



# **National Greenhouse and Energy Reporting (Measurement) Amendment (2024 Update) Determination 2024**

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I, Chris Bowen, Minister for Climate Change and Energy, make the following determination.

Dated                    26 June 2024

Chris Bowen  
Minister for Climate Change and Energy

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## 1 Name

This instrument is the *National Greenhouse and Energy Reporting (Measurement) Amendment (2024 Update) Determination 2024*.

## 2 Commencement

- (1) Each provision of this instrument specified in column 1 of the table commences, or is taken to have commenced, in accordance with column 2 of the table. Any other statement in column 2 has effect according to its terms.

<b>Commencement information</b>		
<b>Column 1</b>	<b>Column 2</b>	<b>Column 3</b>
<b>Provisions</b>	<b>Commencement</b>	<b>Date/Details</b>
1. Sections 1 to 4 and anything in this instrument not elsewhere covered by this table	1 July 2024.	
2. Schedule 1, item 6	1 July 2025.	
3. Schedule 1, item 7	1 July 2026.	

Note: This table relates only to the provisions of this instrument as originally made. It will not be amended to deal with any later amendments of this instrument.

- (2) Any information in column 3 of the table is not part of this instrument. Information may be inserted in this column, or information in it may be edited, in any published version of this instrument.

## 3 Authority

This instrument is made under subsection 10(3) of the *National Greenhouse and Energy Reporting Act 2007*.

## 4 Schedules

Each instrument that is specified in a Schedule to this instrument is amended or repealed as set out in the applicable items in the Schedule concerned, and any other item in a Schedule to this instrument has effect according to its terms.

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## Schedule 1—Amendments

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

#### 1 Section 1.4 (note)

Omit “4.10, 4.11, 4.13, 4.14, 4.15 and 4.17”, substitute “4.07(2), 4.10, 4.11, 4.13, 4.14, 4.15, 4.17 and 4.17B”.

#### 2 Section 1.8 (Definitions)

In the appropriate alphabetic position, add:

**2021 API Compendium** means the document entitled *Compendium of Greenhouse Gas Emissions Methodologies for the Oil and Natural Gas Industry*, published in November 2021 by the American Petroleum Institute.

Note: The 2021 API Compendium is available at [www.api.org](http://www.api.org).

**shared infrastructure** means fuel supply infrastructure from which fuel may be drawn by multiple facilities.

Note: for example, a Joint User Hydrant Installation.

#### 3 Subsections 2.23(1) and 2.23(2)

Repeal the subsections, substitute:

(1) Samples must be collected on enough occasions to be representative.

#### 4 Section 2.67 (notation)

At the end of the section, insert:

Note: The application of this section is subject to section 2.67B.

#### 5 After section 2.67A

Add:

##### **2.67B Market-based approach for determining the amount of renewable liquid fuel in a blended fuel supplied through shared infrastructure**

- (1) Where a renewable liquid fuel is supplied through shared infrastructure as a component of a blended fuel with its fossil fuel equivalent, section 2.67 does not apply for the purposes of determining the amounts of each kind of fuel that is in the blended fuel drawn from the shared infrastructure.
- (2) A person may only report to have combusted an amount of renewable liquid fuel in an amount of blended fuel drawn from shared infrastructure, if:
  - (a) the person retains and can provide to the Regulator:
    - (i) invoices from the relevant vendor or vendors of the fuel evidencing:
      - (A) purchase of the amount of renewable liquid fuel being reported;

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- (B) purchase of the total amount of blended fuel drawn from the shared infrastructure that was combusted from the operation of the facility; and
  - (ii) written evidence from the vendor of fuel, or other responsible party, that the amount of renewable liquid fuel reported, has been delivered into the shared infrastructure on behalf of the facility; and
  - (iii) a certificate or declaration from the vendor of the fuel demonstrating that the renewable liquid fuel delivered into the shared infrastructure is derived or recovered from biomass.
- (b) the amount of renewable liquid fuel reported to have been combusted, is less than or equal to the total amount of blended fuel drawn from the shared infrastructure.
- (3) If a person reports to have combusted an amount of renewable liquid fuel under subsection (2), they must report an amount of the fossil fuel equivalent as having been combusted from the operation of the facility, equal to the total amount of blended fuel drawn from the shared infrastructure minus the amount of renewable liquid fuel reported.
- (4) If a person does not report combustion of any renewable liquid fuel under subsection (2), all blended fuel drawn by that person from shared infrastructure must be reported as the fossil fuel equivalent.
- (5) In this section, **renewable liquid fuel** means renewable aviation kerosene, renewable diesel or biodiesel.
- (6) In this section, **fossil fuel equivalent** means:
- (a) for renewable aviation kerosene – kerosene for use as fuel in an aircraft;
  - (b) for renewable diesel and biodiesel – diesel oil.

## 6 After subsection 3.19(2)

Add:

- (2A) Method 1 must not be used for estimating fugitive emissions of methane from the extraction of coal from the mine, if the facility:
- (a) is covered by section 22XJ of the Act, and
  - (b) reported more than 10 million tonnes run-of-mine coal extracted from an open cut mine during the financial year starting on 1 July 2022 and ending 30 June 2023.

## 7 Subsection 3.19(2A)

Repeal the subsection, substitute:

- (2A) Method 1 must not be used for estimating fugitive emissions of methane from the extraction of coal from the mine, if the facility is covered by section 22XJ of the Act.

## 8 After paragraph 3.42(g)

Add:

; and (h) mud degassing.

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## 9 Subsection 3.46A(2)

Omit “process vents, systems upsets and accidents”, substitute “system upsets, accidents and deliberate releases from process vents”.

## 10 At the end of paragraph 3.46A(2)(a)

Add:

and (v) section 3.46AC (mud degassing).

## 11 Subsection 3.46A(3)

Omit “process vents, systems upsets and accidents”, substitute “system upsets, accidents and deliberate releases from process vents”.

## 12 After section 3.46AB

Add:

### 3.46AC Method 1— emissions from system upsets, accidents and deliberate releases from process vents— mud degassing

Method 1 is, for a process mentioned in column 2 of an item in the following table, as described in the section of the 2021 API Compendium in column 3 for the item.

Item	Emission process	2021 API Compendium section
1	Other venting sources—mud degassing	Section 6.2.1

## 13 Subsection 3.73NB(1)

Repeal the subsection, substitute:

(1) Method 2 is:

$$E_{ij} = (W_i \times EF_{ijw} \times S_{ij}/SD_{ij}) - Q_{j,cap}$$

Where:

$E_{ij}$  is the fugitive emissions (other than emissions that are vented or flared) of gas type ( $j$ ) being methane from the produced water from the relevant activity during the year measured in CO<sub>2</sub>-e tonnes.

$W_i$  is the net quantity of produced water during the year associated with the relevant activity measured in megalitres of produced water, where the net quantity is the total quantity of produced water during the year minus the total quantity of produced water not exposed to the atmosphere that is reinjected over the same period.

$EF_{ijw}$  is the emission factor for gas type ( $j$ ), being methane, measured in CO<sub>2</sub>-e tonnes per megalitre of produced water associated with the relevant activity during the year as determined under subsection (2).



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$S_{ij}$  is the measured share of gas type ( $j$ ) being methane in the unprocessed gas ( $i$ ), by volume, measured in accordance with Division 2.3.3 and the principles in section 1.13.

$SD_{ij}$  is the default share of gas type ( $j$ ) in the unprocessed gas ( $i$ ), for methane  $SD$  is 0.832.

$Q_{j,cap}$  is the quantity of gas type ( $j$ ), being methane from the produced water from the relevant activity captured during the year (before reaching the resource pond) and re-injected back into the gathering line, measured in CO<sub>2</sub>-e tonnes and estimated in accordance with Division 2.3.6.

Note: The energy content of the quantity of methane in  $Q_{j,cap}$  must be reported in the quantity of energy produced for the relevant fuel type. The additional energy produced carries through any subsequent energy transformations and processing.

**14 Subsection 3.73Q(3) (definition  $EF_{js}$  and  $Q_i$ )**

Omit “gathering and boosting”, substitute “processing”.

**15 Sections 3.85A, 3.85B, 3.85K, 3.85L, 3.85M, 3.85N**

Omit every occurrence of “Method 1”, substitute “Method 2”.

**16 Sections 3.85A, 3.85K, 3.85M (notations)**

Omit every occurrence of “method 2” in the note, substitute “method 1”.

**17 Sections 3.85B, 3.85L, 3.85N**

Omit “as described”, insert “the engineering calculations provided”.

**18 After subparagraph 3.85T(1)(a)(ii)**

Insert:

(iia) method 2B under section 3.87B;

**19 At the end of paragraph 3.85T(1)(b)**

Add:

(iii) method 2B under section 3.87B.

**20 After subsection 3.85T(1)**

Insert:

(1A) If method 2B under section 3.87B has been used to estimate emissions of either methane or carbon dioxide released, no other method in this section may be used to estimate emissions of methane or carbon dioxide.

**21 Section 3.87A (definition  $EF_{hj}$ )**

Omit “3.85(2)”, substitute “3.86(2)”.

**22 At the end of section 3.87A**

Add:

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### 3.87B Method 2B—Natural gas production mass balance approach (flared methane and carbon dioxide emissions)

Method 2B is:

(1) For methane emissions:

$$E_{CH_4} = Q_{methane} \times (1 - OF_k) \times GWP_{methane}$$

Where:

$E_{CH_4}$  is the total methane emissions, in tonnes of CO<sub>2</sub>-e.

$Q_{methane}$  is the total quantity of methane within the flared gas ( $k$ ), in tonnes, calculated through a mass balance.

$OF_k$  is 0.98, which is the destruction efficiency of gas  $k$ .

$GWP_{methane}$  is the global warming potential of methane as prescribed in the Regulations.

(2) For carbon dioxide emissions:

$$E_{CO_2} = \left( Q_h \times CF_k \times OF_k \times \frac{44}{12} \right) + Q_{CO_2}$$

Where:

$E_{CO_2}$  is the total carbon dioxide emissions, in tonnes of CO<sub>2</sub>-e.

$Q_h$  is the total quantity of hydrocarbons ( $h$ ) within the flared gas ( $k$ ), in tonnes, calculated through a mass balance.

$CF_k$  is the carbon weight fraction within the hydrocarbon component of the flared gas  $k$ .

$OF_k$  is 0.98, which is the destruction efficiency of gas  $k$ .

$Q_{CO_2}$  is the quantity of carbon dioxide within the flared gas, in tonnes, calculated through the same mass balance approach as the estimate for methane content.

$\frac{44}{12}$  is the Carbon to CO<sub>2</sub> mass conversion factor.

Note: Mass balance refers to the Carbon mass balance approach set out in the 2021 API Compendium.

Note 2: If this method is used to methane emissions, it must also be used to estimate carbon dioxide emissions. Likewise, if it is used to estimate carbon dioxide emissions, it must be used to estimate methane emissions.

## 23 Section 3.96

Repeal the section, substitute:

### 3.96 Method 2—fugitive emissions from injection of a greenhouse gas into a geological formation (other than deliberate releases from process vents, system upsets and accidents)

(1) Method 2 is:

$$E_{ij} = \sum_k (T_{ik} \times N_{ik} \times EF_{ijk})$$

where:

$E_{ij}$  is the fugitive emissions of gas type ( $j$ ), being carbon dioxide, from the injection of a greenhouse gas into a geological formation during the year, measured in CO<sub>2</sub>-e tonnes.

$\sum_k$  is the total emissions of gas type ( $j$ ), being carbon dioxide, measured in CO<sub>2</sub>-e tonnes and estimated by summing up the emissions released from each equipment type ( $k$ ) specified in column 2 of an item in the table in subsection (2), if the equipment is used in the injection of a greenhouse gas into a geological formation.

$T_{ik}$  is the average hours of operation during the year of the equipment of each equipment type ( $k$ ), if the equipment is used in the injection of a greenhouse gas into a geological formation.

$N_{ik}$  is the total number of equipment units of each equipment type ( $k$ ), if the equipment type is used in the injection of a greenhouse gas into a geological formation during the year.

$EF_{ijk}$  is the emission factor of gas type ( $j$ ), being carbon dioxide, measured in tonnes of CO<sub>2</sub>-e per equipment type ( $k$ ) – hour as determined under subsection (2), if the equipment is used in the injection of a greenhouse gas into a geological formation.

Note: Consistent with subsection 3.41(2), emissions associated with any piece of equipment included in this definition should not be counted under this section if those emissions are also counted as equipment emissions under another section within this Part.

(2) For  $EF_{ijk}$  in subsection (1):

(a) column 3 of an item in the following table specifies the emission factor for carbon dioxide ( $j$ ) for an equipment type ( $k$ ) specified in column 2 of that item:

Item	Equipment type (k)	Emission factor for gas type (j)	
		CO <sub>2</sub>	Units
1	Injection wellheads	$1.25 \times 10^{-6}$	tonnes CO <sub>2</sub> -e /equipment - hour
2	Reciprocating compressor	$1.14 \times 10^{-4}$	tonnes CO <sub>2</sub> -e /equipment - hour
3	Screw compressor	$7.15 \times 10^{-5}$	tonnes CO <sub>2</sub> -e /equipment - hour
4	Metering installation and associated piping	$2.45 \times 10^{-6}$	tonnes CO <sub>2</sub> -e /equipment - hour

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- (b) if the manufacturer of the equipment supplies equipment-specific emission factors for the equipment type—those factors are the relevant emissions factors.

**24 Subsections 5.4(2), 5.4(3), 5.15(3), 5.15(4), 5.15(5), 5.15A(1), 5.15B(1)**

Omit every occurrence of “collection efficiency amount”, substitute “collection efficiency limit”.

**25 Subsections 5.4(3) and 5.15(4) (definition of CEA)**

Omit “CEA”, substitute “CEL”.

**26 Subsections 5.4(3) and 5.15(4)**

Omit the following equation:

$$\text{CH}_4^* = \gamma (Q_{\text{cap}} + Q_{\text{flared}} + Q_{\text{tr}}) \times \left( \frac{1}{\text{CEA}} \right)$$

Substitute:

$$\text{CH}_4^* = \gamma (Q_{\text{cap}} + Q_{\text{flared}} + Q_{\text{tr}}) \times \left( \frac{1}{\text{CEL}} \right)$$

**27 Subsection 5.15A(3) (Note 2)**

Omit every occurrence of “collection efficiency amount” in Note 2, substitute “collection efficiency limit”.

**28 Subsection 5.4B(1)**

Omit “0.75”, substitute “the collection efficiency limit for the landfill calculated in accordance with section 5.15C”.

**29 Subsection 5.4B(3) (Note 2)**

Omit every occurrence of “0.75” in Note 2, substitute “the collection efficiency limit for the landfill calculated in accordance with section 5.15C”.

**30 Subsection 5.4C(1)**

Omit “0.75”, substitute “the collection efficiency limit for the landfill calculated in accordance with section 5.15C”.

**31 Section 5.4D (Note 4)**

Omit every occurrence of “0.75” in Note 4, substitute “the collection efficiency limit for the landfill calculated in accordance with section 5.15C”.

**32 Subsection 5.15A(3) (Note 2)**

Omit every occurrence of “collection efficiency amount” in Note 2, substitute “collection efficiency limit”.

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### 33 After section 9.17

Add:

#### **9.18 Amendments made by the *National Greenhouse and Energy Reporting (Measurement) Amendment (2024 Update) Determination 2024***

- (1) The amendments made by items 1 to 5 and items 8 to 42 of the *National Greenhouse and Energy Reporting (Measurement) Amendment (2024 Update) Determination 2024* applies in relation to:
  - (a) the financial year starting on 1 July 2024; and
  - (b) later financial years.
- (2) The amendments made by items 6 and 7 of the *National Greenhouse and Energy Reporting (Measurement) Amendment (2024 Update) Determination 2024* applies in relation to:
  - (a) the financial years beginning at the commencement of those amendments; and
  - (b) later financial years.

*The Regulator may approve transitional use of Method 1 to estimate fugitive emissions of methane from the extraction of coal from open-cut mines*

- (3) Despite the amendments made by items 6 and 7 in the *National Greenhouse and Energy Reporting (Measurement) Amendment (2024 Update) Determination 2024*, Method 1 under paragraph 3.19(2)(a) may be used for a facility in a reporting year, if the Regulator approves an application for that facility to use Method 1.
- (4) An application under subsection (3) must:
  - (a) be in writing;
  - (b) specify a reporting year in which the applicant proposes to use Method 1;
  - (c) be submitted to the Regulator no later than three months prior to the commencement of the reporting year relevant to the application;
  - (d) explain the following:
    - (i) how the applicant has made early and reasonable efforts to use Methods 2 or 3 referred to in subsection 3.19(2) for the relevant reporting year; and
    - (ii) why the applicant is not able to use Methods 2 or 3 referred to in subsection 3.19(2) for the relevant reporting year, due to circumstances outside its control;
  - (e) contain written evidence to support the explanations provided under paragraph 4(d).

Note: An application may only be made in relation to one reporting year. However, more than one application may be made for a facility.

- (5) Despite paragraph (4)(c), the Regulator may at its discretion, consider an application that has been submitted outside of the time period required under that paragraph.
- (6) If the Regulator does not approve an application made under subsection (4), the Regulator must notify the applicant of its decision and provide reasons for this decision.

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*Reconsideration of a transitional use decision*

- (7) A person who has received a notification under subsection (6) who is dissatisfied with the decision may apply to the Regulator for the Regulator to reconsider the decision.
- (8) An application under subsection (7) must:
  - (a) be in a form approved by the Regulator;
  - (b) set out the reasons for the application; and
  - (c) be submitted to the Regulator within 28 days of the person receiving the notification under subsection (6).
- (9) The Regulator must reconsider the decision and affirm, vary or revoke the decision.
- (10) A reconsideration decision under subsection (9) may have effect as if it had been made at the time of the original decision under subsection (3).
- (11) The Regulator must notify the applicant of its decision on reconsideration and provide reasons for this decision.
- (12) Application may be made to the Administrative Appeals Tribunal for review of a decision of the Regulator under subsection (9).

### **34 Schedule 4 (under the Schedule heading)**

Omit “4.10, 4.11, 4.13, 4.14, 4.15 and 4.17”, substitute “4.07(2), 4.10, 4.11, 4.13, 4.14, 4.15, 4.17 and 4.17B”.

### **35 Before Part 1 of Schedule 4**

Add:

#### **Part 1A—Fuel combustion**

<b>Item</b>	<b>Method</b>	<b>Matters to be identified</b>
1	Any method set out in Parts 2.2, 2.3, 2.4 and 1.3.	For each blended fuel combusted at a facility: <ol style="list-style-type: none"><li>(a) The section under Part 2.6 used to determine the amounts of each kind of fuel in the blended fuel.</li><li>(b) The total amount of blended fuel, corrected to standard conditions, for which the section under paragraph (a) has been used, in:<ol style="list-style-type: none"><li>(i) if the blended fuel is a solid fuel – tonnes;</li><li>(ii) if the blended fuel is a liquid fuel – kilolitres;</li><li>(iii) if the blended fuel is a gaseous fuel – cubic metres.</li></ol></li><li>(c) The amount of each type of fuel, corrected to standard conditions, that is contained in the blended fuel, determined in accordance with the section under paragraph (a), in:<ol style="list-style-type: none"><li>(i) if the blended fuel is a solid fuel – tonnes;</li><li>(ii) if the blended fuel is a liquid fuel – kilolitres;</li><li>(iii) if the blended fuel is a gaseous fuel – cubic metres.</li></ol></li></ol>

Note: The matters to be identified for Item 1 in the table to Part 1A should be reported for the cumulative amount of each type of blended fuel combusted at the facility during the reporting period, not on a batch-by-batch basis.

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**36 Schedule 4, Part 2 (Table under Source 2R—Onshore natural gas production—venting)**

After “Methods 1”, insert “2”.

**37 Schedule 4, Part 2 (Table under Source 2S—Offshore natural gas production—venting)**

After “Methods 1”, insert “2”.

**38 Schedule 4, Part 2, under Source 2T—Onshore natural gas production—flaring (after Table item 2)**

Insert:

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Item	Method	Matters to be identified
3	Method 2B for the source, as set out in subsection 3.87B(1)	(a) the tonnes of flared gas (b) the tonnes and gigajoules of methane within the flared gas, calculated through a mass balance
4	Method 2B for the source, as set out in subsection 3.87B(2)	(a) the tonnes of flared crude oil and liquids (hydrocarbon component) within the flared gas, calculated through a mass balance

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**39 Schedule 4, Part 2, under Source 2U—Offshore natural gas production—flaring (after Table item 2)**

Insert:

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Item	Method	Matters to be identified
3	Method 2B for the source, as set out in subsection 3.87B(1)	(a) the tonnes of flared gas (b) the tonnes and gigajoules of methane within the flared gas, calculated through a mass balance
4	Method 2B for the source, as set out in subsection 3.87B(2)	(a) the tonnes of flared crude oil and liquids (hydrocarbon component) within the flared gas, calculated through a mass balance

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**40 Schedule 4, Part 6, Source 4A—Solid waste disposal on land (Table item 1, column headed ‘Matters to be identified’, after clause (i)(viii))**

Insert:

(ix) the tonnes of methane (CO<sub>2</sub>-e), other than legacy emissions, that would be emitted if emissions were not captured, and oxidation did not occur, calculated as:

$$NLCH_4 = \frac{\text{non - legacy emissions}}{1 - OF} + CH_4 \text{ recovery}$$

Where:

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‘NLCH<sub>4</sub>’ is the tonnes of methane (CO<sub>2</sub>-e), other than legacy emissions, that would be emitted by the facility if emissions were not captured, and oxidation did not occur.

‘Non-legacy emissions’ is the emissions (CO<sub>2</sub>-e), other than legacy emissions, from the decomposition of waste.

‘OF’ is the oxidation factor (0.1) for near surface methane in the landfill.

‘CH<sub>4</sub> recovery’ is the sum of the tonnes of methane (CO<sub>2</sub>-e), other than legacy emissions, that are captured for combustion, or captured and transferred offsite, and flared.

#### 41 Schedule 4, Part 7 (Scope 2 emissions)

Repeat the Part (not including the heading), substitute:

For the purposes of paragraph 4.17B(2)(b) of the Regulations, the matters that must be included in a report are:

<b>Item</b>	<b>Method</b>	<b>Matters to be identified</b>
1	Method B as set out in section 7.4	The values Q, Q <sub>exempt</sub> , REC <sub>surr</sub> and RE <sub>Consite</sub> used to estimate scope 2 emissions under the method.
2	Methods A1, A2 and B, as set out in sections 7.2, 7.3 and 7.4	If a registered corporation has reported scope 1 emissions under Chapter 2 from the combustion of fuel for the purpose of generating electricity, and scope 2 emissions under Chapter 7 from the consumption of that electricity: <ul style="list-style-type: none"><li>(i) the identity of the facility generating that electricity, and</li><li>(ii) the identity of the facility consuming that electricity.</li></ul>