of the physical and chemical processing of iron containing feeds into a crude iron product that is suitable for use by the facility for manufacturing primary steel.

Because the steelmaking production variables are used for setting facility-specific emissions intensities rather than for calculating baselines directly in accordance with section 11 of the Safeguard Rules, there are no default or best practice numbers specified for this production variable.

Item 41

Item 41 repeals the production variable 'iron ore pellets (integrated iron and steel manufacturing)' and replaces it with the related new production variable 'iron ore pellets' in Schedule 1. This production variable only applies to iron ore pellets that are exported from the facility, and the facility would no longer be required to be conducting the 'integrated iron and steel manufacturing activity'. This is an intermediate product used for steel production and iron production, and the emissions associated with the production of iron ore pellets that is not exported would be associated with the new production variables 'primary steel' or 'primary iron'.

Throughout the Safeguard Rules, when something is ***exported from the facility*** it is transferred from the facility to somewhere else. This term is not intended to imply that it would be exported from Australia.

This item also inserts the default number and best practice number for 'iron ore pellets'. 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 iron ore pellets. The number was calculated using the same data that was used to calculate the default number for 'iron ore pellets'.

Item 42

Item 42 updates the heading for Division 6 of Part 20 of Schedule 1 to 'Continuously cast carbon steel products and ingots of carbon steel from primary steel manufacturing' in Schedule 1, reflecting the move away from referring to integrated iron and steel manufacturing.

Item 43

Item 43 repeals the production variable 'continuously cast carbon steel products and ingots of carbon steel (integrated iron and steel manufacturing)' and replaces it with the new production variable 'primary steel' in Schedule 1.

Steel is typically made through an integrated process that processes iron ore (rocks rich in iron oxides) into iron ore sinter or iron ore pellets, and adds the processed iron ore, along with coke oven coke (also referred to as coke) and lime (which helps to remove impurities) to a blast furnace. This reduces the iron oxides in the ore to produce elemental iron in a form known as crude iron or pig iron. The crude iron has a high carbon content (typically 3.8-4.7

per cent) and may contain other impurities. Molten crude iron exits the blast furnace and enters a basic oxygen furnace, which mixes oxygen with the molten iron to reduce its carbon content. Additives such as lime are also added to the basic oxygen furnace to reduce impurities. Molten steel exits the basic oxygen furnace, and it is cast into ingots of steel. The 'primary steel' production variable would cover this process.

The 'primary steel' production variable is defined more generally than the production variable that it replaces. This means that Safeguard-covered facilities can receive a baseline allocation for new ways of making steel, so that steelmaking facilities are appropriately incentivised to undertake low-emissions steelmaking.

Because 'primary steel' includes the emissions of coke oven coke production, the metric for this production variable is reduced when steel is produced from coke oven coke imported to the facility. Without this change, if a facility were to produce steel using coke oven coke imported to the facility, its emissions would be reduced (with its baseline unchanged), but there would be emissions elsewhere to produce the coke. There is accordingly a multiplier applied to each tonne of steel produced from coke oven coke imported to the facility, which was calculated using data from Australian steelmaking facilities.

This item also inserts the default emissions intensity number for 'primary steel'. The number has been determined in line with the calculation method in the Framework Document using data from 2012-13 to 2016-17. Due to reviewing and amending production variable definitions related to steel production and updated data for a domestic facility, the default number published in the Amendment Rules (2.07) increased slightly compared to the number published in the Exposure Draft (2.05).

Item 44

Item 44 repeals and replaces Division 7 of Part 20 of Schedule 1. The heading is updated to 'Hot-rolled long products produced at primary steel manufacturing facilities' in Schedule 1, reflecting the removal of the integrated iron and steel manufacturing activity.

Item 44 also updates subsection 42(2) by stating that the production variable corresponding to hot-rolled long products produced at primary steel manufacturing facilities is applicable to a facility that conducts the ***hot-rolled long products*** activity and manufactures the hot-rolled carbon steel long products from continuously cast carbon steel products produced as part of carrying on the ***primary steel manufacturing*** activity at the facility.

This item clarifies that the link between the two relevant activities associated with the production variable, so that it is only applicable to facilities that engage in the first activity (primary steel manufacturing) and use the carbon steel products produced by the first activity as an input into the second activity (the ***hot-rolled long products*** activity).

The metric for this activity, like for all production variables, can include products that come under the metric at subsection (1) but may not meet the requirements of subsection (2), so long as the activity described in subsection (2) is conducted by the facility.

For example, consider a facility that manufactures hot-rolled carbon steel long products (that meet the requirements of subsection (1)) from continuously cast carbon steel products produced as part of carrying on the primary steel manufacturing activity at the facility, so that the production variable is applicable to the facility. Suppose that the facility also produces hot-rolled carbon steel long products, using ferrous feed imported to the facility, that also meets the requirements of subsection (1). These hot-rolled carbon steel long products would not meet the requirements in subsection (2) because they are not manufactured from 'continuously cast carbon steel products produced as part of carrying on the primary steel manufacturing activity at the facility'. The metric in subsection (1) would include both the hot-rolled carbon steel long products manufactured from the continuously cast carbon steel products produced at the facility, and also the hot-rolled carbon steel long products manufactured using ferrous feed imported to the facility.

Item 45

Item 45 repeals and replaces Division 8 of Part 20 of Schedule 1. The heading is updated to 'Hot-rolled flat products produced at primary steel manufacturing facilities', reflecting the removal of the 'integrated iron and steel manufacturing' activity.

Item 45 also updates subsection 43(2) by stating that the production variable corresponding to 'hot-rolled long products produced at primary steel manufacturing facilities' is applicable to a facility that conducts the hot rolled flat products activity and manufactures the hot-rolled carbon steel flat products from continuously cast carbon steel products produced as part of carrying on the 'primary steel' manufacturing activity at the facility.

This item clarifies the link between the two relevant activities associated with the production variable, so that it is only applicable to facilities that engage in the first activity (primary steel manufacturing) and use the carbon steel products as an input into the second activity (the hot rolled flat products activity).

The metric for this activity, like for all production variables, can include products that come under the metric at subsection (1) but may not meet the requirements of subsection (2), so long as the activity described in subsection (2) is conducted by the facility.

Item 46

Item 46 changes the heading for Division 9 of Part 20 of Schedule 1 from 'Continuously cast carbon steel products and ingots of carbon steel from manufacture of carbon steel products from cold ferrous feed' to 'Continuously cast carbon steel products and ingots of carbon steel from manufacture of carbon steel from cold ferrous feed' by removing the word 'products' after 'manufacture of carbon steel'. This makes the heading consistent with the definition of the ***manufacture of carbon steel from cold ferrous feed*** activity in subsection 36(1).

Item 47

Item 47 updates the production variable at section 44 of Schedule 1. It updates the heading to 'Continuously cast carbon steel products and ingots of carbon steel (manufacture of carbon steel from cold ferrous feed)' and removes a requirement for the metric to not include tonnes

of continuously cast carbon steel products and ingots of carbon steel that are produced as part of carrying on the ***primary steel manufacturing activity*** at the facility. That requirement is now in the amended definition of the ***manufacture of carbon steel from cold ferrous feed*** activity in subsection 36(1), which is relevant to this section.

Item 48

Item 48 adds new section 44A to Schedule 1 that defines a new production variable 'ferrous feed (steelmaking)'. This production variable, alongside the new 'primary iron (steelmaking)' production variable, are referred to as the 'steelmaking production variables' and are used by sections 14A and 19A so that a facility that has 'primary steel' as a historical production variable can have an emissions intensity determination that specifies emissions intensities for 'primary iron' and for 'continuously cast carbon steel products and ingots of carbon steel (manufacture of carbon steel from cold ferrous feed)'. This is done by apportioning emissions from 'primary steel' to the 'steelmaking production variables'.

Because 'ferrous feed (steelmaking)' is used to calculate a facility-specific emissions intensity for 'continuously cast carbon steel products and ingots of carbon steel (manufacture of carbon steel from cold ferrous feed)', its definition mirrors the definition in section 44 of that production variable. However, the relevant metric (in subsection (2)) and activity (in subsections (3) and (4)) are defined differently, so that the production variable is applicable to a facility that conducts the activity of the physical and chemical transformation of ferrous feed (such as ferrous scrap, hot briquetted iron, molten pig iron and flat iron) into liquid carbon steel and the subsequent casting of the liquid carbon steel to produce continuously cast carbon steel products and ingots of carbon steel.

Because the steelmaking production variables are used for setting facility-specific emissions intensities rather than for calculating baselines directly in accordance with section 11 of the Safeguard Rules, there are no default or best practice emissions intensity numbers specified for this production variable.

Item 49

Item 49 repeals and replaces Division 10 of Part 20 of Schedule 1. The headings for Division 10 and section 45 are updated to refer to cold ferrous feed, reflecting that the production variable involves the ***manufacture of carbon steel from cold ferrous feed*** activity.

Item 49 also updates subsection 45(1) by correcting a reference to the 'hot-rolled carbon steel long products activity' to the ***hot-rolled long products*** activity.

Item 49 updates subsection 45(2) by stating that the 'hot-rolled long products (cold ferrous feed)' production variable is applicable to a facility that conducts the ***hot-rolled long products*** activity and manufactures the hot-rolled carbon steel long products from continuously cast carbon steel products produced as part of carrying on the ***manufacture of carbon steel from cold ferrous feed*** activity at the facility, and applicable to facilities that conduct the ***hot-rolled long products*** activity and are stand-alone hot-rolling mill.

This item clarifies that the link between the two relevant activities associated with the production variable, so that it is only applicable to facilities that engage in the first activity (***manufacture of carbon steel from cold ferrous feed***) and use the carbon steel produced by the first activity as an input into the second activity (the ***hot-rolled long products*** activity), or which are stand-alone hot rolling mills.

The metric for this activity, like for all production variables, can include products that come under the metric at subsection (1) but may not meet the requirements of subsection (2), so long as the activity described in subsection (2) is conducted by the facility.

For example, consider a facility that manufactures hot-rolled carbon steel long products (that meet the requirements of subsection (1)) from continuously cast carbon steel products produced as part of carrying on the manufacture of carbon steel from cold ferrous feed activity at the facility. Suppose that the facility also produces hot-rolled carbon steel long products, using ferrous feed imported to the facility, that also meets the requirements of subsection (1). These hot-rolled carbon steel long products would not meet the requirements in subsection (2) because they are not manufactured from 'continuously cast carbon steel products produced as part of carrying on the manufacture of carbon steel from cold ferrous feed activity at the facility'. The metric in subsection (1) would include both the hot-rolled carbon steel long products manufactured from the continuously cast carbon steel products produced at the facility, and also the hot-rolled carbon steel long products manufactured using ferrous feed imported to the facility.

Item 50

Item 50 repeals and replaces Division 11 of Part 20 of Schedule 1. The headings for Division 11 and section 46 are updated to refer to cold ferrous feed, reflecting that the production variable involves the ***manufacture of carbon steel from cold ferrous feed*** activity.

Item 50 also updates subsection 46(1) by correcting a reference to the 'hot-rolled carbon steel long products activity' to the ***hot-rolled long products activity***.

In addition, item 50 updates subsection 46(2) by stating that the 'hot-rolled flat products (cold ferrous feed)' production variable is applicable to a facility that conducts the ***hot-rolled flat products*** activity and manufactures the hot-rolled carbon steel flat products from continuously cast carbon steel products produced as part of carrying on the ***manufacture of carbon steel from cold ferrous feed*** activity at the facility, and applicable to facilities that conduct hot-rolled flat products activity and are stand-alone hot-rolling mill.

This item clarifies that the link between the two relevant activities associated with the production variable, so that it is only applicable to facilities that engage in the first activity (***manufacture of carbon steel from cold ferrous feed***) and use the carbon steel produced by the first activity as an input into the second activity (the ***hot-rolled flat products*** activity), or which are stand-alone hot rolling mills.

The metric for this activity, like for all production variables, can include products that come under the metric at subsection (1) but may not meet the requirements of subsection (2), so long as the activity described in subsection (2) is conducted by the facility.

Item 51

Item 51 repeals Division 12 of Part 20 of Schedule 1, being the production variable 'Iron ore pellets not from integrated iron and steel manufacturing', which is replaced by the new production variable 'Iron ore pellets' (see item 41 for further details). This reflects that pellet production is no longer distinguished between integrated iron and steel manufacturing and other processes.

Item 52

Item 52 updates the definition of the ***rail transport*** activity in Schedule 1, which is used in four production variables applicable to the rail sector and makes it technology neutral by removing references to fuel combustion. The updated definition ensures that the production variables related to rail transport can apply to any technology for powering rolling stock, including new technologies that enable rail facilities to reduce their emissions, such as battery-electric or hydrogen power.

Item 53

Item 53 inserts a best practice emissions intensity number for the 'bulk freight road transport' production variable in 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, so consistent with the Guidelines, a supplementary approach was taken. As such, the best practice emissions intensity number was calculated using data published by the US Environmental Protection Agency, which includes facility level bulk freight road transport emissions intensity data. This data does not have production information for each facility, so was not suitable for the calculation approach specified in the Guidelines, but was suitable for calculating a benchmark using a supplementary approach. As such, the number was calculated by taking the average emissions intensity of the least emissions-intensive 10 per cent of facilities.

Item 54

Item 54 inserts a best practice emissions intensity number for the 'electricity generation' production variable in Schedule 1. Consistent with the Guidelines, the number is based on Australian data, as suitable data could not be found globally for on-site electricity generation that is appropriate for the Safeguard context.

In Australia, many facilities are in remote locations that do not have access to grid electricity. When setting this number, consideration was given to section of the Guidelines titled 'Data should be appropriate for the Safeguard context', which states that in the Safeguard context, the 'electricity generation' production variable means on-site electricity to support an industrial facility rather than a grid-connected or utility scale generator. As such, the calculation was undertaken in a way to ensure that the best practice emissions intensity number is representative. To do this, facilities used in the calculation were drawn from a

range of sectors, including five from oil and gas, three from mining and five from manufacturing. They were chosen so that facilities from oil and gas, mining, and manufacturing each represent between 3 and 3.3 per cent of total electricity generation from Safeguard facilities. The calculation used the same data used to calculate the default emissions intensity number for electricity.

The best practice emissions intensity number published in the Amendment Rules (0.236) was increased from the number that was published in the Exposure Draft (0.177). The number published in the Exposure Draft was based on selecting three facilities from each sector, rather than requiring each sector to represent between 3 and 3.3 per cent of total electricity generation from Safeguard facilities.

Item 55

Item 55 removes the superfluous word 'prescribed' at paragraph 63(2)(b) in Schedule 1.

Item 56

Item 56 removes the superfluous word 'prescribed' at paragraph 64(3)(c) in Schedule 1.

Item 57

Item 57 inserts a new default emissions intensity number for the 'refined lead' production variable in Schedule 1. To calculate an emissions intensity number representative of a sectoral average, the approach set out in the Framework Document was followed using contemporary data from 2020-21 to 2022-23. The number has been calculated using contemporary data given that operation of the Australian industry has changed significantly since the previous number was calculated.

The production variable text is repealed and replaced to make two minor edits that do not affect its operation: the word 'is' is corrected to 'are' in paragraph 69(1)(a) and a note is deleted that explained that a default number is not yet calculated.

Item 58

Item 58 updates the default emissions intensity number for the zinc-in-fume production variable in Schedule 1. To calculate an emissions intensity number representative of a sectoral average, the approach set out in the Framework Document was followed using contemporary data from 2020-21 to 2022-23. The number has been calculated using contemporary data given that operation of the Australian industry has changed significantly since the previous number was calculated.

Item 59

Item 59 updates the definition of ***intermediate nickel products*** in Schedule 1 to include mixed nickel cobalt hydroxide precipitate that has a concentration of nickel between 20 and 47 per cent (inclusive) by mass. The concentration of nickel was previously required to be between 35 and 47 per cent (inclusive) by mass.

This change will allow a nickel producer to use the 'intermediate nickel products from nickel bearing inputs' production variable for a mixed nickel cobalt hydroxide precipitate that has a concentration of nickel above 20 per cent. The metric for this production variable is 'tonnes of 100 per cent equivalent nickel' rather than the tonnes of the nickel product itself, and as such it remains a suitable basis for setting baselines that reflect emissions per unit of production.

Item 60

Item 60 inserts a new default emissions intensity number for the 'newsprint manufacturing' production variable in Schedule 1. To calculate an emissions intensity number representative of a sectoral average, the approach set out in the Framework Document was followed using contemporary data from 2017-18 to 2021-22. The number has been calculated using contemporary data, given that the number of facilities operating in Australia has changed significantly since the previous number was calculated.

Due to an updated data set, the default number published in the Amendment Rules (0.706) increased compared to the number published in the Exposure Draft (0.644).

Item 61

Item 61 updates the default emissions intensity number for the 'ethene (ethylene)' production variable in Schedule 1. The number has been determined in line with the calculation method in the Framework Document using data from 2012-13 to 2016-17. The number in the Safeguard Rules is being updated through the Amendment Rules to reflect that some emissions previously apportioned to 'ethene (ethylene)' are now apportioned to the new production variable 'exported steam related to the ethene production activity'.

Item 62

Item 62 updates the default emissions intensity number for the 'polyethylene' production variable in Schedule 1. The number has been determined in line with the calculation method in the Framework Document using data from 2012-13 to 2016-17. The number in the Safeguard Rules is being updated through the Amendment Rules to reflect that some emissions previously apportioned to 'polyethylene' are now apportioned to the new production variable 'exported steam related to the ethene production activity'.

Item 63

Item 63 defines the new production variable 'exported steam related to the ethene production activity' in new section 87A of Schedule 1 and specifies its default emissions intensity number. The number has been determined in line with the calculation method in the Framework Document using data from 2012-13 to 2016-17. This new production variable is intended to apply to facilities which produce ethene (ethylene) and export steam.

Steam is ordinarily an intermediate product and has associated emissions included in the relevant output-based production variable under the Safeguard Mechanism. An alternate approach may be required where steam is produced with the explicit purpose of export, rather

than as an input for a production variable. Particularly when emissions associated with exported steam are a significant portion of a facility's emissions profile, and where the production of steam for export is non-linear with the production of the facility's other production variables. In this case, it is appropriate that a production variable for exported steam is available to reflect the fact that one or more facilities are producing steam for export to meet a commercial demand. This is the case for the production variable for 'exported steam related to the raw sugar manufacturing activity'.

Facilities in the ethylene producing sector have a demonstrated need for an exported steam production variable, provided they are structured such that steam is intended to be exported to another facility under ordinary operating conditions. The primary production variables of the sector, 'ethene (ethylene)' and 'polyethylene', have had their default emissions intensity numbers recalculated to exclude emissions associated with exported steam and the numbers are updated in this Amendment Rules.

This item includes a note on the measurement of steam and guidance on how measurement should be converted to gigajoules in accordance with standard thermodynamic principles.

Item 64

Item 64 inserts a note on the measurement of steam and guidance on how measurement should be converted to gigajoules in accordance with standard thermodynamic principles. This note is consistent with a note inserted by item 63.

Item 65

Item 65 updates the definition of 'petroleum refining feedstocks' in Schedule 1 to allow for a broader range of feedstocks applicable to the 'petroleum refining' production variable, such as renewable and waste feedstocks, to be refined alongside petroleum-based feedstocks. This may result in blended products from a petroleum refinery, where products are made from refining both petroleum feedstocks and renewable and/or waste feedstocks.

The inclusion of renewable and/or waste feedstocks in the 'petroleum refining' production variable does not cause an overlap with the 'renewable diesel' and 'renewable kerosene fuel' production variables (inserted by item 73). These biofuel production variables apply to a production process that only treats renewable feedstocks, whereas the 'petroleum refining' production variable applies to a refinery process that treats crude petroleum oil, potentially in combination with one or more other eligible feedstocks.

Item 66

Item 66 amends subsection 97(2) to reflect the numbering of the list of additional renewable and waste feedstocks inserted by item 65 in Schedule 1.

Item 67

Item 70 replaces a short prescriptive list of allowable feedstocks with a longer list consistent with the renewable and waste feedstocks inserted by item 65 in Schedule 1.

Item 68

Item 68 replaces a short prescriptive list of allowable feedstocks with a longer list consistent with the renewable and waste feedstocks inserted by item 65 in Schedule 1.

Item 69

Item 69 includes an updated default emissions intensity number for the 'petroleum refining' production variable in Schedule 1, alongside the existing default emissions intensity. The updated number reflects the increase in emissions intensity at petroleum refineries due to producing petrol that complies with a maximum 10-ppm sulfur content and an aromatics standard that due to enter into force at a later date (in a determination made under the *Fuel Quality Standards Act 2000*). This updated default emissions intensity number would apply from the start of the financial year in which compliance with all relevant fuel quality standard requirements that apply to unleaded petrol is achieved. The definition of a fuel quality standards requirement is made by item 71.

Item 70

Item 70 is a consequential renumbering of section 97 due to the additional provision inserted by item 69.

Item 71

Item 71 inserts the definition of a ***fuel quality standards requirement*** in Schedule 1, including a determination made under section 21 of the *Fuel Quality Standards Act 2000* relating to the maximum sulfur content or level of aromatics in petrol. This definition applies to the 'petroleum refining' production variable, including the default emissions intensity number made at item 69.

Item 72

Item 72 inserts the default emissions intensity number for the 'lithium hydroxide' production variable in Schedule 1. There are a small number of facilities operating in Australia, none of which had reached stable production by the time of calculation. Given the lack of emissions and production data, the number was calculated consistent with the *Guidance on supplementary approaches to determine fault emissions intensity values*[4]*,* which is the companion document to the Framework Document. The default number has been calculated by sourcing additional data from facilities producing lithium hydroxide monohydrate, which comprised forecast and estimated data, with advice on data suitability provided by an independent technical expert. An average of this suitable data was taken to produce a value representative of a sectoral average.

This item also inserts the best practice emissions intensity number for lithium hydroxide in Schedule 1. Section 4.7 of the Guidelines provides for supplementary approaches to be

[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

considered in circumstances where historical data is either not available, or not suitable for use in calculating benchmarks. As such, the best practice emissions intensity number was calculated using forecast and estimated data from the greenhouse gas management plans for two proposed Australian facilities, with advice on data suitability provided by an independent technical expert. The selected values represented the lowest emissions intensity values proposed for the sector while also being relevant to Australian operating conditions.

Item 73

Item 73 inserts five new production variables for the hydrogen, mine rehabilitation and biofuels sectors in Schedule 1.

Part 48 – Hydrogen

Item 73 inserts new production variables for 'gaseous hydrogen' (at section 99 of Schedule 1) and 'liquefied hydrogen' (at section 100 of Schedule 1), along with their corresponding best practice emissions intensity numbers. Consistent with the Guidelines, the numbers are based on a supplementary approach as suitable global data was not available. The supplementary approach uses an engineering calculation based on gas-fuelled steam methane reforming technology, which was assessed as being the lowest emissions-intensity commercial production (that is, not a pilot or demonstration plant and not receiving significant subsidies). The engineered 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 hydrogen production variables are intended to apply to facilities where the final product is either gaseous or liquid hydrogen that is exported from the facility. Some existing Australian facilities produce hydrogen as a by-product or produce and use hydrogen in their facility to make their final output. The intent is that these new hydrogen production variables would not apply to those situations, as the emissions from producing hydrogen or equivalent feedstocks have already been accounted for in existing production variables (such as ammonia and petroleum refining).

Throughout the Safeguard Rules, when something is ***exported from the facility*** it is transferred from the facility to somewhere else. This term is not intended to imply that it would be exported from Australia.

The 'liquefied hydrogen' production variable includes the emissions of producing the gaseous hydrogen. Therefore, if a facility makes and liquifies hydrogen, only the 'liquefied hydrogen' production variable would apply, not the 'gaseous hydrogen' production variable, unless some of the gaseous hydrogen is exported and not liquified.

The best practice emissions intensity numbers are the same for 'gaseous hydrogen' and 'liquified hydrogen'. This is due to the liquefaction of hydrogen being virtually all electrically driven. This means that although liquefied hydrogen requires more processing than gaseous hydrogen, it does not necessarily result in more scope 1 emissions. If there are additional emissions from generating electricity at the facility for liquefaction, then this is covered by the on-site electricity production variable. If grid electricity is used to power the liquefaction process then these are Scope 2 emissions and not covered by the Safeguard

Mechanism. The treatment of on-site electricity generation is consistent across the Safeguard Mechanism.

Part 49 – Mine rehabilitation

Item 73 also inserts a new production variable for 'mine rehabilitation' in Schedule 1, as well as the corresponding default emissions intensity number and best practice emissions intensity number. The current mining production variables already include emissions from progressive and continuous rehabilitation, so this new production variable is principally intended to apply at the end of a mine's life following cessation of production, or circumstances where rehabilitation activities go beyond business as usual, such as rehabilitation of an entire pit, or rehabilitation ramping up as production drops towards mine closure.

The mine rehabilitation production variable uses an input metric, which is allowed by the Framework Document, particularly as there is no clear production output from mine rehabilitation activity. Rehabilitation activity differs greatly between facilities, resulting in different fuel burn rates for equipment, comparative scale of activity and mix of activities such as haulage, shaping and revegetation. These differences mean that historical production data is not suitable for use in calculating a best practice emissions intensity, and therefore a supplementary approach has been used in line with the Guidelines. The best practice emissions intensity number and the default emissions intensity number both represent the combustion factor for diesel oil for stationary energy purposes legislated by the *National Greenhouse and Energy Reporting (Measurement) Determination 2008* (NGER Measurement Determination). This is based on the characteristics of operating mine facilities where diesel remains the primary energy input for vehicle-based operations.

Part 50 – Biofuels

Item 73 also inserts definitions for ***biofuel***, ***biofuel feedstocks***, ***biofuel production activity***, ***renewable aviation kerosene*** and ***renewable diesel***, which are all consistent with the National Greenhouse and Energy Reporting (NGER) scheme. This reflects that the NGER scheme has been updated to account for biofuels. The definitions are applicable to two new production variables: 'renewable aviation kerosene' (in section 103 of Schedule 1) and 'renewable diesel' (in section 104 of Schedule 1). The new production variables apply to facilities that refine biofuel feedstocks only, including waste feedstocks, with no petroleum feedstock refined. This contrasts with the 'petroleum refining' production variable, which applies to a facility using petroleum-based feedstocks potentially in combination with biofuel feedstocks.

Item 74

Item 74 updates the table of trade-exposed production variables that are also manufacturing production variables in Schedule 1 to include the new production variables for 'renewable aviation kerosene', 'renewable diesel', 'gaseous hydrogen', 'liquefied hydrogen', 'primary iron' and 'primary steel'.

Item 75

Item 75 updates the table of trade-exposed production variables in Schedule 1 that are not manufacturing production variables to include the new production variable for ‘lithium ore’.

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 (Safeguard Mechanism) Amendment (Production Variables Update) Rules 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 (Safeguard Mechanism) Amendment (Production Variables Update) Rules 2024* makes technical amendments to the *National Greenhouse and Energy Reporting (Safeguard Mechanism) Rule 2015.* These amendments insert new production variables, make changes to existing production variables, add new and updated default emissions intensity numbers, and insert best practice 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 make technical changes to clarify policy matters, to ensure that the reformed Safeguard Mechanism operates as intended and avoids any unintended outcomes.

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 Production Variables 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 (Safeguard Mechanism) Amendment (Production Variables Update) Rules 2024* (**2024 Production Variables 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 Production Variables 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, while incentivising low emissions production.
3. The PVs and default EIs that are the subject of the 2024 Production Variables Update and the *National Greenhouse and Energy Reporting (Safeguard Mechanism) Amendment (Production Variables Update) Rules 2023* (**2023 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.
4. The 2024 Production Variables Update also outlines best practice emissions intensities (**best practice EIs**) for 18 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 for setting new facility baselines (emissions limits) at international best practice, adapted for an Australian context. In the absence of international data, domestic data or other supplementary approaches outlined in the Guidelines are used. This sends a strong signal to investors that Australia is serious about net zero, and new investments must support this goal.
5. The 2024 Production Variables Update also includes a number of technical amendments (summarised in subparagraph 21(j) below) to the Safeguard Rules to clarify the original policy intent and to ensure outcomes are achieved as intended.
6. The Safeguard Rules as amended by the 2024 Production Variables 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.

Abbreviation	Definition
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.
Emissions intensity determination	A determination made under section 19 of the Safeguard Rules. Emissions intensity determinations set facility-specific EIs for existing facilities.
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.
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.

Abbreviation	Definition
Historical production variable (historical PV)	Has the meaning defined in section 12(2) of the Safeguard Rules (as amended by the Production Variables Update No 2). 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*
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*

Abbreviation	Definition
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
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.
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.

7. 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

8. 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).

9. 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

10. 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.

11. 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.

12. 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]

13. 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.

14. 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.

15. 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

[5] Designated large facility emissions are published by the Clean Energy Regulator at: https://www.cleanenergyregulator.gov.au/NGER/The-safeguard-mechanism/safeguard-data/safeguard-facility-reported-emissions

[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

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.

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

17. 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 EI 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.

18. On 29 September 2023, I made the 2023 Production Variables Update which amended the Safeguard Rules to update Safeguard Mechanism PVs. On the same day, I set out my reasons for being satisfied that the Safeguard Rules as amended by the 2023 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 NGER Act. Those reasons are published on the Department's website in accordance with section 22XS(1B) of the NGER Act.

19. The 2024 Production Variables Update builds upon the 2023 Production Variables Update to fulfil the Government's commitment to review PVs and finalise the recalculation of certain default EIs for existing facilities. It also makes the first set of best practice EIs.

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 Production Variables Update amends the Safeguard Rules.

21. The 2024 Production Variables Update makes the following amendments to the Safeguard Rules:

    a. It amends PVs used for steel production to ensure the definitions are technologically neutral and broadly applicable;

    b. It amends the definition of the rail transport activity to be technology-neutral, relevant to four rail PVs;

    c. It amends the sodium cyanide PV so that it can include sodium cyanide manufactured using caustic soda imported to a facility;

    d. It amends the definition of 'intermediate nickel products' to include mixed nickel-cobalt hydroxide precipitate that has a concentration of nickel between 20% and 47%, relevant to three nickel PVs;

e. It inserts seven new PVs: mine rehabilitation, two hydrogen PVs, lithium ore, renewable diesel, renewable aviation kerosene, and exported steam related to the ethene production activity;

f. It inserts eight new default EIs for lithium hydroxide, lithium ore, mine rehabilitation, exported steam related to the ethene production activity, refined lead, ethane, primary steel and primary iron;

g. It updates eight existing default EIs for zinc-in-fume, ethene, polyethene, newsprint, glass container manufacturing and three steel sector PVs (pellets, lime and coke) to better reflect current industry conditions or changed PV definitions; and

h. Sets an updated default EI for the petroleum refining PV that reflects the higher emissions intensity associated with meeting new sulfur and aromatics standards for petrol, expected to commence from December 2025. This default EI may be used by a refinery in the financial year it complies with both standards.

i. Sets 18 best practice EIs relevant to the oil and gas, mining, steel, hydrogen, electricity and iron sectors.

j. Makes a number of technical amendments, including to: extend the eligibility of facilities that are no longer Safeguard facilities to receive SMCs; encourage existing facilities to apply for an emissions intensity determination by setting emissions intensity values for relevant PVs to 0 if the facility has not made an application for a determination; clarify that covered emissions (not scope 1 emissions) are relevant for landfill baselines; clarify that ACCUs cannot be issued for a reduction in covered emissions; clarify that an existing facility is a facility that commenced commercial production prior to the reforms commencing on 1 July 2023; and clarify how to apportion emissions if more than one PV is applicable to facility.

Consultation

22. In February 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.

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

24. On 15 December 2023, the Government released for consultation an exposure draft of the 2024 Production Variables Update, with the consultation period open until 5pm on 16 January 2024, with extensions granted on request until 23 January 2024.

25. The Government received 40 formal submissions, comprising 26 submissions from designated large facilities or businesses, nine from industry associations and the remaining from five individuals and non-government organisations. The Department will publish non-confidential submissions on its website. Submissions on PVs and default EIs were broadly supportive of the updates. Submissions on the proposed best practice EIs raised concerns about the level of the EIs, both that they appeared too high and too low, and requested more transparency on how the values were determined. In response to the submissions received

following the consultation, six proposed default EIs and six best practice EIs were updated and three oil and gas best practice EIs were not included in the Safeguard Rules to allow for further consultation. The explanatory statement details how the best practice EIs were developed, including an explanation of how the Guidelines were applied. Technical changes were also made to the lithium ore, petroleum refinery and steel production variables, taking into account feedback received.

Material on which my decision was based

26. 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 (Safeguard Mechanism) Amendment (Production Variables Update) Rules 2024*;

    b. Explanatory Document: National Greenhouse and Energy Reporting (Safeguard Mechanism) Amendment (Production Variables Update) Rules 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.

27. The 2024 Production Variables Update updates certain PVs and default EIs and inserts new PVs, default EIs and 18 best practice EIs into Schedule 1 of the Safeguard Rules. Updates to PVs better reflect the emissions sources that contribute to the default EI associated with each PV. Updated and new PVs, 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.

28. 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.

29. The Department has updated its net emissions analysis, which I relied on for my 3 May 2023 statement of reasons and 29 September 2023 statement of reasons, to reflect the effect of the 2024 Production Variables Update, *Australia's emissions projections 2023* (published by the Department in November 2023), the latest Safeguard emissions data for 2022-23 published by the Clean Energy Regulator, and other updates to reflect new data and revised baseline estimates. The update also reflects revised production forecasts for some facilities, and new projections of onsite abatement, consistent with *Australia's emissions projections 2023*. The updated analysis also takes into account that some facilities began commercial production in 2022-23. If these facilities are covered by the Safeguard, they will use default EIs rather than best practice EIs due to the transitional production variable provisions in the Safeguard Rules.

30. 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 Production Variables Update. However, the updated estimated aggregated baselines will still be well 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).

31. 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. My most recent statement of reasons of 29 September 2023 estimated the net emissions budget as 815 Mt for the period between 2023-24 to 2029-30, which assumed 418* Mt CO_2-e would be emitted from designated large facilities over the period 2020-21 to 2022-23, reflecting the *Australia's emissions projections 2022*.[7] The updated budget reflects the latest reported Safeguard emissions data for 2022-23 published by the Clean Energy Regulator.[8]

32. My Department's net emissions analysis underpinning the 29 September 2023 amendments projected baselines to total net emissions of 793* Mt CO_2-e between 2023-24 to 2029-30 having regard to the changes made by the 2023 Production Variables Update.[9] My Department has updated the net emissions analysis to reflect the updates described in paragraph 29 above, including the 2024 Production Variables Update, and this results in an increase in net covered emissions to 802* Mt between 2023-24 to 2029-30. The 2024 Production Variables Update contributes 1* Mt CO_2-e to this increase, with the balance

[7] See paragraph 27 of the statement of reasons of 29 September 2023 for the 2023 Production Variables Update.
[8] Clean Energy Regulator (2024) Safeguard facility reported emissions data, accessed at https://cer.gov.au/markets/reports-and-data/safeguard-facility-reported-emissions-data
[9] See paragraph 27 of the statement of reasons of 29 September 2023 for the 2023 Production Variables Update.

reflecting updates based on the *Australia's emissions projections 2023* and other revisions described in paragraph 29 above.

33. The net emissions analysis I considered in relation to 2023 Production Variables Update allowed for a reserve, to account for uncertainty about future emissions, of 22* Mt CO_2-e.[10] The change in net emissions described above (802 Mt compared to 793 Mt) and the change in the net emissions budget (821 Mt compared to 815 Mt) means that the reserve is now estimated at 19* Mt CO_2-e.

34. 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 4* Mt to 2030, compared to 13* Mt in the September statement of reasons. The reduction is primarily due to *Australia's emissions projections 2023* indicating fewer new facilities will be covered by the Safeguard with some of these facilities reclassified as transitional facilities.

35. My Department's net emissions analysis accounts for the impact of likely TEBA facilities, which receive a lower baseline decline rate. The 2024 Production Variables Update adds renewable aviation kerosene, renewable diesel, gaseous hydrogen, liquefied hydrogen, primary iron, primary steel and lithium ore 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. For the case of the primary steel PV, this addition to the list does not change expected net emissions because this PV will be used by facilities already assumed to have TEBA status in the Department's analysis. The addition of the other 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.

36. The amendments made by the 2024 Production Variables Update also ensure that existing facilities should have a baseline determined from a combination of default EIs and facility-specific EIs (which are set by the Clean Energy Regulator in emissions intensity determinations) for their historical PVs (PVs for which the facility engaged in commercial production between 1 July 2017 and 30 June 2022). This is directed at achieving the policy settings relevant to the safeguard outcomes. If an existing facility has not applied for an emissions intensity determination for one of its historical PVs and the best practice EI for that PV has not yet been set, then the amendments made by the 2024 Production Variables Update will mean that the EI is set to zero for the relevant PV, where it is a historical PV for the facility. My Department's net emissions analysis assumes existing facilities use a baseline set using a combination of default and facility-specific EIs, as intended by the Safeguard reforms. This amendment encourages compliance with the requirement to apply for emissions intensity determinations.

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

[10] See paragraph 28 of the statement of reasons 29 September 2023 for the 2023 Production Variables Update.

emissions of 802* Mt CO_2-e net as a result of the 2024 Production Variable Update and the 821* Mt CO_2-e net emissions budget for the period between 2023-24 to 2029-30, described in paragraphs 30 to 33 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 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 September 2023 net emissions analysis based on the Safeguard Rules as amended by the 2023 Production Variables Update forecasted that net Safeguard emissions would decline to 95.9 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 *Australia's emissions projections 2023*, the updates described in paragraph 29 above, and the 2024 Production Variables Update. Based on these updates, net Safeguard emissions are expected to increase to 96.3 Mt CO_2-e in 2029-30 (taking into account the reserve allowance), which is below 100 Mt CO_2-e. The 2024 Production Variables Update contributes 0.2 Mt CO_2-e to the increase, with the balance reflecting *Australia's emissions projections 2023* and the updates described in paragraph 29 above. 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 paragraphs 37 and 38 of my reasons of 3 May 2023, the default decline rate detailed within Part 3, Division 5 of the Safeguard Rules for a financial year beginning 1 July 2030 or later is a rate that reduces to zero over the 20 years 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 Production Variables 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 Production Variable 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	133.5	128.0	120.5
5 year rolling average	139.6	137.8	137.2	136.8	135.8	133.7	130.4
Change relative to specified period		three years prior			two years prior		
		-0.9%	-2.8%	-2.8%	-0.7%	-1.1%	-2.3%

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

43. The amendments made by the 2024 Production Variables Update will help to encourage emissions reductions in the steel sector by ensuring that baselines will not go down for the same level of production if the facility uses new low-emissions technologies. For example, by replacing blast furnace with direct reduced iron technology.

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.

44. 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 Production Variable Update will encourage investors in the mining, oil and gas, iron and steel and hydrogen 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.

45. The 2024 Production Variables Update amends the iron and steel sector PVs so they are technology-neutral and broadly applicable. This will provide a material incentive for facilities to take up opportunities for emissions reductions by ensuring the Safeguard baseline does not decrease if the facility invests in lower emissions production (on an emissions intensity basis). Many ways of reducing the emissions intensity of steel production involve using less coke (an intermediate product) to make the steel. Previously, facilities would get a lower baseline for reducing their coke production, which disincentivises these approaches for reducing emissions. To address this, the updated coke PV only applies to coke that is exported from the facility. The emissions associated with the production of coke oven coke

that is not exported would be associated with the new primary steel PV. The emissions from on-site production of lime, iron ore pellets and iron ore sinter are similarly associated with the new primary iron and primary steel PVs, so that the baseline is not reduced if lower emissions technologies no longer require these feedstocks. Consistent with the coke oven coke PV, the lime and pellet PVs are updated to only apply to product exported from the facility. It is impractical to export sinter, so this PV is removed.

46. The updates to the steel PVs are intended to accommodate new low emissions technologies for making steel. One such technology is a process called direct reduction which be used to make direct reduced iron (DRI) and hot briquetted iron (HBI). This does not require coke (from coal) and can be done using natural gas, and potentially hydrogen. DRI and HBI can then be converted to steel using an electric arc furnace at the facility, or exported from the facility to make steel elsewhere.

47. To accommodate DRI and HBI, a primary iron PV has been created which applies to metallic iron products exported from the facility. This means that if a facility invests in this technology, it will have the flexibility to export metallic iron products or use them to make steel at the facility which is intended to allow it to manage its electric arc furnace capacity and provide the facility new options to sell its products.

48. The 2024 Production Variable Update also adds new sections to the Safeguard Rules so that if an emissions intensity determination applies to “primary steel” for a facility, it also applies (with different emissions intensities) to “primary iron” and “continuously cast carbon steel products and ingots of carbon steel (cold ferrous feed)” for that facility, even if “primary iron” and “continuously cast carbon steel products and ingots of carbon steel (cold ferrous feed)” are not historical PVs for the facility.

49. These provisions mean that an integrated steelmaking facility can export DRI or HBI iron, or export steel made using an electric arc furnace and have its baseline set as if it engaged in historical production of these products, using emissions data from its integrated steelmaking activities. These provisions help to ensure that integrated steelmakers in Australia have a material incentive to invest in reducing covered emissions from the operation of the facility.

50. The amendments made by the 2024 Production Variables Update to the definition of rail transport are relevant for four rail PVs. The updated definition will incentivise opportunities for emissions reductions by ensuring the baseline does not decrease if the rail business invests in locomotives that do not combust fossil fuels (on an emissions intensity basis).

51. These updates to the steel and rail PVs engage safeguard outcome (e) by providing material incentives to take advantage of new opportunities for emissions reductions. They will also engage safeguard outcome (d) by making it more likely that the 5-year rolling average Safeguard emissions for each financial year that begins after 30 June 2024 will be lower than the past 5-year rolling average safeguard emissions for that financial year, to the extent that opportunities are taken up.

52. The new mine rehabilitation PV is to apply at the end of a mine’s life following cessation of production, or in circumstances where rehabilitation activities go beyond business as usual such as rehabilitation of an entire pit or rehabilitation ramping up as production drops towards mine closure. As there is no clear production output of the mine rehabilitation

activity, the PV is set using an energy input, with the default and best practice EI based on diesel combustion given diesel remains the primary energy input for vehicle-based operations. The baseline decline rate will create a material incentive to reduce emissions during the rehabilitation phase, though the use of lower emissions fuels and technology.

53. The 2024 Production Variables Update expands the eligibility of facilities that drop below the Safeguard coverage threshold to receive SMCs for up to 10 financial years in total. This change enables a facility to engage in a decarbonisation project that has significant lead times (e.g. up to three years), rather than being restricted to projects with no to minimal lead times after dropping below the coverage threshold. This update engages safeguard outcome (e) by providing material incentives to take advantage of new opportunities for emissions reductions. It does not engage safeguard outcome (b) or (c) because Safeguard emissions (as defined in section 7 of the NGER Act) do not include the emissions of below-threshold facilities that are eligible to receive SMCs.

54. 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 Production Variables Update as described in paragraphs 43-53 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.

55. 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.[11] 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.

56. The 2024 Production Variables Update adds renewable aviation kerosene, renewable diesel, gaseous hydrogen, liquefied hydrogen, primary iron, primary steel and lithium ore PVs as trade exposed in Schedule 2 of the Safeguard Rules. 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 be appropriately supported as Australia and its regions seize the opportunities of the move to a global net zero economy.

57. In making the amendments concerning renewable aviation kerosene, renewable diesel, gaseous hydrogen, liquefied hydrogen, primary iron, primary steel and lithium ore PVs in Schedule 2, I have taken into account safeguard outcome (f). 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).

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

Other provisions

58. 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.

59. The 2024 Production Variables Update adds a new Division 7 to Part 6 of the Safeguard Rules. This Division includes an application and transitional provision that ensures that default EIs set in the 2024 Production Variables Update apply to Safeguard Mechanism baselines for the financial year 2023-24 and subsequent financial years.

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	