EXPLANATORY STATEMENT

Issued by the Authority of the Minister for Climate Change, Industry and Innovation, the Honourable Greg Combet AM MP

National Greenhouse and Energy Reporting (Measurement) Amendment Determination 2013 (No. 1)

The National Greenhouse and Energy Reporting Act 2007 (Cwlth) (the 'Act') established the National Greenhouse and Energy Reporting (NGER) scheme, which is a national system for reporting greenhouse gas emissions, energy consumption and energy production by Australian corporations.

The National Greenhouse and Energy Reporting (Measurement) Determination 2008 (the Determination) was made under subsection 10(3) 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.

This Instrument will amend the National Greenhouse and Energy Reporting (Measurement) Determination 2008.

The National Greenhouse and Energy Reporting (Measurement) Amendment Determination 2013 (No.1) (the Instrument) will amend the National Greenhouse and Energy Reporting (Measurement) Determination 2008 and aims to achieve the following:

- elaborate the methods specified for certain sectors:
    - fugitive emissions associated with coal seam gas;
    - emissions from solid waste disposal on land; and
    - a revised emission factor for fugitive emissions from brown coal mining.
- improve the streamlining of company reporting;
- update scope 2 emissions factors for the consumption of electricity which require annual adjustment in line with dispatch decisions made throughout the last financial year;
- align the Instrument with the Clean Energy Act 2011 (Cwlth) and the National Greenhouse and Energy Reporting Regulations 2008 (Cwlth) (the 'Regulations');
- provide clarification of methodologies to improve the consistency and accuracy of emission estimates;
- provide methods for measuring the potential emissions embodied in an amount of designated fuel (LNG, LPG, and Fuel for the Opt-In Scheme), and the adjustment methods for natural gas suppliers and Opt-In Scheme Participants; and
- respond to feedback from stakeholders.

The Instrument will commence on 1 July 2013 and apply to the 2013-14 financial year. It will affect NGER reports submitted by corporations in October 2014.

Details of the amendments to the Instrument and a Statement of Compatibility with Human Rights are included in the Attachments.

The Instrument is a legislative instrument for the purposes of the Legislative Instruments Act 2003.

Consultation

From 5 December 2012 to 1 February 2013, the former Department of Climate Change and Energy Efficiency (now the Department of Industry, Innovation, Climate Change, Science, Research and Tertiary Education) (the Department) sought public comment on a consultation paper about the efficiency of reporting under the National Greenhouse and Energy Reporting (NGER) Scheme; 49 submissions were received.

From 23 May 2013 to 7 June 2013 the Department sought comment on a position paper, which was developed after considering the responses to the consultation paper; 17 submissions were received.

On 4 June 2013, the Department held a teleconference which over 50 people participated in, and a face-to-face discussion which 11 people attended. The consultation process covered potential amendments to the National Greenhouse and Energy Reporting Regulations 2008, and the National Greenhouse and Energy Reporting (Measurement) Determination 2008. Many helpful suggestions were made and incorporated into the amendments.

A consultation draft of the Instrument was released for public comment on 23 May 2013. The Department received 21 submissions from stakeholders on a range of issues, which also resulted in a number of clarifications to the Instrument.

With the release of the initial Determination, a commitment was made to review the methods and factors provided within 5 years. This review was undertaken in 2010 and was facilitated by a public consultation process on the National Greenhouse and Energy Reporting (Measurement) Determination Discussion Paper released in August 2010. Some of the issues in the discussion paper requiring further research and development have now been addressed in this Instrument. Other issues are still under consideration. A number of issues are also being addressed through amendments to the Regulations.

Background

The initial Determination was the result of comprehensive consultation with business and other stakeholders between May 2005 and June 2008 in relation to the Act, the National Greenhouse and Energy Reporting Regulations 2008 (the Regulations) and the Instrument.

Since the Determination was made in 2008 a set of amendments to the Instrument have been released in June of each year. This annual cycle of amendments involves consultation with stakeholders as well as a public consultation process, and reflects the experience of implementation and the ongoing research and development in various industry sectors.

The initial Instrument was the subject of specific consultations, including the release of two documents for public comment: National Greenhouse and Energy Reporting Scheme, Technical Guidelines for the Estimation of Greenhouse Emissions and Energy at Facility-Level; and Energy, Industrial Process and Waste Sectors in Australia - Discussion Paper and a related overview paper. Over 70 formal submissions were received from interested organisations and individuals.

The Instrument includes provisions to support the Clean Energy Act 2011. These provisions relate to potential emissions embodied in an amount of designated fuel (natural gas, LNG, LPG, and fuel covered by the Opt-In Scheme). The natural gas provisions provide criteria for measuring amounts of natural gas. The provisions for LNG, LPG and fuel covered by the Opt-In Scheme provide criteria for measuring amounts of those fuels, and methods for measuring the embodied potential emissions. Potential greenhouse gas emissions are defined in section 7B of the NGER Act as amended by the Clean Energy (Consequential Amendments) Act 2011, and allow liability for emissions to be incurred before the emissions are produced.

Under the Clean Energy Act 2011, large users of natural gas, and persons who quote their OTN in relation to a supply of natural gas, LNG or LPG are responsible for their own emissions, while suppliers of natural gas, LNG and LPG are liable for the remaining emissions of their other end-use customers. The Opt-In Scheme allows large users of liquid petroleum fuels to manage their carbon price liability through the carbon pricing mechanism, instead paying an effective carbon price through the fuel tax system.

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

The legislative framework for the NGER scheme is established by the Act. The Act provides for an integrated reporting system with the objectives of:

- informing government policy formulation and the Australian public;
- meeting Australia's international reporting obligations;
- assisting Commonwealth, State and Territory government programs and activities;
- underpinning the introduction of an emissions trading scheme in the future; and
- avoiding duplication of similar reporting requirements in the States and Territories.

The Act makes reporting mandatory for corporations whose energy production, energy use, or greenhouse gas emissions meet certain specified thresholds. However, liable entities registered under Division 4 of Part 2 of the NGER Act (for example a local government body) are not required to report scope 2 emissions, energy consumption or energy production data.

The Determination, made under section 7B and subsection 10(3) of the Act, provides the criteria for establishing methodologies and methods for estimating and measuring the following items from the operation of facilities:

- greenhouse gas emissions;
- the production of energy;
- the consumption or energy; and
- potential greenhouse gas emissions embodied in an amount of natural gas.

The structure of the Determination is designed to facilitate the integration of corporate and facility level data provided under the Act with international data standards on greenhouse gas emissions.

The scope of the Determination is given by the following categories of emission sources:

- fuel combustion – emissions from the combustion of fuel for energy (see chapter 2);
- fugitive emissions from the extraction, production, flaring, processing and distribution of fossil fuels and carbon capture and storage (see chapter 3);
- industrial process emissions where a mineral, chemical or metal product is formed using a chemical reaction that generates greenhouse gases as a by-product and emissions of hydrofluorocarbons and sulphur hexafluoride resulting from their use by certain industries (see chapter 4); and
- waste emissions from waste disposal – either in landfill, as management of wastewater or from waste incineration (see chapter 5).

The most significant source is fuel combustion, which accounts for over 60 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 Determination provides methods that allow for both direct emissions monitoring and the estimation of emissions through the tracking of observable, closely-related variables. This framework reflects the approaches of the international guidelines governing the estimation of national greenhouse gas inventories and international practice such as for the EU Guidelines for the Monitoring and Reporting of Greenhouse Gas Emissions and the US Environment Protection Agency Greenhouse Gas Mandatory Reporting Rule.

At its simplest, emissions may be estimated by reference to reportable data such as fossil fuel consumption, evidenced by invoices, and the use of specified emission factors provided in the Determination. For emissions from fuel combustion, for example, data on fuel consumption would be multiplied by a specific emission factor for that fuel to generate an emissions estimate. A similar approach was used for over a decade prior to the commencement of the NGER scheme under earlier reporting programs.

More complex measurement processes may produce more accurate estimates at a facility level through sampling and analysis of the carbon content within fuel consumed and other qualities that affect actual emissions generated by its combustion at a facility. This approach to emissions estimation has been used for some time under previous reporting programs.

Direct monitoring, while not common, is an important approach to emissions estimation and is mandatory for the measurement of emissions associated with underground coal mining activities. In these cases State legislation also requires methane levels to be monitored directly for occupational health and safety reasons.

By drawing on existing emissions estimation practices, where possible, the Instrument aims to minimise reporting burdens on corporations and encourage reporters to balance the costs of using higher order methods with the benefits of potentially more accurate emissions estimates.

The Determination provides four different methods of estimating emissions for most emissions sources. A summary of each method used in the Determination is provided below.

Method 1: The National Greenhouse Accounts default method

Method 1 provides a class of estimation procedures derived directly from the methodologies used by the Department for the preparation of the National Greenhouse Accounts. This also ties Method 1 to the international guidelines adopted by the UN Framework Convention on Climate Change for the estimation of greenhouse gas emissions (including the 2006 IPCC Guidelines for National Greenhouse Gas Inventories).

Method 1 specifies the use of a designated emissions factor in the estimation of emissions. These emissions factors are national average factors determined by the Department using the Australian Greenhouse Emissions Information System (AGEIS). Method 1 is most useful and appropriate for emission sources of a homogenous nature, such as emissions from the combustion of a liquid fuels, where the emissions per unit of fuel combusted across all reporting facilities will be similar.

Method 2: Facility specific methods using Australian or international standards provided in the Determination or equivalent.

Method 2 enables corporations to undertake additional measurements, for example, of fuel inputs, in order to gain more accurate estimates of emissions for that facility. Australian and international standards provide the benchmark for procedures used for the analysis of fuel inputs.

Method 2 is most likely to be useful for fuels which exhibit variability in key qualities such as carbon content from facility to facility. This method is based on technical guidelines that existed under previous reporting programs.

Method 3: Facility specific sampling and analysis in line with Australian and international standards provided in the Determination.

Method 3 builds upon Method 2 and requires reporters to comply with Australian or equivalent standards for sampling (of fuels or raw materials) as well as standards for the analysis of fuels.

Method 4: Direct monitoring of emissions systems, either on a continuous or periodic basis.

Method 4 aims to directly monitor emissions arising out of a particular activity and can provide high level accuracy in certain circumstances. This method differs from lower order methods in its focus on the direct outputs of the activity rather than the inputs.

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.

Options: Different methods for different sources

Reporters may select different methods for each source. The Reporter may elect to use a different method based on the nature and content of the operation and emissions, subject to certain restrictions. In part, these differences reflect method availability. For example, for solid fuels, only Method 1 has been provided for methane and nitrous oxide, whereas four methods are available for carbon dioxide.

ATTACHMENT A

Details of the *National Greenhouse and Energy Reporting (Measurement) Amendment Determination 2013 (No.1)*

Item 1 – Name of Determination

This item provides that the title of the Instrument is the National Greenhouse and Energy Reporting (Measurement) Amendment Determination 2013 (No. 1).

Item 2 – Commencement

This item provides that the National Greenhouse and Energy Reporting (Measurement) Amendment Determination 2013 (No. 1) commences on 1 July 2013.

Item 3 – Authority

This item outlines that the National Greenhouse and Energy Reporting (Measurement) Determination 2008 (the Determination) is made under sections 7B and 10 of the *National Greenhouse and Energy Reporting Act 2007.*

Item 4 – Schedules

SCHEDULE 1 AMENDMENTS

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

CHAPTER 1: GENERAL

The proposed amendments to Chapter 1 of the Determination add definitions required to align the Determination with the National Greenhouse and Energy Reporting Regulations 2008 (the Regulations) and the Clean Energy Act 2011.

Part 1.1 Overview

Item	Commentary
[1]	Updates the authority under which the Determination is made to reflect updates to the National Greenhouse and Energy Reporting Act.
[2] – [6]	Replaces references in the overview to 'natural gas' with references to 'designated fuel', to reflect the extended application of the Determination to measuring potential emissions embodied in a wider range of fuels.
[7] – [16]	Adds definitions relating to waste, designated fuels and fugitive emissions. Inserts a new definition of 'invoice equivalent' to broaden the type of documents that can be used to evidence an amount of natural gas supplied. Aligns definitions for scope 1 emissions, scope 2 emissions, liquefied natural gas and liquefied petroleum gas with the Regulations. Updates the definition for method to include potential emissions. Note added to the global warming potential definition that outlines the intention to update global warming potentials from 1 July 2017 to align with those published in the Intergovernmental Panel on Climate Change (IPCC) in The Physical Science Basis (Cambridge, UK: Cambridge University Press, 2007).
[17]	Introduces the concept of a separate instance of a source for use in the reporting thresholds introduced by items [31, 35 and 41]. A separate instance of a source occurs where there are 2 or more activities that occur at the same facility, using different classes of equipment, and both activities have the same source. The Determination amendments allow different emission estimation methods to be used for each instance of a source. Introduces the concept of separate occurrence of a source for use in sections 1.18 and 1.19, as per items [22-26].

Part 1.1A Potential greenhouse gas emissions

The proposed amendments set out methods to be used to measure the potential emissions embodied in an amount of natural gas.

Item	Commentary
[18]	Inserts a new Division 1.1A.3, setting out criteria that can be used to measure an amount of natural gas supply, and the evidence that can be provided to support that measurement. Inserts a new Division 1.1A.4, setting out how a Provisional Emissions Number (PEN) in relation to natural gas supply can be adjusted in one year based on a review of the

	calculation of the PEN in the previous eligible financial year. That review can be done in light of further information that has come to hand since the previous year PEN was submitted, although any adjustment is made to the current year PEN not the previous year PEN. Determining methods to make this adjustment is authorised by section 10(6) and 10(8) of the NGER Act, which take effect from 1 July 2013.

Part 1.1B Potential greenhouse gas emissions embodied in an amount of gaseous designated fuel and;

Part 1.1C Potential greenhouse gas emissions embodied in an amount of liquid designated fuel

The proposed amendments set out methods to be used to measure the potential emissions embodied in an amount of gaseous or liquid designated fuel.

Item	Commentary
[19]	Inserts new Divisions 1.1B.1 and 1.1B.2, setting out a new default method and a new prescribed alternative method for calculating the potential greenhouse gas emissions embodied in an amount of gaseous designated fuel. These methods are adapted from the methods already provided for in relation to combustion of gaseous fuel within a facility. The existing default and prescribed alternative methods that apply to natural gas remain unchanged. Inserts a new Division 1.1B.3 setting out criteria for calculating how quantities of gaseous designated fuels (but not natural gas) are to be estimated for the purpose of working out potential emissions embodied in that fuel. A range of criteria is allowed for, in different circumstances, to evidence a quantity of fuel. New criteria, based on the records that must be kept for excise and customs purposes are introduced for fuel that is entered for home consumption. Criteria provided for elsewhere in the Determination in relation to combustion of gaseous fuel within a facility are adapted for the purpose of measuring amounts in relation to potential emissions. Inserts new Divisions 1.1C.1 and 1.1C.2, setting out a new default method and a new prescribed alternative method for calculating the potential greenhouse gas emissions embodied in an amount of liquid designated fuel. These methods are adapted from the methods already provided for elsewhere in the Determination in relation to combustion of liquid fuel within a facility. Inserts a new Division 1.1C.3, setting out the criteria for calculating how quantities of liquid designated fuel are to be estimated for the purpose of working out the potential emissions embodied in that fuel. A range of criteria is allowed for, in different circumstances, to evidence a quantity of fuel. New criteria, based on the records that must be kept for excise and customs purposes are introduced for fuel that is entered for home consumption. Criteria provided for elsewhere in the Determination in relation to combustion of liquid fuel within a facility are adapted for the purpose of measuring amounts in relation to potential emissions. Inserts a new Division 1.1C.4, setting out how to increase or reduce, as the case may be, the PEN for an eligible financial year to account for changes in the fuel tax credit entitlement for quantities of fuel measured in the previous financial year. This will apply

	to situations when the changes only become known after the deadline for reporting the previous year's provisional emissions number. Implements a new drafting convention, replacing references to column numbers within a table with references to column headings.

Part 1.2 General

The proposed amendments also aim to allow facilities to report separate instances of a source to be reported using different methods.

Item	Commentary
[20] – [22]	Extends the application of the general principles for measuring emissions to entities liable under the Clean Energy Act 2011.
[23] – [26]	Introduces the concept of a separate occurrence of a source, and updates references so that reporters can use different methods for different parts of a source. The restrictions on changing methods still apply. Amends the Determination to allow reporters to drop back to a lower order method if the reporter certifies in writing that a higher order method was found to be non-compliant during an external audit for the occurrence of a source. This amendment gives reporters a second chance to comply, noting that reporters who are non-compliant may still be subject to penalties. Allows a lower order method to be used for reporting under section 22AA of the Act.
[27]	Amends the Determination to extend the restrictions on changing methods to default and prescribed alternative methods for measuring potential emissions embodied in an amount of designated fuel.
[28-30]	Introduces the concept of a separate occurrence of a source (as introduced by item [16]) to section 1.19 so that the restrictions on downtime can apply to the thing which is undergoing down time, rather than the entire source. Amends the Determination to allow estimates during the first six weeks of down-time (when a reporter's selected method of measurement is unavailable) to be made in a way that accords with the general principles of the Determination. Reporters will be required to notify the Regulator within six weeks if more than six weeks of down-time is required. At that time, the Regulator will have the discretion to require the reporter to return to method 1, or to demonstrate that a statistically valid report can be derived from existing data or an alternative method. This amendment gives reporters a second chance to comply if down time of more than six weeks occurs.
[31] – [32]	Introduces a procedure for allocating emissions to multiple fuels when method 4 is used to estimate emissions from fuel combustion.

CHAPTER 2: FUEL COMBUSTION

Part 2.2 Emissions released from the combustion of solid fuels, Division 2.2.1 Preliminary

Item	Commentary
[33]	Makes the measurement and reporting of emissions and energy associated with the combustion of a solid fuel optional if the quantity of solid fuel combusted in a separate instance of a source, is 1 tonne or less. Amounts below the reporting threshold should be reported if doing so is more efficient for the reporter.

Part 2.2 Emissions released from the combustion of solid fuels, Division 2.2.14 Method 3 – Solid Fuels

Item	Commentary
[34]	Adds standards for sampling bituminous coal, sub-bituminous coal and anthracite.

Part 2.2 Emissions released from the combustion of solid fuels, Division 2.2.5 Measurement of Consumption of Solid Fuels

Item	Commentary
[35] – [36]	Elaborates the existing criteria AA for the measurement of solid fuels which allows facilities to account for changes in stockpiles when estimating consumption of solid fuels. The amendments define the survey approach and the error allowance approaches for estimating the solid fuel contained in a stockpile. The changes also provide greater specificity of the application of these approaches including restrictions on changing approaches. Adds the definition of ‘book quantity’.

Part 2.3 Emissions released from the combustion of gaseous fuels, Division 2.3.1 Preliminary

Item	Commentary
[37]	Makes the measurement and reporting of emissions and energy associated with the combustion of a gaseous fuel in a separate instance of a source optional if the quantity of solid fuel combusted is 1000 cubic metres or less. Amounts below the reporting threshold should still be reported if doing so is more efficient for the reporter.

Part 2.3 Emissions released from the combustion of gaseous fuels, Division 2.3.3 Method 2 – emissions of carbon dioxide from the combustion of gaseous fuels

Item	Commentary
[38]	Extends the provision to entities liable under the carbon pricing mechanism.

Part 2.3 Emissions released from the combustion of gaseous fuels, Division 2.3.6 Measurement of quantity of gaseous fuels

Item	Commentary
[39] – [42]	Removes references to ‘at the point of combustion’.

Part 2.4 Emissions released from fuel use by certain industries, Division 2.4.1 Preliminary

Item	Commentary
[43]	Makes the measurement and reporting of emissions and energy consumed associated with the combustion of liquid fuel in a separate instance of a source optional if the amount is less than: • 5 kL for petroleum-based oils (other than petroleum based oil used as fuel) and petroleum based greases; and • 1 kL for all other liquid fuels.

	Amounts below the reporting threshold should still be reported if doing so is more efficient for the reporter.

Part 2.4 Emissions released from fuel use by certain industries, Division 2.4.6 Measurement of quantity of liquid fuels

Item	Commentary
[44] – [46]	Removes references to 'at the point of combustion'.

Part 2.7 Estimation of energy for certain purposes

Item	Commentary
[47]	Makes the reporting of electricity consumption optional if the amount consumed at a facility is less than 20,000 kilowatt hours. The amount of 20,000 kilowatt hours was chosen because it is more than the average amount consumed in a year by a 6 person household in Australia.
[48]-[50]	Extends the application of apportionment of energy consumed for electricity, transport and stationary energy to entities liable under the Clean Energy Act 2011.

CHAPTER 3: FUGITIVE EMISSIONS

Part 3.2 Coal mining – fugitive emissions, Division 3.2.2 underground mines

Item	Commentary
[51]	Allows companies to report using method 2 for estimating methane and nitrous oxide from the flaring of coal mine waste gas in coal mining. Elaborates on the method for estimating emissions from coal mine waste gas flared to increase clarification.
[52]	Provides a note explaining the operation of the provision.
[53] – [54]	Updates algebra to align with surrounding sections in the Determination.

Part 3.2 Coal mining – fugitive emissions, Division 3.2.3 open cut mines

Item	Commentary
[55]	Updates the emission factor for Victorian brown coal from 0.0007 to 0.00023 tonnes CO_2-e per tonne of run-of-mine coal reflecting the results of an extensive study of the gas contained in brown coal in Victoria's Latrobe Valley.

Part 3.3 Oil and natural gas – fugitive emissions, Division 3.3.2 oil or gas exploration

The proposed amendments set out a refined method 4 to be made available for estimating vented fugitive emissions from coal seam gas well completions and workovers.

Item	Commentary
[56]	Clarifies that 'well workovers' are an activity under Division 3.3.2 - Oil or gas exploration.
[57]	Makes available an optional Method 4 for coal seam gas well completions and workers see [58] below.
[58]	Sets out an optional Method 4 for estimating methane and carbon dioxide vented emissions associated with coal seam gas well completions and well workovers. The method draws upon the approach used for well completions and well workovers by the US Environmental Protection Agency for the US Mandatory Reporting Rule program and has been adapted for Australia's specific circumstances. Currently, the Determination does not contain an industry-specific method for estimating vented emissions from well completions and workovers of coal seam gas wells, but rather relies on the general provisions of Part 1.3 of the Determination. The amendment is a result of an extensive stakeholder consultation process which began with a first round of public consultation in April 2012. In April 2013 the Department published a technical discussion paper entitled Coal Seam Gas: Enhanced Estimation and Reporting of Fugitive Greenhouse Gas Emissions under the NGER Measurement Determination, which sets out the proposed amendment and called for submissions. A series of follow up stakeholder consultations were conducted, including a technical implementation workshop on 7 May 2013. The technical discussion paper released in April 2013 also sets out the Government's intention to require, from 1 July 2015, the mandatory use of this proposed Method 4 for venting associated with coal seam gas well completions and well workovers, where fracking technologies have been used. The Department has received a number of submissions highlighting that shale gas and other forms of unconventional gas sources may also involve fracking. The Department will undertake an additional consultation over the next 12 months, as part of the annual NGER (Measurement) Determination review cycle, on the future treatment of shale gas and other unconventional gas sources in relation to the use of the revised Method 4 set out in this amendment.

CHAPTER 4: INDUSTRIAL PROCESSES

Part 4.5 Industrial processes – emissions of hydrofluorocarbons and sulphur hexafluoride gases

Item	Commentary
[59]	Aligns the definition of hydrofluorocarbons with the Act.

CHAPTER 5: WASTE

Part 5.2 Solid waste disposal on land

The proposed amendments are focused on clarifications around the sampling, analysis and reporting of waste composition, the application of capture efficiency limits under method 2, the clarification of provisions dealing with the use of climate data for the selection of decay rate constants and the update to methods and emission factors for the biological treatment of solid waste.

Item	Commentary
[60] – [62] [99]	Introduces a Method 4 for the biological treatment of solid waste at the landfill in enclosed composting facilities.
[66-68]	Clarifies the intent of the waste stream reporting requirements. Allows landfill operators to report site-specific waste stream data where the State or Territory regulations specify stream classifications that do not align with NGER stream classifications.
[63] – [65] [69], [79], [81-82] [89]	Introduces a new set of homogenous waste streams with discrete requirements for reporting of composition distinct from those in currently place for general waste streams (Municipal Solid Waste, Commercial & Industrial and Construction & Demolition).
[70] – [78] [88]	Minor corrections to waste mix type names.
[80] [84 - 87]	Clarifies existing provisions dealing with the use of local climate data for the selection of decay rate constants.
[90-96]	Introduces a method for deriving the whole of landfill collection efficiency for application under Method 2.
[97]	Clarifies requirements for the selection of representative zones.

[98]	Minor correction to subsection 5.18(2).
[99]	Revises default emission factors for the estimation of methane and nitrous oxide emissions from the biological treatment of solid waste at the landfill.
[83]	Renumbering duplicate 5.14(6) to 5.14 (7).

Part 5.4 Wastewater handling (industrial)

Item	Commentary
[100]	Corrects reference to industrial wastewater.
[101] – [102]	Removes specific reference to carcass weight and raw sugar to better reflect the range of possible commodities covered by industrial wastewater treatment.

CHAPTER 6: ENERGY

Item	Commentary
[103] – [104]	Updates references to the Regulations and Chapter 2 of the Determination.

CHAPTER 7: SCOPE 2 EMISSIONS

Item	Commentary
[105]	Makes measuring and reporting scope 2 emissions from purchased electricity optional if the amount purchased that results in scope 2 emissions is less than 20,000 kilowatt hours at a facility. The amount of 20,000 kilowatt hours was chosen because it is more than the average amount consumed in a year by a 6 person household in Australia.

CHAPTER 8: ASSESSMENT OF UNCERTAINTY

Part 8.3 How to assess uncertainty when using method 1

Item	Commentary
[106]	Adding Method 1 uncertainty levels for new solid fuel types.

SCHEDULE 1

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

Item	Commentary
[107]	Annual update of scope 2 emission factors reflecting generation within the electricity market in the last financial year.

SCHEDULE 2

Part 1 Solid fuels and coal based products

Item	Commentary
[108]	Adding standards for analysing new solid fuel types.

SCHEDULE 3

Part 1 Solid fuels and coal based products

Item	Commentary
[109]	Adding carbon content factors for new solid fuel types.

ATTACHMENT B

DOCUMENTS INCORPORATED BY REFERENCE

Chapter 1: General

The Australian Geological Provinces Database is published by Geoscience Australia and can be obtained at: http://www.ga.gov.au/.

The *Physical Science Basis (2007)*, published by the Intergovernmental Panel on Climate Change (IPCC) can be obtained at: http://www.ipcc.ch/publications_and_data/publications_ipcc_fourth_assessment_report_wg1_report_the_physical_science_basis.htm

Chapter 3: Fugitive emissions

The following standards, published by Standards Australia (SA), can be obtained at: http://www.standards.org.au/.

- *AS 1038.1—2001, Coal and coke - Analysis and testing - Higher rank coal - Total moisture (2001).*
- *AS 1038.3—2000, Coal and coke - Analysis and testing - Higher rank coal - Moisture-holding capacity (equilibrium moisture) (2000).*
- *AS 1038.5—1998, Coal and coke - Analysis and testing - Gross calorific value (1998).*
- *AS 1038.6.1—1997, Coal and coke - Analysis and testing - Higher rank coal and coke - Ultimate analysis - Carbon and hydrogen (1997).*
- *AS 1038.6.4—2005, Coal and coke - Analysis and testing - Higher rank coal and coke - Ultimate analysis - Carbon, hydrogen and nitrogen - Instrumental method (2005).*
- *AS 4264.1-1995, Coal and coke – Sampling – Coal – Sampling procedures (1995).*

Chapter 5: Waste

The following guidelines, published by the US Environmental Protection Agency (USEPA), can be obtained at: http://www.epa.gov/.

- *USEPA Method 2E—Determination of landfill gas production flow rate (September, 2011).*

The following guidelines, published by the Australian Bureau of Meteorology (BOM), can be obtained at: http://www.bom.gov.au/.

- *Guidelines for the Siting and Exposure of Meteorological Instruments and Observing Facilities (Observation Specification No. 2013.1) (January 1997).*

ATTACHMENT C

STATEMENT OF COMPATIBILITY WITH HUMAN RIGHTS

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 Determination 2013 (No. 1)

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

This Instrument amends the *National Greenhouse and Energy Reporting (Measurement) Determination 2008* (the Determination). The Determination is made under section 7B and 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 and (d) potential greenhouse gas emissions embodied in an amount of natural gas.

Human rights implications

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

Conclusion

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

Greg Combet

Minister for Climate Change, Industry and Innovation