



## 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 (Additional Prescribed Production Variables) Rule 2020* (Amendment Rule), and the document titled ‘Tranche 2 additions to the *Safeguard Mechanism: Prescribed production variables and default emissions intensities* document’<sup>1</sup>.

The Safeguard Mechanism commenced on 1 July 2016. It applies to facilities with more than 100,000 tonnes of carbon dioxide equivalent (t CO<sub>2</sub>-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.<sup>2</sup> 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:

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<sup>1</sup> 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) Rule 2020*.

<sup>2</sup> 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 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 CO<sub>2</sub>-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.

Although reported baselines expire on 1 July 2021, it is not intended that facilities will apply for a transitional calculated baseline from the 2021-22 year onwards. The legislation does not prevent them from doing so, but if they do, they must use Government-determined prescribed production variables and default emissions intensity values. In March 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.

### **Safeguard Rule amendments in the *National Greenhouse and Energy Reporting (Safeguard Mechanism) Amendment (Additional Prescribed Production Variables) Rule 2020***

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 mining prescribed production variables that were set in the Safeguard Rule in March 2020. The draft amendments also contain a separate set of default emissions intensity values that account for updated global warming potentials.

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.<sup>3</sup>

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.

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<sup>3</sup> 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>

Production variables have been prepared for the majority of Safeguard Mechanism facilities. The remaining production variables will be defined over the coming months with a view to publishing them in the first part of 2021 for use in baseline applications that relate to the 2020-21 compliance year, which are due before 31 October 2021 (see Table 1). Default emissions intensity values for a small number of sectors may require additional data beyond what is currently available to the Government. Default values for these 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.

**Table 1: indicative timeline and important dates**

Date(s)	Item description	Safeguard Rule legislative reference (if applicable)
August 2020	Consultation on draft Safeguard Amendment Rule.	<a href="#">Consultation webpage</a>
September 2020*	Amendment Rule made** and takes effect the day after it is registered on the Federal Register of Legislation.	40 (1) (ab)
Before 31 October 2020	Deadline for applications for baselines that commence on 1 July 2019.	22 (3) (b)
Current - to early/mid 2021*	Development of remaining prescribed production variables and default emissions intensity values in consultation with industry, for inclusion in the Safeguard Rule through a further amendment in 2021.	N/A
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)

\*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 \(Additional Prescribed Production Variables\) Rule 2020](#)
- [Tranche 2 additions to the Safeguard Mechanism: Prescribed production variables and default emissions intensities document](#) and

- this explanatory document

Following consultation on the Amendment Rule, the contents of the document titled 'Tranche 2 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* document<sup>4</sup>. 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 Friday, 28 August 2020.

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 28 August 2020 at 11.59pm AEST.**

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<sup>4</sup> 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, and to update existing default emissions intensity values to reflect the latest global warming potentials that are now being used under the National Greenhouse and Energy Reporting (NGER) scheme.

The Amendment Rule also includes other minor changes. A consequential amendment is proposed to paragraph 7(1)(d) to align with the reference to the Greater Sunrise special regime area in the *National Greenhouse and Energy Reporting Act 2007*, and remove the reference to the Joint Petroleum Development Area. This change reflects similar changes already made to other Commonwealth legislation in recognition of the transfer of the Joint Petroleum Development Area to Timor-Leste's exclusive jurisdiction under the new Timor Sea Maritime Boundaries Treaty.

A minor change is also proposed to the definition of the coal mining activity, which was published in the Safeguard Rule in March 2020, to make it clear that it includes post-mining activities.

The amendment rule also includes transitional provisions to ensure the updates to global warming potentials on 1 July 2020 work as intended and a minor update to section 56 to reflect the updating of default emissions intensities in calculated emissions baseline determinations when global warming potential are updated.

The Amendment Rule is comprised of two Schedules.

### 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 baseline<sup>5</sup>. 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.

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<sup>5</sup> 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).

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 CO<sub>2</sub>-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 2 additions to the *Safeguard Mechanism: Prescribed production variables* document' for an explanation of the relevant emissions sources included in the calculation of the default emissions intensity values.

## **Amendment Rule Schedule 2 – Update to global warming potentials**

The default emissions intensity values in the current Safeguard Rule and Schedule 1 of the Amendment Rule were developed using the global warming potentials of greenhouse gases from the Intergovernmental Panel on Climate Change's (IPCC's) Fourth Assessment Report (AR4). Schedule 1 of the Amendment Rule commences the day after the Amendment Rule is registered on the Federal Register of Legislation. New section 82 included in the Amendment Rule ensures that these Schedule 1 emissions intensity values will, in almost all circumstances, apply to baselines for the 2019-20 compliance year. This is the last compliance year in which Safeguard facilities will report their emission under NGERs on an AR4 basis.

On 1 July 2020, the *National Greenhouse and Energy Reporting Regulations 2008* and *National Greenhouse and Energy Reporting (Measurement) Determination 2008* were amended to incorporate updated values for global warming potentials from the IPCC's Fifth Assessment Report (AR5). To support this change, Schedule 2 of the Amendment Rule would update all default emissions intensity values under the Safeguard Mechanism to use global warming potentials from the IPCC's Fifth Assessment Report (AR5). Schedule 2 of the Amendment Rule (which includes AR5 default emissions intensity values) commences two days after the Amendment Rule is registered. Subsection 83(1) included in the Amendment Rule ensures these updated values apply to baselines that relate to the 2020-21 compliance year and later years.

Subsection 83(1) applies in place of existing subsection 44(3B) for the financial year beginning on 1 July 2020. Subsection 44(3B) ensures that where a default emissions intensity or a benchmark emissions intensity changes after a production-adjusted baseline is made, the baseline for a financial year must use the (new) default emissions intensity that is in place at the start of that financial year. However,

subsection 44(3B) would have the effect of applying an AR4-based default emissions intensity value to a production-adjusted baseline for the 2020-21 year. This is because AR4-based default emissions intensity values were in force on 1 July 2020 under the Safeguard Rule. The new subsection 83(1) applies in place of subsection 44(3B) for the 2020-21 year to ensure that only AR5-based default emissions intensity values are used in production-adjusted baselines in that year.

Existing section 56 of the Safeguard Rule requires the Clean Energy Regulator (the Regulator) to update certain classes of baselines to reflect any new global warming potentials that change at the start of or during that year. The Amendment Rule adds new paragraph 56(d), and amends subparagraph 56(1)(b)(ii), to ensure that baselines that use default emissions intensity values will also be updated.

A facility could apply to the Regulator for a baseline that applies to the 2020-21 year and that uses AR4-based default emissions intensity values. This could occur if the baseline application is made before the proposed Amendment Rule commences (it is only when the Amendment Rule is made and in force that the AR5 global warming potentials apply from 1 July 2020). The new subsection 83(2) included in the Amendment Rule would require the Regulator to update any calculated emissions baseline in force for the 2020-21 financial year (that has not been updated under section 56) to incorporate AR5 global warming potentials that apply from 1 July 2020.

It may be the case that a Responsible Emitter has a calculated baseline that commenced on 1 July 2019 and that uses an estimated (site-specific) emissions intensity value based on AR5 global warming potentials. This could occur where a facility applies for a calculated baseline between 1 July 2020 and 31 October 2020 and therefore uses the post-1 July 2020 NGER Regulations and Measurement Determination (which adopt AR5 global warming potentials) to calculate its estimated (site-specific) emissions intensity value for its baseline. In such a case, new section 84 included in the Amendment Rule allows the Responsible Emitter to apply to the Clean Energy Regulator to adjust the facility's calculated baseline number for the 2019-20 year so that it is based on AR4 global warming potentials. The Regulator would have regard to subsection 22XQ(2) of the *National Greenhouse and Energy Reporting Act 2007* in applying the new section 84 of the Amendment Rule.

In summary, AR4-based default emissions intensity values (in Schedule 1 of the Amendment Rule and currently set out in Schedules 2 and 3 of the Safeguard Rule) are applicable, in almost all circumstances, to baselines that apply in the 2019-20 year; and AR5-based default emissions intensity values (in Schedule 2 of the Amendment Rule) are applicable to baselines that apply from the 2020-21 year.

The effect of adopting AR5 global warming potentials under the Safeguard Mechanism is that some default emissions intensity values will be higher and some will be lower than the previous AR4-based values. As a result, some baselines will be increased, and some will be decreased in the 2020-21 year relative to the 2019-20 year. However, facilities will also be reporting their emissions under NGERs using the same AR5 global warming potentials from 1 July 2020. This means that an increase or

decrease in a facility's baseline as a result of the global warming potential changes can be matched by a proportionate increase or decrease in its reported emissions under NGERs. The adoption of the latest global warming potentials under the Safeguard Mechanism is intended to ensure that, going forward, baselines are set on the same basis as facilities' emissions reported under NGERs.

**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. The blue shaded boxes indicate a different AR5 default emissions intensity value to the AR4 default emissions intensity value.

<b>SCHEDULE 2</b>				
<b>Part</b>	<b>Prescribed Production Variable</b>	<b>Default Emissions Intensity Value (AR4)</b> (tonnes carbon dioxide equivalent per unit)	<b>Default Emissions Intensity Value (AR5)</b> (tonnes carbon dioxide equivalent per unit)	<b>Default Emissions Intensity Unit</b>
<b>MANUFACTURING</b>				
2	Bulk flat glass	0.774	0.774	tonnes of bulk flat glass
3	Glass containers	0.521	0.521	tonnes of glass containers
4	Aluminium	1.86	1.85	tonnes of primary aluminium
5	Alumina	0.545	0.545	tonnes of alumina and alumina equivalent tonnes of alumina trihydrate
6	Ammonia	1.87	1.87	tonnes of 100% equivalent anhydrous ammonia
7	Ammonium nitrate	0.352	0.315	tonnes of 100% equivalent ammonium nitrate
8	Urea	0.566	0.566	tonnes of 100% equivalent carbamide
9	Diammonium phosphate	0.078	0.078	tonnes of diammonium phosphate products

	Monoammonium phosphate	0.088	0.088	tonnes of monoammonium phosphate products
10	Sodium cyanide			tonnes of 100% equivalent sodium cyanide
11	Synthetic rutile	1.15	1.15	tonnes of synthetic rutile
12	White titanium dioxide pigment	1.68	1.68	tonnes of white titanium dioxide pigment
<b>MINING</b>				
13	Run of mine coal <sup>6</sup>	0.0137	0.0137	tonnes of run-of mine coal
	Coal mine waste gas	0.564	0.564	tonnes of unmitigated coal mine waste gas
	Fugitive emissions at a decommissioned underground coal mine	1	1	tonnes of reported fugitive emissions
14	Iron ore	0.00476	0.00476	tonnes of iron ore
15	Manganese ore			tonnes of manganese ore product
16	Bauxite	0.00402	0.00401	tonnes of bauxite product
17	Heavy metal concentrate			tonnes of heavy metal concentrate
18	Run of mine metal ore	0.00859	0.00859	tonnes of run-of-mine metal ore
<b>OIL AND GAS – Part 19</b>				
Div 2	Extracted oil and gas hydrocarbon			gigajoules of unprocessed natural gas and unstabilised crude oil and condensate

<sup>6</sup> 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 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)			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)			gigajoules of liquefied natural gas
Div 9	Ethane			gigajoules of ethane
Div 10	Liquefied petroleum gas			gigajoules of liquefied petroleum gas
Div 11	Reservoir carbon dioxide			tonnes of reservoir carbon dioxide
<b>STEEL MANUFACTURING – Part 20</b>				
Div 2	Coke oven coke (integrated iron and steel manufacturing)	0.467	0.467	tonnes of coke oven coke
Div 3	Lime (integrated iron and steel manufacturing)	0.780	0.780	tonnes of lime
Div 4	Iron ore sinter (integrated iron and steel manufacturing)	0.233	0.233	tonnes of iron ore sinter
Div 5	Iron ore pellets (integrated iron and steel manufacturing)	0.0586	0.0586	tonnes of iron ore pellets
Div 6	Continuously cast carbon steel products and ingots of carbon steel (integrated iron	1.50	1.50	tonnes of continuously cast carbon steel products

	and steel manufacturing)			and ingots of carbon steel
Div 7	Hot-rolled long products (integrated iron and steel manufacturing)	0.101	0.101	tonnes of long products
Div 8	Hot-rolled flat products (integrated iron and steel manufacturing)	0.000358	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	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	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	0.0517	tonnes of iron ore pellets
<b>RAIL TRANSPORT – Part 21</b>				
Div 2	Bulk freight on a dedicated line	0.00000527	0.00000529	net-tonne-kilometres of bulk freight
Div 3	Bulk freight on a non-dedicated line	0.0000163	0.0000163	net-tonne-kilometres of bulk freight
Div 4	Non-bulk freight	0.0000204	0.0000205	net-tonne-kilometres of freight
Div 5	Rail passenger transport	0.0000710	0.0000712	passenger-kilometres
<b>AIR TRANSPORT</b>				
22	Air transport	0.00112	0.00112	revenue-tonne-kilometres
<b>ROAD TRANSPORT – Part 23</b>				
Div 1	Passenger road transport	0.00164	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
Div 6	Small freight			vehicle deliveries
<b>WATER TRANSPORT – Part 24</b>				
Div 1	Mixed passenger and freight water transport	0.000103	0.000104	operational deadweight-tonne-kilometres
Div 2	Bulk freight water transport	0.00000540	0.00000539	net tonne kilometres
<b>OTHER</b>				
25	Wastewater handling (domestic and commercial) COD removed	0.459	0.513	tonnes of COD removed
	Wastewater handling (domestic and commercial) Nitrogen removed	5.03	4.48	tonnes of nitrogen removed
26	Electricity generation	0.538	0.539	megawatt hours of electricity generated or exported
<b>NATURAL GAS DISTRIBUTION</b>				
27	Natural gas distribution	0.227	0.254	petajoule kilometres
<b>NATURAL GAS TRANSMISSION – Part 28</b>				
Div 2	Kilometres of natural gas transmission pipelines	10.42	11.62	kilometres of natural gas transmission pipelines
<b>CLINKER, LIME AND CEMENT – Part 29</b>				
Div 2	Clinker (not used by facility to make cement)	0.841	0.841	tonne of Portland cement clinker

	Cement (produced from clinker a facility)	0.708	0.708	tonnes of cement
Div 3	Lime	1.13	1.13	tonne of lime
<b>METAL MANUFACTURING</b>				
30	Non-metallic mineral quarrying			tonnes of quarried rock
31	Silicon	1.92	1.92	tonnes of silicon
32	Lead bullion			tonnes of lead bullion
33	Refined lead	1.21	1.21	tonnes of refined lead
34	Zinc in fume	3.34	3.34	tonnes of zinc in fume
35	Caustic calcined magnesia			tonnes of caustic calcined magnesia
36	Copper anode	0.677	0.677	tonnes of copper anode
37	Manganese sinter	0.242	0.242	tonnes of manganese sinter
38	Ferromanganese alloy	1.30	1.30	tonnes of ferromanganese alloy
39	Silicomanganese alloy	1.70	1.70	tonnes of silicomanganese alloy
<b>NICKEL MANUFACTURING – Part 40</b>				
Div 2	Primary nickel products (from nickel bearing inputs)	8.78	8.78	tonnes of 100% equivalent nickel
	Primary nickel products (from imported intermediate nickel products)	2.52	2.52	tonnes of 100% equivalent nickel
	Intermediate nickel products (from nickel bearing inputs)	1.76	1.76	tonnes of 100% equivalent nickel
<b>PULP AND PAPER – Part 41</b>				
Div 2	Tissue paper			tonnes of rolls of uncoated tissue paper

Div 3	Packaging and industrial paper			tonnes of rolls of packaging and industrial paper
Div 4	Printing and writing paper			tonnes of rolls of uncoated printing and writing paper
Div 5	Newsprint			tonnes of rolls of uncoated newsprint
Div 6	Pulp			tonnes of wet or dry pulp

### SCHEDULE 3

Part	Prescribed Production Variable	Default Emissions Intensity Value (AR4) (tonnes carbon dioxide equivalent per unit)	Default Emissions Intensity Value (AR5) (tonnes carbon dioxide equivalent per unit)	Default Emissions Intensity Unit
<b>PETROLEUM REFINING</b>				
2	Petroleum feedstock	0.136	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: New baseline to apply from 1 July 2020 – operation of subsection 83(1)***

Facility B applies for a calculated baseline to commence on 1 July 2020. It chooses to use an estimated (site-specific) emissions intensity value for production variable B1, and a default emissions intensity value for production variable B2.

In line with subsection 83(1) of the Amendment Rule, the relevant AR5-based default emissions intensity value from Schedule 2 of the Safeguard Rule is used in the baseline application for production variable B1.

To set the estimated emissions intensity value for B2, the facility develops a forecast of its emissions intensity using the current version of the NGERs Measurement Determination, which uses AR5-based emissions factors. In this way, both Facility B's baseline and its NGER-reported emissions will be set on an AR5 basis.

***Example 3: Reported baseline updated for the latest global warming potentials – operation of section 56 and subsection 83(1)***

Facility C is on a reported baseline of 150,000 t CO<sub>2</sub>-e. In line with section 56 of the Safeguard Rule, the Regulator updates the reported baseline to an AR5 basis for the 2020-21 year. Should Facility C apply for a new baseline (i.e., a calculated baseline or a production adjusted baseline) that uses a default emissions intensity and that commence in the 2020-21 year, the new baseline would replace the reported baseline for that year. The new baseline would be set using AR5 global warming potentials in line with subsection 83(1).

***Example 4: Calculated baseline updated for the latest global warming potentials – operation of section 56 and subsection 83(2)***

Facility D is on a calculated baseline that commenced in 2018-19 and uses both estimated (site-specific) emissions intensity values and default emissions intensity values. The facility plans to remain on its existing calculated baseline for the 2020-21 year before moving to a production-adjusted baseline to commence at the start of the 2021-22 year.

Section 56 of the Safeguard Rule and subsection 83(2) included in the Amendment Rule ensure that the baseline will be updated by the Clean Energy Regulator for the 2020-21 year using AR5 global warming potentials. This means that Facility D's baseline and its NGER-reported emissions in the 2020-21 year will both be calculated using AR5 global warming potentials.

**Example 5: Global warming potentials – operation of section 84**

Facility E produces E1 and E2, which are prescribed (annually adjusted) production variables listed in Schedule 2. Facility E is on a reported baseline and makes an application for a calculated baseline to commence in the 2019-20 year using estimated (site-specific) emissions intensity values for E1 and E2.

Facility E estimates its highest production of its primary production variable, E1, will occur in 2021-22, with 200,000 tonnes. It used AR5 global warming potentials in the calculation of the estimated emissions intensities. The E1 estimated emissions intensity is 0.7 t CO<sub>2</sub>-e/tonne of E1. It also estimates it will produce 5,000 tonnes of E2 in 2021-22, with an estimated emissions intensity of 0.4 t CO<sub>2</sub>-e/tonne of E2. The Clean Energy Regulator determines that the facility's calculated baseline will be 142,000 t CO<sub>2</sub>-e, calculated below:

$$\begin{aligned} \text{Calculated baseline} &= \text{E1} + \text{E2} \\ 142,000 \text{ t CO}_2\text{-e} &= (200,000 \times 0.7) + (5,000 \times 0.4) \end{aligned}$$

Facility E's Responsible Emitter applies to the Clean Energy Regulator, under section 84, to have its 2019-20 baseline adjusted using AR4 global warming potentials. The estimated emissions intensity for E1 remains the same, but the new estimated emissions intensity value for E2 is 0.6. After considering the application, the Clean Energy Regulator adjusts the facility's calculated baseline for the 2019-20 year to 143,000 t CO<sub>2</sub>-e, calculated below:

$$\begin{aligned} \text{Calculated baseline} &= \text{E1} + \text{E2} \\ 143,000 \text{ t CO}_2\text{-e} &= (200,000 \times 0.70) + (5,000 \times 0.6) \end{aligned}$$

This calculated baseline number is in force for the 2019-20 year, and reverts back to 142,000 t CO<sub>2</sub>-e for the 2020-21 year, unless the calculated baseline is replaced by a different baseline on application by the Responsible Emitter.

**Example 6: Updated global warming potentials – operation of subsection 83(1), and sections 82 and 84**

Facility F produces F1 and F2, which are prescribed (annually adjusted) production variables listed in Schedule 2 of the Safeguard Rule. Facility F is on a reported baseline and makes an application for a calculated baseline to commence in the 2019-20 year using an estimated (site-specific) emissions intensity value for F1 and the default emissions intensity value for F2. Facility F lodges its baseline application with the Regulator on 23 October 2020.

Facility F estimates its highest production of its primary production variable, F1, will occur in 2021-22. It estimates the production level will be 200,000 tonnes, and the estimated emissions intensity will be 0.62 t CO<sub>2</sub>-e/tonne of F1. The facility estimates this emissions intensity for the 2020-21 year using the current version of the NGER Measurement Determination, which is based on AR5 global warming potentials.

It also estimates it will produce 1,000 tonnes of F2 in 2020-21. The default emissions intensity in force from 1 July 2019 for F2 is based on the AR4 global warming potentials, as per section 82 included in the Amendment Rule, and is equal to 0.55 t CO<sub>2</sub>-e/tonne of F2. The facility's calculated baseline will be 124,500 t CO<sub>2</sub>-e, calculated below:

$$\begin{aligned} \text{Calculated baseline} &= \text{F1} + \text{F2} \\ 124,500 \text{ t CO}_2\text{-e} &= (200,000 \times 0.62) + (1,000 \times 0.55) \end{aligned}$$

Should the facility choose to, it can apply to the Regulator under new section 84 to have its baseline adjusted for the 2019-20 year so that the emissions intensity for F1 is based on the AR4 global warming potentials. Say Facility F chooses to apply to have its baseline amended for the 2019-20 year. The amended estimated emissions intensity for F1 is 0.63 based on the AR4 global warming potentials. The facility's calculated baseline for the 2019-20 year would be amended to be 126,500 t CO<sub>2</sub>-e, calculated below:

$$\begin{aligned} \text{Calculated baseline} &= \text{F1} + \text{F2} \\ 126,500 \text{ t CO}_2\text{-e} &= (200,000 \times 0.63) + (1,000 \times 0.55) \end{aligned}$$

This baseline would be in force for the 2019-20 year only.

For the 2020-21 year, the estimated emissions intensity value for F1 would revert back to using the AR5 global warming potential. This is because new section 84 included in the Amendment Rule only adjusts, on application, the estimated emissions intensity for the 2019-20 year, and not later years. Similarly, the default emissions intensity for F2 would be adjusted by the Clean Energy Regulator to incorporate AR5 global warming potentials in accordance with subsection 83(1).