

# **EXPLANATORY STATEMENT**

Issued by authority of the Minister for the Environment and Energy

*National Greenhouse and Energy Reporting Act 2007*

*National Greenhouse and Energy Reporting (Measurement) Amendment (2018 Update)  
Determination 2018*

The *National Greenhouse and Energy Reporting Act 2007* (the Act) provides a framework for the reporting of emissions, energy production and consumption in Australia. It also provides for the Safeguard Mechanism to place limits on the net emissions of the largest facilities in Australia.

The *National Greenhouse and Energy Reporting (Measurement) Determination 2008* (“the Determination”) was made under section 10 of the Act, which provides for the Minister to determine methods, or criteria for methods, for the measurement of (a) greenhouse gas emissions; (b) the production of energy; and (c) the consumption of energy. An overview of the Determination is provided below.

The purpose of the *National Greenhouse and Energy Reporting (Measurement) Amendment (2018 Update) Determination 2018* (the Instrument) is to assist National Greenhouse and Energy Reporting (NGER) scheme reporters by improving the clarity and guidance on emissions and energy reporting, and introducing routine updates. The amendments:

- refine methods to estimate emissions from decommissioned underground coal mines;
- respond to requests from NGER reporters for clarification on reporting arrangements under the NGER scheme, mainly in relation to iron and steel production, carbon capture and storage, waste water management and thresholds for small onsite electricity generation; and
- update emission factors used to estimate emissions resulting from the consumption of electricity purchased or lost from the grid (these are known as ‘scope 2 emissions’) – based on the latest available data.

The Instrument will commence on 1 July 2018 and apply to the 2018-19 financial year. It will affect NGER reports submitted by corporations in October 2019. Details of the amendments contained in the *National Greenhouse and Energy Reporting (Measurement) Amendment (2018 Update) Determination 2018* are provided below.

## ***Overview of the National Greenhouse and Energy Reporting (Measurement) Determination 2008***

The *NGER (Measurement) Determination 2008* (“the Determination”) provides the methods for the estimation of greenhouse gas emissions and the production and consumption of energy. The scope of the Determination follows international classification systems and includes emissions from:

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

The most significant source of emissions in Australia is from fuel combustion, which accounts for over 70 per cent of the emissions reported in the national greenhouse gas inventory.

The scope of the Determination does not include land based emissions covered by the Intergovernmental Panel on Climate Change (IPCC) categories ‘Agriculture’ and ‘Land Use, Land Use Change and Forestry’. Emissions from fuel combustion by land based industries are, nonetheless, covered by this Determination.

#### Methods of measurement

The framework supporting the emissions estimation methods specified in the Determination reflects the approaches of the IPCC guidelines governing the estimation of national greenhouse gas inventories, as adopted by the Parties to the UN Framework Convention on Climate Change and its Kyoto Protocol.

The Determination provides four different classes of methods for the estimation of emissions for most emissions sources.

**NGER Method 1:** is the *National Greenhouse Accounts* default method and specifies the use of default emission factors in the estimation of emissions. This is the simplest method available and, in general, emissions may be estimated by reference to activity data such as fossil fuel consumption, evidenced by invoices, and the use of specified emission factors provided in the Determination.

**NGER Method 2:** is a facility-specific method using industry sampling and Australian or international standards to provide more accurate estimates of emissions at facility level. Method 2 enables corporations to undertake additional measurements – for example, the qualities of fuels consumed at a particular facility – in order to gain more accurate estimates for emissions for that particular facility.

**NGER Method 3:** is a facility-specific method using Australian or international standards for both sampling and analysis of fuels and raw materials. Method 3 is very similar to Method 2, except that reporters must use Australian or equivalent documentary standards for sampling (of fuels or raw materials) as well as for the analysis of fuels.

**NGER Method 4:** direct monitoring of emission systems, either on a continuous or periodic basis. Rather than providing for the analysis of the chemical properties of inputs (or in some

case, products), Method 4 aims to directly monitor greenhouse emissions arising from an activity. This approach can provide a higher level of accuracy in certain circumstances, depending on the type of emissions process; however, it is more likely to be more data intensive than other approaches.

As for Methods 2 and 3, there is a substantial body of documented procedures on monitoring practices and state and territory government regulatory experience that provide the principal sources of guidance for the establishment of such systems.

More generally, the Determination draws on existing estimation practices wherever possible, including the use of data collected for commercial, taxation or other regulatory purposes, with the aim of maximising the use of readily validated data and minimising administrative burdens on reporters.

## ***Overview of the National Greenhouse and Energy Reporting (Measurement) Amendment (2018 Update) Determination 2018***

### General principles

Currently, the general measurement principles outlined in s 1.13 of the NGER (Measurement) Determination do not apply to the estimation of energy consumption nor energy production of the fuels and energy commodities listed in Schedule 1.

The application of the general measurement principles of the NGER Measurement Determination contained in s 1.13 is extended to now include the estimation of energy consumption and energy production as well as for emissions. This reflects the relevance of these general principles to energy consumption and production estimates and their interrelationship with emissions reporting.

### Fuel combustion - Electricity generation

Paragraph 2.68 of the NGER (Measurement) Determination outlines the reporting thresholds below which NGER Reporters do not need to report energy consumption without combustion from solid, gaseous and liquid fuels as well as from electricity consumption.

Paragraph 2.68 (b) now clarifies reporting thresholds to ensure individual nameplate capacities of generating units are considered at a facility.

### Decommissioned underground mines

The existing method is structured for estimating emissions from a decommissioned mine on the basis of a whole financial year resolution. This method functions best where a mine is decommissioned at the end of a financial year. However, this is not generally the case in practice.

Where a mine is decommissioned part way through a reporting year, the existing method can lead to unintended misalignment in;

- i. the starting date, which is assigned to a whole year instead of part-year. This may lead to a time gap between when a mine ceases operation and when the decommissioned method starts, and;
- ii. the emission factor which currently represents fixed yearly intervals.

The amendments are designed to refine the existing decommissioned mine method to allow for estimation of emissions at a monthly resolution. This will enable mines which close part way through a reporting year to more accurately estimate emissions by;

- i. nominating a decommissioned starting month part way through a reporting year; and
- ii. estimate annual emissions going forward in time using an emission factor based on the number of months since decommissioning, rather than years.

The method for estimating the proportion of mine that is flooded has also been amended to accord with the estimation of emissions at a month resolution.

### Carbon capture and storage

Two minor clarifications are proposed and updates to GWPs implemented.

An amendment is proposed for the method 1 conceptual formula for the derivation of fugitive emissions associated with the transport of greenhouse gas substances.

There is a potential for double counting of fugitive emissions associated with the injection processes, with the amount injected being that delivered to the injection site less fugitive emissions (including leaks, deliberate and accidental vents).

The amount of fugitive emissions associated with the injection process is therefore simply deducted from estimates for the transport of greenhouse gases for permanent storage.

### Iron and Steel

For the estimation of emissions for iron, steel or other metal production using an integrated metal works, quantities used in the carbon mass balance calculations are required to be estimated in accordance with criterion A in the relevant (Solid, liquid, gas) division (s 4.66 Step 1, NGER Measurement Determination).

Steel makers are currently unable to estimate input quantities with reference to other criteria when they do not purchase their inputs. 'Other metals' sources of emissions, i.e. ferroalloy metals production and other metals production allow for use of industry practice consistent with the accuracy principles provided in the NGER (Measurement) Determination to estimate input quantities when they have not been commercially acquired (i.e. when the input material has been produced at the facility).

This amendment allows the accuracy principles to be applied to the calculation of the quantities of fuels and carbonaceous input material when the steel makers have not commercially acquired it.

### Waste water

The introduction of a materiality threshold for reporting emissions from wastewater handling (domestic and commercial) exempts reporters from reporting on any facilities that fall below a certain emissions level arising from the source, or below a specified 'number of population served'. The latter variable is reportable, as an MTBI for all three methods as per Schedule 1 Part 6 Source 3, NGER Regulations.

The proposed materiality thresholds are introduced into a Part 5.3 – Wastewater handling (domestic and commercial), with a new subsection in 5.23 that clarifies that Part is not applicable to a person whose primary activities lie outside of item 192, Water supply, sewerage and drainage services (ANZSIC code 281), in Schedule 2 of the Regulations.

Further details of the Instrument are outlined in [Attachment A](#).

The Instrument is a legislative instrument for the purposes of the *Legislation Act 2003*.

A consultation draft of this Instrument was released for public comment on 30 May 2018. The Department received two submissions from stakeholders, which did not require any change to the Instrument.

A Regulation Impact Statement was not required, based on advice from the Office of Best Practice Regulation (ID 23865).

A statement of the Regulation's compatibility with human rights is set out in [Attachment B](#).

## ATTACHMENT A

### *National Greenhouse and Energy Reporting (Measurement) Amendment (2018 Update) Determination 2018*

#### Section 1 – Name of Determination

This section provides that the title of the Instrument is the *National Energy Reporting (Measurement) Amendment (2018 Update) Determination 2018*.

#### Section 2 – Commencement

This section provides for the amendments to commence on 1 July 2018.

#### Section 3 – Authority

This section outlines that the Determination falls under subsection 10(3) of the *National Greenhouse and Energy Reporting Act 2007*.

#### Section 4 – Schedules

The amendments to the Determination are outlined at Schedule 1.

#### Schedule 1 – Amendments

The explanations of amendments provided below are grouped by chapter within the Instrument. Individual amendment items are referenced to the amendment number as stated in the Instrument.

#### **Chapter 1: General**

#### **Part 1.2 – General**

<b>Item</b>	<b>NGER (Measurement) Determination Reference</b>	<b>Commentary</b>
1	Subsection 1.3(1)	Removes reference to s7B definition ‘Potential greenhouse gas emissions embodied in an amount of designated fuel’, following repeal of this section in the NGER Act.
2	Section 1.8	This item inserts a definition of ‘decommissioned underground mine’ so that the term has the meaning given by the Regulations.
3	Paragraph 1.11(a)	Includes the requirement to apply the general principles to the estimation of energy estimates in addition to emissions

4	1.12 Measurement of emissions and energy 1.13 General principles for measuring emissions and energy	estimates.
5	Subsection 1.19(2)	Corrects a typographical error.

## Chapter 2: Fuel Combustion

### Part 2.7—Estimation of energy for certain purposes

Item	NGER (Measurement) Determination Reference	Commentary
6	Subparagraphs 2.68(b)(iv) and 2.68(b)(v)	Clarifies the threshold for electricity consumed from a generating unit at the facility.

## Chapter 3: Fugitive Emissions

### Part 3.2—Coal mining—fugitive emissions

Item	NGER (Measurement) Determination Reference	Commentary
7	3.30 Application	Clarification of method for application to mines that are decommissioned part-way through a reporting year
8	Subsection 3.31(1) Available Methods	Clarification of method for application to mines that are decommissioned part-way through a reporting year
9	Subsection 3.31(6) Available Methods	Clarification of conditions when Method 1 must not be used. This applies when gas is captured, regardless of whether it is captures for combustion or another purpose.
10	3.32 Method 1	Improvement of method to allow for calculation of emissions at monthly resolution
11, 12	3.33 Emission factor for decommissioned underground mines	Subsequent revision of emission factor formula to provide monthly resolution
13, 14	3.34 Measurement of proportion of mine that	Subsequent revision of mine flooding formula to provide monthly resolution

<b>Item</b>	<b>NGER (Measurement) Determination Reference</b>	<b>Commentary</b>
	is flooded	

### Part 3.4—Carbon capture and storage—fugitive emissions

<b>Item</b>	<b>NGER (Measurement) Determination Reference</b>	<b>Commentary</b>
15, 16	3.91 Method 1—emissions from transport of greenhouse gases involving transfer	<p>Clarifies the intent of Method 1, by making clear that the fugitives are simply the amount of greenhouse put into the pipeline less the quantity delivered. The Method one formula now includes the requirement to deduct injection fugitive emissions calculated under subdivision 3.4.3.2.</p> <p>This makes it explicit that fugitive emissions calculated for transport and for injection should not be subject to double counting, and that is the quantity of greenhouse gas injected into the storage site during the year is that which is stored, and not simply delivered to the injection equipment.</p> <p>Updates a global warming potential factor within the formula for methane from 21 to 25.</p>
17, 18	3.92 Method 1—emissions from transport of greenhouse gases not involving transfer	<p>Clarifies the intent of Method 1, by making clear that the fugitives are simply the amount of greenhouse put into the pipeline less the quantity delivered. The Method one formula now includes the requirement to deduct injection fugitive emissions calculated under subdivision 3.4.3.2.</p> <p>This makes it explicit that fugitive emissions calculated for transport and for injection should not be subject to double counting, and that is the quantity of greenhouse gas injected into the storage site during the year is that which is stored, and not simply delivered to the injection equipment.</p> <p>Updates a global warming potential factor within the formula for methane from 21 to 25.</p>

## Chapter 4: Industrial processes emissions



#### Part 4.4—Industrial processes—metal industry

Item	NGER (Measurement) Determination Reference	Commentary
19	4.66 Method 1—production of a metal from an integrated metalworks	<p>Steel makers are currently prevented from estimating their input quantities with reference to other criteria in the case they do not purchase their inputs.</p> <p>Amendment ensures the current reporting and measurement obligations of NGER Reporters for emissions source iron, steel and other metal production using an integrated metal works is consistent with those NGER Reporters for emissions sources ferroalloys production and other metals production.</p> <p>It allows for the calculation of the quantities of fuels and carbonaceous input material, when steel makers have not commercially acquired it.</p>

#### Chapter 5: Waste

##### Part 5.3—Wastewater handling (domestic and commercial)

Item	NGER (Measurement) Determination Reference	Commentary
20	Subsection 5.23(1)	Clarifies that this Part is not applicable to a person whose primary activities lie outside of item 192, Water supply, sewerage and drainage services (ANZSIC code 281), in Schedule 2 of the Regulations

#### Application

##### Part 9—Application and Transitional Provisions

Item	NGER (Measurement) Determination Reference	Commentary
21	9.11	Provides that the amendments only apply in relation to the financial year starting on 1 July 2018 and subsequent years.

#### Part 6 — Indirect (scope 2) emission factors from consumption of purchased electricity from grid

<b>Item</b>	<b>NGER (Measurement) Determination Reference</b>	<b>Commentary</b>
22	Part 6 of Schedule 1.	Annual update of scope 2 emission factors will reflect changes within the National Electricity Market in the last financial year.

**Further amendments – liable entity**

23	Listed provisions	Updates terminology from ‘liable entity’ and ‘entity’ to ‘registered person’, following passage of the <i>Clean Energy Legislation (Carbon Tax Repeal) Act 2014</i> and the <i>Carbon Farming Initiative Amendment Act 2014</i> .
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**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 (Measurement) Amendment (2018 Update) Determination 2018***

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 (Measurement) Amendment (2018 Update) Determination 2018* makes minor amendments to the *National Greenhouse and Energy Reporting (Measurement) Determination 2008* (the Determination). The Determination is made under subsection 10(3) of the *National Greenhouse and Energy Reporting Act 2007*, which provides for the Minister to determine methods, or criteria for methods, for the measurement of (a) greenhouse gas emissions, (b) the production of energy, (c) the consumption of energy

**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 Josh Frydenberg MP**  
**Minister for the Environment and Energy**