



EXPLANATORY DOCUMENT

Exposure draft amendments to the *National Greenhouse and Energy Reporting (Safeguard Mechanism) Rule 2015*

Background

This document explains the exposure draft amendments to the *National Greenhouse and Energy Reporting (Safeguard Mechanism) Rule 2015* (Safeguard Rule). It is intended to be read in conjunction with the exposure draft *National Greenhouse and Energy Reporting (Safeguard Mechanism) Amendment (Prescribed Production Variables Update) Rule 2021* (Amendment Rule), and the document titled 'Tranche 3 additions to the *Safeguard Mechanism: Prescribed production variables and default emissions intensities* document'¹.

The Safeguard Mechanism commenced on 1 July 2016. It applies to facilities with more than 100,000 tonnes of carbon dioxide equivalent (t CO₂-e) emissions each year. Covered facilities must keep their emissions below a legislated baseline or purchase Australian carbon credit units to make up the difference. Baselines are intended to accommodate business growth and allow businesses to continue normal operations.

The Safeguard Mechanism was amended in March 2019 to make it fairer and simpler.² Those amendments:

1. allow facilities to update baselines using more up-to-date information;
2. give businesses the option of using standardised Government-determined prescribed 'production variables' (which define what is produced at Safeguard facilities) and associated default emissions-intensity values for calculating baselines; and
3. allow baselines to adjust annually with production so they keep pace with business growth.

The March 2019 amendments established a transition period that allows baselines to be updated in 2018-19 and 2019-20. Due to the impacts of the COVID-19 pandemic, the Safeguard Mechanism was amended in May 2020 to extend the transition period by one year to include the 2020-21 compliance year. All facilities can apply for a transitional calculated baseline during this period and they have the option to use either:

¹ Which is referred to as the "*Safeguard Mechanism document*" in the exposure draft of the *National Greenhouse and Energy Reporting (Safeguard Mechanism) Amendment (Prescribed Production Variables Update) Rule 2021*.

² Explanatory information for the March 2019 Rule amendment is available at: <https://publications.industry.gov.au/publications/climate-change/climate-change/government/emissions-reduction-fund/consultation/safeguard-mechanism-legislative-amendments-2018.html>

- **default values:** Government-determined prescribed production variables and default emissions intensity values (collectively referred to as 'default values'); or
- **estimated (site-specific) values:** which take account of individual facility circumstances, either as a site-specific production variable or an estimated ('site-specific') emissions intensity value.

At the end of the transition period (30 June 2021), reported (historical) baselines will expire on 1 July 2021 for all facilities, except grid-connected electricity generators. If a facility (other than a grid-connected generator) does not apply for a new baseline, or does not have another baseline in force, it will receive a default baseline of 100,000 t CO₂-e from the 2021-22 compliance year. Grid-connected electricity generators will continue to be covered by a sectoral baseline, so will not face facility-specific emissions limits.

In March and October 2020, the Safeguard Rule was amended to insert the majority of Government-determined prescribed production variables and many of the corresponding default emissions intensity values into Schedules 2 and 3 to give effect to amendments made to the Safeguard Rule in March 2019.

All facilities can access a transitional calculated baseline in 2018-19, 2019-20 or 2020-21. During this transitional phase, the use of default emissions intensity values is optional. If facilities apply for a transitional calculated baseline from the 2021-22 year onwards, they must use Government-determined prescribed production variables and default emissions intensity values.

Safeguard Rule amendments in the *National Greenhouse and Energy Reporting (Safeguard Mechanism) Amendment (Prescribed Production Variables Update) Rule 2021*

These draft amendments insert additional Government-determined prescribed production variables and corresponding default emissions intensity values into Schedule 2 of the Safeguard Rule. They also contain the corresponding default emissions intensity values for a number of prescribed production variables that were set in the Safeguard Rule in March and October 2020.

The default values have been developed by the Department of Industry, Science, Energy and Resources in close consultation with industry. They have been developed in line with *The Framework for developing default production variables and emissions intensity values* (the Framework), which underwent public consultation as part of the consultation for the March 2019 amendments to the Safeguard Rule.³

³ Defaults Framework available at Appendix A of this document: <https://publications.industry.gov.au/publications/climate-change/system/files/consultations/56b64cc6-6455-4aa1-9b72-d00b7e09bfb3/files/safeguard-mechanism-rule-amendment-explanatory-document.pdf>

Default values can simplify baseline applications, reduce auditing costs, and allow baselines to adjust annually with a facility’s level of production, ensuring baselines keep pace with business growth.

Production variables have already been prepared for the majority of Safeguard Mechanism facilities. This Rule amendment will set the remaining production variables and will set a number of default emissions intensity values. The remaining default emissions intensity values for a small number of sectors will be developed in consultation with industry as data becomes available, for later inclusion in the Safeguard Rule.

The default values have been assessed by independent technical experts, and reviewed by an external consultant to ensure the Framework principles have been applied consistently within and between sectors.

The Amendment Rule makes minor technical corrections to prescribed production variables set in the Safeguard Rule in 2020.

Table 1: indicative timeline and important dates

Date(s)	Item description	Safeguard Rule legislative reference (if applicable)
May - June 2021	Consultation on draft Safeguard Amendment Rule.	
June/July 2021*	Amendment Rule made** and takes effect the day after it is registered on the Federal Register of Legislation.	40 (1) (ab)
1 July 2021	Reported baselines expire.	18 (3)
Before 31 October 2021	Deadline for applications for baselines that commence on 1 July 2020.	22 (3) (b)
Current	Development of remaining default emissions intensity values in consultation with industry, for inclusion in the Safeguard Rule when sufficient data becomes available.	N/A

**Indicative date*

*** Subject to the decision of the Minister for Energy and Emissions Reduction*

Exposure draft package

This exposure draft package includes three documents:

- *National Greenhouse and Energy Reporting (Safeguard Mechanism) Amendment (Prescribed Production Variables Update) Rule 2021;*

- Tranche 3 additions to the *Safeguard Mechanism: Prescribed production variables and default emissions intensities*; and
- this explanatory document

Following consultation on the Amendment Rule, the contents of the document titled 'Tranche 3 additions to the *Safeguard Mechanism: Prescribed production variables and default emissions intensities* document' will be added to the existing *Safeguard Mechanism: Prescribed production variables and default emissions intensities* document⁴. These documents define the scope of each production variable. They provide detailed information on the types of emissions included in and excluded from the default emissions intensity calculations. Businesses can use the *Safeguard Mechanism: Prescribed production variables and default emissions intensities* document to understand which emissions sources can and cannot be used in the preparation of an estimated (site-specific) emissions intensity value for a prescribed production variable.

Submissions

The draft legislative amendments have been released for public comment for a four week period, until 3 June 2021.

Submissions are invited from interested stakeholders. Where possible, submissions should be lodged electronically using the link on the consultation page.

Submissions may be made publicly available. If a stakeholder wishes their submission (or extracts of a submission) to be kept confidential, this should be indicated in the submission.

Submissions should be lodged by 3 June 2021 at 11.59pm AEST.

⁴ Available here: <https://www.industry.gov.au/data-and-publications/safeguard-mechanism-prescribed-production-variables-and-default-emissions-intensity-values>

Summary of Amendment Rule

The primary purpose of the proposed Amendment Rule is to amend the Safeguard Rule to include additional prescribed production variables and default emissions intensity values in Schedule 2 of the Rule. The Amendment Rule also contains a minor amendment to clarify the definition of the white titanium dioxide pigment production variable, which is already published in the Safeguard Rule.

Amendment Rule Schedule 1 – Additional production variables

Schedule 1 of the Amendment Rule inserts additional prescribed production variables and corresponding default emissions intensity values into Schedule 2 of the Safeguard Rule, which contains prescribed (annually adjusted) production variables. In order to use a prescribed (annually adjusted) production variable, that production variable must be applicable to the facility—i.e. the facility must produce the product or undertake the service represented by the production variable.

The component of a baseline set using Schedule 2 prescribed (annually adjusted) production variables can update automatically for annual changes in production. This annual update will occur after a calculated-emissions baseline is replaced with a production-adjusted baseline⁵. In most cases, a facility's baseline will be entirely comprised of annually adjusted production variables, so the entire baseline can adjust annually with production. This approach, established in March 2019, ensures that business growth is not penalised, and encourages business to manage their emissions intensity of production as they grow.

Prescribed (annually adjusted) production variables are described in the Amendment Rule using a defined metric. The metric could contain a standard volume, mass or energy unit (e.g. kilolitres, tonnes, gigajoules) and may specify minimum chemical or physical properties, or other conditions that must be met for a facility to be considered to be producing that production variable. Where necessary, there are specific measurement requirements or requirements for supporting information that are relevant to a prescribed (annually adjusted) production variable.

The default emissions intensity for the production variable metric is specified in tonnes of carbon dioxide equivalent (t CO₂-e) for every unit of the production variable metric. Default emissions intensity values accompany many of the production variables. The remaining default emissions intensities will be included in an amendment at a later date, as industry data becomes available.

Responsible emitters should refer to the document titled 'Tranche 3 additions to the *Safeguard Mechanism: Prescribed production variables* document' for details of the

⁵ Or if a facility applies for a production adjusted baseline that exclusively uses Schedule 2 prescribed production variables and default emissions intensity values, in which case it can move directly to a production adjusted baseline without the need to first establish a calculated baseline (see section 40 of the Safeguard Rule).

relevant emissions sources included in the calculation of the default emissions intensity values.

Table 2: Summary of Schedules 2 and 3 of the Safeguard Mechanism Rule

The green shaded boxes indicate the new prescribed production variables and default emissions intensity values.

SCHEDULE 2			
Part	Prescribed Production Variable	Default Emissions Intensity Value (AR5) (tonnes carbon dioxide equivalent per unit)	Default Emissions Intensity Unit
MANUFACTURING			
2	Bulk flat glass	0.774	tonnes of bulk flat glass
3	Glass containers	0.521	tonnes of glass containers
4	Aluminium	1.85	tonnes of primary aluminium
5	Alumina	0.545	tonnes of alumina and alumina equivalent tonnes of alumina trihydrate
6	Ammonia	1.87	tonnes of 100% equivalent anhydrous ammonia
7	Ammonium nitrate	0.315	tonnes of 100% equivalent ammonium nitrate
8	Urea	0.566	tonnes of 100% equivalent carbamide
9	Diammonium phosphate	0.078	tonnes of diammonium phosphate products
	Monoammonium phosphate	0.088	tonnes of monoammonium phosphate products
10	Sodium cyanide		tonnes of 100% equivalent sodium cyanide
11	Synthetic rutile	1.15	tonnes of synthetic rutile
12	White titanium dioxide pigment	1.68	tonnes of white titanium dioxide pigment

MINING			
13	Run of mine coal ⁶	0.0137	tonnes of run-of mine coal
	Coal mine waste gas	0.564	tonnes of unmitigated coal mine waste gas
	Fugitive emissions at a decommissioned underground coal mine	1	tonnes of reported fugitive emissions
14	Iron ore	0.00476	tonnes of iron ore
15	Manganese ore		tonnes of manganese ore product
16	Bauxite	0.00401	tonnes of bauxite product
17	Heavy metal concentrate		tonnes of heavy metal concentrate
18	Run of mine metal ore	0.00859	tonnes of run-of-mine metal ore
OIL AND GAS – Part 19			
Div 2	Extracted oil and gas hydrocarbon		gigajoules of unprocessed natural gas and unstabilised crude oil and condensate
Div 3	Stabilised crude oil or condensate (stabilisation only)		gigajoules of crude oil and condensate
Div 4	Stabilised crude oil and condensate (integrated extraction and stabilisation)	0.00380	gigajoules of crude oil
Div 5	Processed natural gas (processing only)		gigajoules of processed natural gas
Div 6	Processed natural gas (integrated extraction and processing)		gigajoules of processed natural gas
Div 7	Liquefied natural gas (from unprocessed natural gas)		gigajoules of liquefied natural gas
Div 8	Liquefied natural gas (from processed natural gas)	0.00401	gigajoules of liquefied natural gas
Div 9	Ethane		gigajoules of ethane

⁶ Plus an additional baseline allocation for fugitive emissions at an open cut mine or post mining emissions at an applicable underground mine based on the method outlined in the Safeguard Rule.

Div 10	Liquefied petroleum gas		gigajoules of liquefied petroleum gas
Div 11	Reservoir carbon dioxide		tonnes of reservoir carbon dioxide
STEEL MANUFACTURING – Part 20			
Div 2	Coke oven coke (integrated iron and steel manufacturing)	0.467	tonnes of coke oven coke
Div 3	Lime (integrated iron and steel manufacturing)	0.780	tonnes of lime
Div 4	Iron ore sinter (integrated iron and steel manufacturing)	0.233	tonnes of iron ore sinter
Div 5	Iron ore pellets (integrated iron and steel manufacturing)	0.0586	tonnes of iron ore pellets
Div 6	Continuously cast carbon steel products and ingots of carbon steel (integrated iron and steel manufacturing)	1.50	tonnes of continuously cast carbon steel products and ingots of carbon steel
Div 7	Hot-rolled long products (integrated iron and steel manufacturing)	0.101	tonnes of long products
Div 8	Hot-rolled flat products (integrated iron and steel manufacturing)	0.000358	tonnes of flat products
Div 9	Continuously cast carbon steel products and ingots of carbon steel (manufacture of carbon steel products from cold ferrous feed)	0.0981	tonnes of continuously cast carbon steel products and ingots of carbon steel
Div 10	Hot-rolled long products (not integrated iron and steel manufacturing)	0.0750	tonnes of long products
Div 11	Hot-rolled flat products (not integrated iron and steel manufacturing)		tonnes of flat products
Div 12	Iron ore pellets (not from integrated iron and steel manufacturing)	0.0517	tonnes of iron ore pellets

Div 13	Treated steel flat products	0.144	Tonnes of treated steel flat products
RAIL TRANSPORT – Part 21			
Div 2	Bulk freight on a dedicated line	0.00000529	net-tonne-kilometres of bulk freight
Div 3	Bulk freight on a non-dedicated line	0.0000163	net-tonne-kilometres of bulk freight
Div 4	Non-bulk freight	0.0000205	net-tonne-kilometres of freight
Div 5	Rail passenger transport	0.0000712	passenger-kilometres
AIR TRANSPORT			
22	Air transport	0.00112	revenue-tonne-kilometres
ROAD TRANSPORT – Part 23			
Div 1	Passenger road transport	0.00164	vehicle-kilometres of passenger road transport
Div 2	Non-bulk freight		cubic tonne kilometres
Div 3	Non-bulk (temperature controlled) freight		cubic tonne kilometres
Div 4	Specialised and heavy haulage		deadweight tonne kilometres
Div 5	Bulk freight		net tonne kilometres
WATER TRANSPORT – Part 24			
Div 1	Mixed passenger and freight water transport	0.000104	operational deadweight-tonne-kilometres
Div 2	Bulk freight water transport	0.00000539	net tonne kilometres
OTHER			
25	Wastewater handling (domestic and commercial) COD removed	0.513	tonnes of COD removed
	Wastewater handling (domestic and commercial) Nitrogen removed	4.48	tonnes of nitrogen removed
26	Electricity generation	0.539	megawatt hours of electricity generated or exported
NATURAL GAS DISTRIBUTION			

27	Natural gas distribution	0.254	petajoule kilometres
NATURAL GAS TRANSMISSION – Part 28			
Div 2	Kilometres of natural gas transmission pipelines	11.62	kilometres of natural gas transmission pipelines
Div 2	Work of compression	0.253	gigajoule compression of gas
CLINKER, LIME AND CEMENT – Part 29			
Div 2	Clinker (not used by facility to make cement)	0.841	tonne of Portland cement clinker
	Cement (produced from clinker a facility)	0.708	tonnes of cement
Div 3	Lime	1.13	tonne of lime
METAL MANUFACTURING			
30	Non-metallic mineral quarrying		tonnes of quarried rock
31	Silicon	1.92	tonnes of silicon
32	Lead bullion		tonnes of lead bullion
33	Refined lead	1.21	tonnes of refined lead
34	Zinc in fume	3.34	tonnes of zinc in fume
35	Caustic calcined magnesia		tonnes of caustic calcined magnesia
36	Copper anode	0.677	tonnes of copper anode
37	Manganese sinter	0.242	tonnes of manganese sinter
38	Ferromanganese alloy	1.30	tonnes of ferromanganese alloy
39	Silicomanganese alloy	1.70	tonnes of silicomanganese alloy
NICKEL MANUFACTURING – Part 40			
Div 2	Primary nickel products (from nickel bearing inputs)	8.78	tonnes of 100% equivalent nickel
	Primary nickel products (from imported intermediate nickel products)	2.52	tonnes of 100% equivalent nickel

	Intermediate nickel products (from nickel bearing inputs)	1.76	tonnes of 100% equivalent nickel
PULP AND PAPER – Part 41			
Div 2	Tissue paper	0.448	tonnes of rolls of uncoated tissue paper
Div 3	Packaging and industrial paper	0.104	tonnes of rolls of packaging and industrial paper
Div 4	Printing and writing paper	0.101	tonnes of rolls of uncoated printing and writing paper
Div 5	Newsprint	0.464	tonnes of rolls of uncoated newsprint
Div 6	Pulp	0.022	tonnes of wet or dry pulp
ETHYLENE AND POLYETHYLENE – Part 42			
86	Ethene (ethylene)	1.96	tonnes of 100% equivalent ethene
87	Polyethylene	0.136	tonnes of pelletised polyethylene
WHEAT BASED PRODUCTS – Part 43			
88	Wheat protein products (dried gluten)		tonnes of wheat protein products
89	Dried wheat starch		tonnes of dried wheat starch
90	Wheat based glucose		tonnes of wheat based glucose
91	Wheat based dried distillers grain		tonnes of wheat based dried distillers grain
ETHANOL – Part 44			
92	Ethanol – 95		kilolitres of ethanol 95
93	Ethanol – absolute		kilolitres of ethanol absolute
94	Beverage grade ethanol		kilolitres of beverage grade ethanol
SUGAR – Part 45			
95	Raw sugar	0.0311	tonnes of raw sugar
96	Exported steam related to the raw sugar manufacturing activity	0.0490	gigajoules of steam

SCHEDULE 3

Part	Prescribed Production Variable	Default Emissions Intensity Value (AR5) (tonnes carbon dioxide equivalent per unit)	Default Emissions Intensity Unit
PETROLEUM REFINING			
2	Petroleum feedstock	0.138	kilolitres of substances mentioned

Worked examples

The following examples are included for guidance purposes, they are indicative only and are not exhaustive.

Example 1: Baseline comprising an estimated (site-specific) emissions intensity value and a default emissions intensity value

Facility A produces two outputs: A1 and A2. The prescribed production variables for outputs A1 and A2 are Schedule 2 prescribed (annually adjusted) production variables.

Facility A prepares a calculated baseline application under the transitional calculated baseline criteria. Facility A applies for the calculated emissions baseline to start on 1 July 2020, meaning they have the option under sub-subparagraph 27(1)(d)(i)(A) of using an estimated (site-specific) emissions intensity.

Facility A chooses to adopt the default emissions intensity value for A1, and prepare an estimated (site-specific) emissions intensity for A2.

Facility A's calculated emissions baseline would be prepared based on:

$$\text{Calculated emissions baseline} = Q_{(A1,f)} \times EI_{A1} + Q_{(A2,f)} \times EI_{(A2,f)}$$

Where:

- Calculated emissions baseline is the calculated emissions baseline for Facility A
- $Q_{(A1,f)}$ is a forecast of the highest annual production quantity of prescribed (annually adjusted) production variable A1—which is the facility's primary production variable—over the three year calculated emissions baseline period.
- EI_{A1} is the default emissions intensity for A1
- $Q_{(A2,f)}$ is a forecast of the production quantity of prescribed (annually adjusted) production variable B2 in the used to set the production quantity for $Q_{(A1,f)}$
- EI_{A2} is Facility A's estimated (site-specific) emissions intensity value for A2 for the forecast year used to set the production quantity for $Q_{(A1,f)}$.

Example 2: Baseline comprising multiple prescribed production variables and default emissions intensity values

Facility B produces three outputs: B1, B2 and B3. Each of these is a prescribed (annually adjusted) production variable listed in Schedule 2.

Facility B chooses to use the three prescribed (annually adjusted) production variables and their default emissions intensity values. This combination of electing to use only prescribed (annually adjusted) production variables and their default emissions intensity values means Facility B can move directly onto a production adjusted (annually adjusted) baseline (refer subparagraph 40(1)(ab)(iii)).

Facility B makes an application for a production adjusted (annually adjusted) baseline as follows:

$$\text{Baseline}_t = Q_{(1,t)} \times EI_1 + Q_{(2,t)} \times EI_2 + Q_{(3,t)} \times EI_3$$

Where:

- Baseline_t is the production adjusted baseline for Facility B in any year t
- $Q_{(1,t)}$ is the quantity of prescribed (annually adjusted) production variable B1 in year t
- EI_1 is the default emissions intensity for B1
- $Q_{(2,t)}$ is the quantity of prescribed (annually adjusted) production variable B2 in year t
- EI_2 is the default emissions intensity for B2
- $Q_{(3,t)}$ is the quantity of prescribed (annually adjusted) production variable B3 in year t
- EI_3 is the default emissions intensity for B3