Reprint
as at 1 January 2017

Climate Change (Stationary Energy and Industrial Processes) Regulations 2009

(SR 2009/285)

Rt Hon Sir Peter Blanchard, Administrator of the Government

Order in Council

At Wellington this 28th day of September 2009

Present:
His Excellency the Administrator of the Government in Council

Pursuant to section 163 of the Climate Change Response Act 2002, His Excellency the Administrator of the Government, acting on the advice and with the consent of the Executive Council and on the recommendation of the Minister for Climate Change Issues, makes the following regulations.

Contents

		Page
1	Title	5
2	Commencement	5
	Part 1 **Preliminary matters**	
3	Interpretation	6
4	Meaning of class	10

Note

Changes authorised by subpart 2 of Part 2 of the Legislation Act 2012 have been made in this official reprint.

Note 4 at the end of this reprint provides a list of the amendments incorporated.

These regulations are administered by the Ministry for the Environment.

5 EPA may issue guidelines or standards 12

Part 2
Stationary energy participants

Importing coal

6 Application of regulations 7 and 8 13
7 Collection and recording of information for purpose of calculating emissions from importing coal 13
8 Method of calculating emissions from importing coal 13

Mining coal

9 Application of regulations 10 and 11 15
10 Collection and recording of information for purpose of calculating emissions from mining coal 15
11 Method of calculating emissions from mining coal 16
11A Application of regulations 11B and 11C 18
11B Collection and recording of information for purpose of calculating emissions from coal converted to gas via UCG operation 19
11C Method of calculating emissions from coal converted to gas via UCG operation 19

Importing natural gas

12 Application of regulations 13 and 14 19
13 Collection and recording of information for purpose of calculating emissions from importing natural gas 20
14 Method of calculating emissions from importing natural gas 20

Mining natural gas

15 Application of regulations 16 and 17 22
16 Collection and recording of information for purpose of calculating emissions from natural gas mined other than for export 22
17 Method of calculating emissions from natural gas mined other than for export 25

Using geothermal fluid

18 Application of regulations 19 and 20 27
19 Collection and recording of information for purpose of calculating emissions from using geothermal fluid 27
20 Method of calculating emissions from using geothermal fluid 28

Combusting used oil, waste oil, used tyres, or waste

21 Application of regulations 22 to 26 29
22 Standard method for calculating emissions from combusting used oil, waste oil, used tyres, or municipal waste—option 1 30
23 Standard method for calculating emissions from combusting used oil, waste oil, used tyres, or municipal waste—option 2 31

24	Continuous emissions monitoring method for calculating emissions from combusting used oil, waste oil, used tyres, or municipal waste	33
25	Periodic source testing method for calculating emissions from combusting used oil, waste oil, used tyres, or municipal waste	36
26	Calculating total emissions from combusting used oil, waste oil, used tyres, or municipal waste	37
26A	Application of regulations 26B and 26C	38
26B	Collection and recording of information for purpose of calculating emissions in respect of industrial waste	38
26C	Method of calculating emissions from coal converted to gas via UCG operation in respect of industrial waste	38
	Refining petroleum	
27	Application of regulations 28 and 29	39
28	Collection and recording of information for purpose of calculating emissions from refining petroleum	39
29	Method of calculating emissions from refining petroleum	39
29A	Application of regulations 29B and 29C	40
29B	Collection and recording of information for purpose of calculating emissions from using specified liquid hydrocarbons	40
29C	Method of calculating emissions from using specified liquid hydrocarbons	40
	Part 3 **Industrial processes participants**	
	Producing iron or steel	
30	Application of regulations 31 and 32	41
31	Collection and recording of information for purpose of calculating emissions from producing iron or steel	41
32	Method of calculating emissions from producing iron or steel	42
	Producing aluminium	
33	Application of regulations 34 and 35	42
34	Collection and recording of information for purpose of calculating emissions from producing aluminium	42
35	Method of calculating emissions from producing aluminium	43
	Producing clinker or burnt lime	
36	Application of regulations 37 and 38	44
37	Collection and recording of information for purpose of calculating emissions from producing clinker or burnt lime	44
38	Method of calculating emissions from producing clinker or burnt lime	44

Producing glass using soda ash

39 Application of regulations 40 and 41 45
40 Collection and recording of information for purpose of calculating emissions from producing glass 45
41 Method of calculating emissions from producing glass 45

Producing gold

42 Application of regulations 43 and 44 46
43 Collection and recording of information for purpose of calculating emissions from producing gold 46
44 Method of calculating emissions from producing gold 46

Using sulphur hexafluoride in electrical switchgear

44A Application of regulations 44B and 44C 47
44B Collection and recording of information for calculating emissions from use of sulphur hexafluoride in pre-charged equipment 47
44C Method of calculating emissions from use of sulphur hexafluoride 48
44D Method of calculating emissions from importing bulk sulphur hexafluoride *[Revoked]* 48
44E Collection of information for purpose of calculating emissions from importing sulphur hexafluoride in pre-charged equipment *[Revoked]* 49
44F Method of calculating emissions from importing sulphur hexafluoride in pre-charged equipment *[Revoked]* 49

Importing hydrofluorocarbons or perfluorocarbons

44G Application of regulations 44H to 44N 49
44H Collection and recording of information for purpose of calculating emissions from importing hydrofluorocarbons or perfluorocarbons 49
44I Collection of information for purpose of calculating emissions from importing bulk hydrofluorocarbons or perfluorocarbons 49
44J Method of calculating emissions from importing bulk hydrofluorocarbons or perfluorocarbons 50
44K Collection of information for purpose of calculating emissions from importing hydrofluorocarbons or perfluorocarbons in pre-charged equipment *[Revoked]* 50
44L Method of calculating emissions from importing hydrofluorocarbons or perfluorocarbons in pre-charged equipment *[Revoked]* 51
44M Collection of information for purpose of calculating emissions from importing hydrofluorocarbons or perfluorocarbons in motor vehicles *[Revoked]* 51
44N Method of calculating emissions from importing hydrofluorocarbons or perfluorocarbons in motor vehicles *[Revoked]* 51

Manufacturing synthetic greenhouse gases

44O Application of regulations 44P and 44Q 51
44P Collection of information for purpose of calculating emissions from manufacturing synthetic greenhouse gases 51
44Q Method of calculating emissions from manufacturing synthetic greenhouse gases 52

Determination of GWP

44R Determination of GWP figure for class of synthetic greenhouse gas 53

Part 4
Opt-in participants

Purchasing coal

45 Application of regulations 46 and 47 53
46 Collection and recording of information for purpose of calculating emissions from purchasing coal 54
47 Method of calculating emissions in relation to purchasing coal 54

Purchasing natural gas

48 Application of regulations 49 and 50 55
49 Collection and recording of information for purpose of calculating emissions from purchasing natural gas 56
50 Method of calculating emissions in relation to purchasing natural gas 57

Schedule 1 61
Stockpile adjustments for activities of importing and purchasing coal

Schedule 2 71
Emissions and oxidation factors

Schedule 2A 76
Figures for synthetic greenhouse gases

Schedule 3 78
Storage adjustments for activities of purchasing natural gas

Regulations

1 Title

These regulations are the Climate Change (Stationary Energy and Industrial Processes) Regulations 2009.

2 Commencement

These regulations come into force on 1 January 2010.

Part 1
Preliminary matters

3 Interpretation

(1) In these regulations, unless the context otherwise requires,—

Act means the Climate Change Response Act 2002

Aluminium Sector Greenhouse Gas Protocol means the *Aluminium Sector Greenhouse Gas Protocol (Addendum to the WRI/WBCSD Greenhouse Gas Protocol): Greenhouse Gas Emissions Monitoring and Reporting by the Aluminium Industry* (October 2006) produced by the International Aluminium Institute

ASHRAE designation means the designation of a refrigerant mix from Standard 34–2007 *Designation and Safety Classification of Refrigerants*, published in 2007 by the American National Standards Institute/American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc

biomass means—

(a) a material or fuel in respect of which at least 97% (related to mass) of the total carbon content comes from non-fossilised and biodegradable organic material originating from plants, animals, or micro-organisms; and

(b) includes—

(i) non-fossilised and biodegradable organic fractions of industrial and municipal waste; and

(ii) gases and liquids recovered from the decomposition of non-fossilised and biodegradable organic material

bituminous coal has the meaning set out in Schedule 2

calorific value means the energy content of a fuel on a gross or high heating value basis, expressed in terajoules per tonne of fuel

category, in relation to coal, means,—

(a) if there is no unique emissions factor for fugitive coal seam gas in force in relation to the coal, a category specified in Part A of table 3 of Schedule 2; or

(b) if a unique emissions factor for fugitive coal seam gas is in force in relation to the coal, the category of coal to which the unique emissions factor relates

class has the meaning set out in regulation 4

coal miner means—

(a) a person who is required to comply with regulations 10 and 11; or

(b) a person who is—

(i) a wholly owned subsidiary of a person referred to in paragraph (a); or

(ii) a holding company of which a person referred to in paragraph (a) is the wholly owned subsidiary; or

(iii) a wholly owned subsidiary of a holding company of which a person referred to in paragraph (a) is also a wholly owned subsidiary

customs point means the point where goods are entered for import under section 39 or export under section 49 of the Customs and Excise Act 1996

flare, in relation to natural gas, means dispose of by combusting in flares or burners during the production and processing of natural gas

gas miner means—

(a) a person who is required to comply with regulations 16 and 17; or

(b) a person who is—

(i) a wholly owned subsidiary of a person referred to in paragraph (a); or

(ii) a holding company of which a person referred to in paragraph (a) is the wholly owned subsidiary; or

(iii) a wholly owned subsidiary of a holding company of which a person referred to in paragraph (a) is also a wholly owned subsidiary

GWP means global warming potential

holding company has the same meaning as in section 5 of the Companies Act 1993

industrial waste means waste from the production of aluminium or the refinement of oil

lignite has the meaning set out in Schedule 2

LNG means liquefied natural gas

LPG means liquefied petroleum gas

mass fraction means the ratio of the mass of a component in a mixture to the total mass of the mixture

mining facility means a facility where coal is mined; and includes coal mined from different seams within the facility

motor vehicle has the same meaning as in section 2(1) of the Land Transport Act 1998

municipal waste means waste other than industrial waste

obligation coal—

(a) means coal—

(i) imported on or after 1 January 2010 by a person who is required to comply with regulations 7 and 8; or

(ii) mined on or after 1 January 2010 by a person who is required to comply with regulations 10 and 11; and

(b) includes a product (for example coke) derived from coal referred to in paragraph (a)

obligation fuel has the same meaning as in regulation 3 of the Climate Change (Liquid Fossil Fuels) Regulations 2008

obligation natural gas means natural gas—

(a) imported on or after 1 January 2010 by a person who is required to comply with regulations 13 and 14; or

(b) mined on or after 1 January 2010 by a person who is required to comply with regulations 16 and 17

opt-in coal participant means a person who is required to comply with regulations 46 and 47

opt-in natural gas participant means a person who is required to comply with regulations 49 and 50

own use, in relation to the combustion of mined natural gas, means combusted during production and processing operations for purposes that include heat generation, gas compression, or electricity generation

peat has the meaning set out in Schedule 2

point of sale, in relation to—

(a) mining or purchasing coal, means the point at which the sale of coal is deemed to have occurred in accordance with generally accepted accounting practice:

(b) mining or purchasing natural gas, means the first fiscal meter downstream of gas processing

sub-bituminous coal has the meaning set out in Schedule 2

subsidiary has the same meaning as in section 5 of the Companies Act 1993

synthetic greenhouse gas means—

(a) any hydrofluorocarbon (HFC); or

(b) any perfluorocarbon (PFC)

(c) *[Revoked]*

UCG operation means an underground coal gasification operation in which—

(a) coal is converted to gas by—

(i) pumping air into an underground coal seam; and

(ii) partially combusting coal in the coal seam; and

(b) the gas is brought to the surface

unique emissions factor means a unique emissions factor that the EPA has, under section 91 of the Act, approved a participant to use for the purpose of calculating emissions in accordance with these regulations

vent, in relation to natural gas, means release uncombusted gas into the atmosphere during the production and processing of natural gas.

(2) In a formula used in these regulations, the symbols in the first column have the meaning set out in the second column, as follows:

∑	the summation of the calculated amounts that follow the symbol
Al	aluminium
C_2F_6	hexafluoroethane
CF_4	carbon tetrafluoromethane
CH_4	methane
CO_2	carbon dioxide
kg	kilogram
N_2O	nitrous oxide
t	tonnes
tCO_2e	tonnes of carbon dioxide equivalent gases
TJ	terajoules

(3) A reference to a test method containing an acronym listed in the first column in the following table means a standard, or test method related to an organisation, that is listed in the second column of the table:

Test method	Standard or organisation
ASTM	ASTM International
GPA	Gas Processing Association
ISO	International Organization for Standardization
USEPA	United States Environmental Protection Agency
VDI	The Association of German Engineers

(4) Unless the context otherwise requires, if a test method prescribed in these regulations provides for alternative methods, each method has equal standing, and any of the methods may be used.

(5) A unique emissions factor is in force for the purposes of these regulations if—

(a) its use to calculate emissions has been approved by the EPA under section 91(1) of the Act; and

(b) the approval has not ceased to have effect under section 91(2) of the Act.

Regulation 3(1) **ASHRAE designation**: inserted, on 1 January 2011, by regulation 4(1) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2010 (SR 2010/340).

Regulation 3(1) **category**: replaced, on 1 January 2013, by section 103 of the Climate Change Response (Emissions Trading and Other Matters) Amendment Act 2012 (2012 No 89).

Regulation 3(1) **charge**: revoked, on 1 January 2013, by section 103 of the Climate Change Response (Emissions Trading and Other Matters) Amendment Act 2012 (2012 No 89).

Regulation 3(1) **chief executive**: revoked, on 5 December 2011, by section 53(2) of the Environmental Protection Authority Act 2011 (2011 No 14).

Regulation 3(1) **coal miner**: replaced, on 8 December 2009, by section 88(2) of the Climate Change Response (Moderated Emissions Trading) Amendment Act 2009 (2009 No 57).

Regulation 3(1) **excluded goods**: revoked, on 1 January 2013, by section 103 of the Climate Change Response (Emissions Trading and Other Matters) Amendment Act 2012 (2012 No 89).

Regulation 3(1) **gas miner**: replaced, on 8 December 2009, by section 88(2) of the Climate Change Response (Moderated Emissions Trading) Amendment Act 2009 (2009 No 57).

Regulation 3(1) **GWP**: inserted, on 1 January 2011, by regulation 4(1) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2010 (SR 2010/340).

Regulation 3(1) **holding company**: inserted, on 8 December 2009, by section 88(2) of the Climate Change Response (Moderated Emissions Trading) Amendment Act 2009 (2009 No 57).

Regulation 3(1) **industrial waste**: inserted, on 1 February 2012 (applying on and from 1 January 2011), by regulation 5 of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2011 (SR 2011/364).

Regulation 3(1) **mining facility**: inserted, on 1 February 2012 (applying on and from 1 January 2011), by regulation 5 of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2011 (SR 2011/364).

Regulation 3(1) **motor vehicle**: inserted, on 1 January 2011, by regulation 4(1) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2010 (SR 2010/340).

Regulation 3(1) **municipal waste**: inserted, on 1 February 2012 (applying on and from 1 January 2011), by regulation 5 of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2011 (SR 2011/364).

Regulation 3(1) **pre-charged equipment**: revoked, on 1 January 2013, by section 103 of the Climate Change Response (Emissions Trading and Other Matters) Amendment Act 2012 (2012 No 89).

Regulation 3(1) **synthetic greenhouse gas**: inserted, on 1 January 2011, by regulation 4(1) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2010 (SR 2010/340).

Regulation 3(1) **synthetic greenhouse gas** paragraph (b): amended, on 1 January 2013, by section 103 of the Climate Change Response (Emissions Trading and Other Matters) Amendment Act 2012 (2012 No 89).

Regulation 3(1) **synthetic greenhouse gas** paragraph (c): revoked, on 1 January 2013, by section 103 of the Climate Change Response (Emissions Trading and Other Matters) Amendment Act 2012 (2012 No 89).

Regulation 3(1) **type**: revoked, on 1 January 2013, by section 103 of the Climate Change Response (Emissions Trading and Other Matters) Amendment Act 2012 (2012 No 89).

Regulation 3(1) **UCG operation**: inserted, on 1 February 2012 (applying on and from 1 January 2011), by regulation 5 of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2011 (SR 2011/364).

Regulation 3(1) **unique emissions factor**: amended, on 5 December 2011, by section 53(2) of the Environmental Protection Authority Act 2011 (2011 No 14).

Regulation 3(5)(a): amended, on 5 December 2011, by section 53(2) of the Environmental Protection Authority Act 2011 (2011 No 14).

4 Meaning of class

In these regulations, unless the context otherwise requires, **class**,—

(a) in relation to importing coal, means,—

(i) if there is no unique emissions factor in force in relation to the coal, a class of coal listed in the first column of table 1 of Schedule 2:

(ii) if a unique emissions factor is in force in relation to the coal, the class of coal to which the unique emissions factor relates:

(b) in relation to mining coal and purchasing coal, means,—

(i) if there is no unique emissions factor in force in relation to the coal, a class of coal listed in the first column of table 2 of Schedule 2:

(ii) if a unique emissions factor is in force in relation to the coal, the class of coal to which the unique emissions factor relates:

(c) in relation to importing natural gas, means any of the following:

(i) a class of natural gas listed in the first column of table 4 of Schedule 2:

(ii) a commercially produced blend of LPG with a propane content other than 60% by volume:

(d) in relation to mining natural gas, means any of the following:

(i) a clearly defined stream of natural gas—

(A) whose properties are measured downstream of gas processing and prior to mixing with other streams of gas; and

(B) that passes through a single fiscal meter:

(ii) natural gas sent to the low temperature separation plant at Kapuni:

(iii) LPG:

(iv) propane:

(v) butane:

(e) in relation to purchasing natural gas, means,—

(i) if there is no unique emissions factor in force in relation to the natural gas,—

(A) a class of natural gas listed in paragraph (d); or

(B) a class of natural gas defined by reference to the field at which it is mined as specified in table 10 of Schedule 2:

(ii) if a unique emissions factor is in force in relation to the natural gas, the class of natural gas to which the unique emissions factor relates:

(f) in relation to geothermal fluid, means,—

(i) if there is no unique emissions factor in force in relation to the geothermal fluid, a class of geothermal fluid described in the first column of Part A or Part B of table 6 of Schedule 2:

(ii) if a unique emissions factor is in force in relation to the geothermal fluid, the class of geothermal fluid to which the unique emissions factor relates:

(g) in relation to used oil, waste oil, used tyres, or waste, means,—

(i) if there is no unique emissions factor in force in relation to the used oil, waste oil, used tyres, or waste,—

(A) a class of used oil, waste oil, used tyres or waste listed in the first column of table 7 of Schedule 2; or

(B) a subset of a class referred to in subsubparagraph (A), which is combusted in particular equipment:

(ii) if there is a unique emissions factor in force in relation to used oil, waste oil, used tyres, or waste, the class of used oil, waste oil, used tyres, or waste to which the unique emissions factor relates.

(h) in relation to hydrofluorocarbons or perfluorocarbons, means—

(i) a refrigerant gas or mix described by reference to its ASHRAE designation and listed in the first column of table 2 of Schedule 2A; or

(ii) any other mix of constituents that—

(A) is not listed in the first column of table 2 of Schedule 2A; but

(B) contains a hydrofluorocarbon or perfluorocarbon listed in table 1 of Schedule 2A; or

(iii) if it is not mixed with other constituents, any hydrofluorocarbon or perfluorocarbon listed in table 1 of Schedule 2A:

(i) in relation to synthetic greenhouse gases, means a class of hydrofluorocarbons or perfluorocarbons specified in paragraph (h).

Regulation 4(h): inserted, on 1 January 2011, by regulation 5 of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2010 (SR 2010/340).

Regulation 4(i): replaced, on 1 January 2013, by section 103 of the Climate Change Response (Emissions Trading and Other Matters) Amendment Act 2012 (2012 No 89).

5 EPA may issue guidelines or standards

(1) The EPA may, by notice in the *Gazette*, issue guidelines or standards in relation to the information required to be collected by these regulations.

(2) The EPA may, by notice in the *Gazette*, amend or revoke a guideline or standard.

(3) A participant who complies with a guideline or standard that is issued under this regulation, and is in force, is to be treated as complying with the requirements of these regulations to which the guideline or standard relates.

Regulation 5 heading: amended, on 5 December 2011, by section 53(2) of the Environmental Protection Authority Act 2011 (2011 No 14).

Regulation 5(1): amended, on 5 December 2011, by section 53(2) of the Environmental Protection Authority Act 2011 (2011 No 14).

Regulation 5(2): amended, on 5 December 2011, by section 53(2) of the Environmental Protection Authority Act 2011 (2011 No 14).

Part 2
Stationary energy participants

Importing coal

6 Application of regulations 7 and 8

(1) A person must comply with regulations 7 and 8 if the person, in any year, is a participant under section 54(1)(a) of the Act in respect of the activity in Part 3 of Schedule 3 of the Act of importing coal.

(2) Regulations 7 and 8 apply in relation to coal only if the coal is imported by the person on or after 1 January 2010.

7 Collection and recording of information for purpose of calculating emissions from importing coal

(1) The following information must be collected and recorded in relation to each class of coal for the year:

(a) the total number of tonnes of the class of coal imported by the person in the year, as recorded at the customs point; and

(b) the calorific value of the coal referred to in paragraph (a); and

(c) the total number of tonnes of coal of the class exported by the person in the year, as recorded at the customs point; and

(d) the calorific value of the coal referred to in paragraph (c).

(2) If the person wishes to include a stockpile adjustment in relation to a class of coal for the year under regulation 8(1), then the information specified in clause 3 of Schedule 1 must be collected and recorded.

8 Method of calculating emissions from importing coal

(1) Emissions for the year in relation to each class of coal must be calculated in accordance with the following formula:

$$E = ((A \times CV_1) - (S \times CV_2) - (C \times CV_1)) \times EF$$

where—

A is the total number of tonnes of the class of coal imported by the person in the year, as recorded under regulation 7(1)(a)

C is the total number of tonnes of the class of coal exported by the person in the year as recorded under regulation 7(1)(c)

CV_1 is the weighted average calorific value of the coal of the class imported or exported, as the case may be, calculated by reference to the information recorded under regulation 7(1)(b) or (d)

CV_2 is—

(a) the figure for CV_2 determined in accordance with Schedule 1 if the person—

(i) includes a stockpile adjustment for the class of coal; or

(ii) does not include a stockpile adjustment, but a stockpile adjustment was included when emissions from importing the class of coal were calculated and reported in the previous emissions return submitted for the activity; or

(b) zero, if S is zero

E is the emissions for the class of coal in tonnes

EF is,—

(a) in relation to a class of coal for which no unique emissions factor is in force, the emissions factor for the class of coal from table 1 in Schedule 2:

(b) in relation to a class of coal for which a unique emissions factor is in force, the unique emissions factor

S is—

(a) the figure determined in accordance with Schedule 1 if the person—

(i) includes a stockpile adjustment for the class of coal; or

(ii) does not include a stockpile adjustment, but a stockpile adjustment was included when emissions from importing the class of coal were calculated and reported in the previous emissions return submitted for the activity; or

(b) zero, if the person does not include a stockpile adjustment for the class of coal and—

(i) it is the person's first emissions return for the activity; or

(ii) a stockpile adjustment was not included when emissions from importing the class of coal were calculated and reported in the previous emissions return submitted for the activity.

(1A) For the purposes of subclause (1), a person must include a stockpile adjustment if the emissions return is the final emissions return relating to the period ending on the date on which the name of the person is removed from the register of participants in respect of the activity of importing coal.

(2) An emissions return submitted by a person required to comply with this regulation must record the person's total emissions from the activity of importing coal in the relevant year, calculated by adding together the emissions for each class of coal calculated under subclause (1).

(3) If a person who is required to comply with this regulation is required to submit an emissions return for a period other than a year, this regulation applies with any necessary modifications.

Regulation 8(1A): inserted (with effect on 1 January 2010), on 25 September 2010, by regulation 6 of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2010 (SR 2010/340).

Mining coal

9 Application of regulations 10 and 11

(1) A person must comply with regulations 10 and 11 if the person, in any year, is a participant under section 54(1)(a) of the Act in respect of the activity in Part 3 of Schedule 3 of the Act of mining coal where the volume of coal mined exceeds 2 000 tonnes in a year.

(2) Regulations 10 and 11 apply in relation to mined coal only if the coal is mined by the person on or after 1 January 2010.

10 Collection and recording of information for purpose of calculating emissions from mining coal

(1) The following information must be collected and recorded in relation to each class of mined coal at each mining facility for the year:

(a) the total number of tonnes of mined coal of the class sold by the person in the year (including for export) as recorded at the point of sale; and

(b) the calorific value of the coal referred to in paragraph (a); and

(ba) the total number of tonnes of mined coal of the class sold by the person in the year to each opt-in coal participant, as recorded at the point of sale; and

(bb) the calorific value of the coal referred to in paragraph (ba); and

(c) the total number of tonnes of mined coal of the class exported in the year (and mined coal sold in the year for the purposes of export in the following year may be treated as exported in the year), as recorded at the customs point; and

(d) the calorific value of the coal referred to in paragraph (c); and

(e) the total number of tonnes of mined coal of the class combusted by the person in the year; and

(f) the calorific value of the coal referred to in paragraph (e); and

(g) the total number of tonnes of mined coal of the class gifted or otherwise provided gratuitously to any person, including an employee, in the year; and

(h) the calorific value of the coal referred to in paragraph (g).

(2) The following information must be collected and recorded in relation to all coal mined by the person in the year:

(a) the total number of tonnes of coal mined from each category in the year; and

(b) the total number of tonnes of methane flared, combusted for energy, or otherwise oxidised in the year.

(3) For the purposes of subclause (1)(ba) and regulation 11, mined coal sold to an opt-in coal participant includes coal that—

(a) is sold by the person to any of the following related persons:

(i) a wholly owned subsidiary of the person:

(ii) a holding company of which the person is the wholly owned subsidiary:

(iii) a wholly owned subsidiary of a holding company of which the person is also a wholly owned subsidiary; and

(b) is then on-sold by the related person to the opt-in participant.

Regulation 10(1): amended, on 1 February 2012 (applying on and from 1 January 2011), by regulation 6 of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2011 (SR 2011/364).

Regulation 10(1)(a): amended, on 8 December 2009, by section 88(2) of the Climate Change Response (Moderated Emissions Trading) Amendment Act 2009 (2009 No 57).

Regulation 10(1)(ba): inserted, on 8 December 2009, by section 88(2) of the Climate Change Response (Moderated Emissions Trading) Amendment Act 2009 (2009 No 57).

Regulation 10(1)(bb): inserted, on 8 December 2009, by section 88(2) of the Climate Change Response (Moderated Emissions Trading) Amendment Act 2009 (2009 No 57).

Regulation 10(1)(c): replaced, on 1 January 2016, by regulation 5 of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2015 (LI 2015/218).

Regulation 10(3): replaced, on 8 December 2009, by section 88(2) of the Climate Change Response (Moderated Emissions Trading) Amendment Act 2009 (2009 No 57).

11 Method of calculating emissions from mining coal

(1) Emissions for the year in relation to each class of mined coal at each mining facility must be calculated in accordance with the following formula:

$$E = ((A \times CV) + (C \times CV) + (D \times CV) - (B \times CV) - (BA \times CV)) \times EF_1$$

where—

A is the total number of tonnes of coal of the class sold by the person in the year, as recorded under regulation 10(1)(a)

BA is the total number of tonnes of coal of the class sold by the person in the year to opt-in coal participants, as recorded under regulation 10(1)(ba)

B is the total number of tonnes of the class of coal exported in the year, as recorded under regulation 10(1)(c)

C is the total number of tonnes of the class of coal combusted by the person in the year, as recorded under regulation 10(1)(e)

CV is the weighted average calorific value of the class of coal sold, combusted, gifted, or otherwise provided gratuitously, as the case may be, calculated by reference to the information recorded under the relevant paragraph in regulation 10(1)

D is the total number of tonnes of the class of coal gifted or otherwise provided gratuitously to any person, as recorded under regulation 10(1)(g)

E is the emissions for the class of coal in tonnes

EF_1 is,—

(a) in relation to a class of coal for which no unique emissions factor is in force, the emissions factor for the class of coal from table 2 in Schedule 2:

(b) in relation to a class of coal for which a unique emissions factor is in force, the unique emissions factor.

(2) Emissions for the year in relation to fugitive coal seam gas from each category of coal at each mining facility must be calculated in accordance with the following formula:

$$E_{CSG} = F \times EF_2$$

where—

E_{CSG} is the emissions for fugitive coal seam gas from coal mined from the category of coal in tonnes

EF_2 is,—

(a) in relation to a category of coal for which no unique emissions factor is in force, the emissions factor for fugitive coal seam gas for the category, as specified in Part A of table 3 of Schedule 2:

(b) in relation to a category of coal for which a unique emissions factor is in force, the unique emissions factor

F is the total number of tonnes of coal from the category mined by the person in the year, as recorded under regulation 10(2)(a).

(3) An emissions return submitted by a person required to comply with this regulation must record the person's total emissions from the activity of mining coal in the relevant year, calculated as follows:

$$TE = \sum(E) + \sum(E_{CSG}) - (G \times EF_{FLA})$$

where—

E is the emissions for each class of coal for the year, as calculated under subclause (1)

E_{CSG} is the emissions from fugitive coal seam gas for each category of coal for the year, as calculated under subclause (2)

EF_{FLA} is the emissions factor for flaring, combusting for energy, or otherwise oxidising specified in Part B of table 3 of Schedule 2

G is the total number of tonnes of methane flared, combusted for energy, or otherwise oxidised by the person in the year, as recorded under regulation 10(2)(b)

TE is the total emissions for the activity of mining coal for the year in tonnes.

(4) If a person who is required to comply with this regulation is required to submit an emissions return for a period other than a year, this regulation applies with any necessary modifications.

Regulation 11(1): amended, on 1 February 2012 (applying on and from 1 January 2011), by regulation 7(1) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2011 (SR 2011/364).

Regulation 11(1) formula: replaced, on 8 December 2009, by section 88(2) of the Climate Change Response (Moderated Emissions Trading) Amendment Act 2009 (2009 No 57).

Regulation 11(1) formula item BA: inserted, on 8 December 2009, by section 88(2) of the Climate Change Response (Moderated Emissions Trading) Amendment Act 2009 (2009 No 57).

Regulation 11(1) formula item B: amended (with effect on 1 January 2010), on 25 September 2010, by regulation 8 of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2010 (SR 2010/340).

Regulation 11(2): amended, on 1 February 2012 (applying on and from 1 January 2011), by regulation 7(2) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2011 (SR 2011/364).

11A Application of regulations 11B and 11C

(1) Despite regulation 9, a person must comply with regulations 11B and 11C if the person, in any year, is a participant under section 54(1)(a) of the Act in respect of the activity in Part 3 of Schedule 3 of the Act of mining coal where—

(a) the volume of coal mined exceeds 2 000 tonnes in a year; and

(b) the coal is converted to gas via a UCG operation.

(2) Regulations 11B and 11C apply only in relation to coal that is converted to gas via a UCG operation by the person on or after 1 January 2011.

Regulation 11A: inserted, on 1 February 2012 (applying on and from 1 January 2011), by regulation 8 of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2011 (SR 2011/364).

11B Collection and recording of information for purpose of calculating emissions from coal converted to gas via UCG operation

The following information must be collected and recorded in relation to each class of mined coal at each mining facility for the year that the coal is converted to gas via a UCG operation:

(a) the total quantity, in tonnes, of the gas brought to the surface; and

(b) the total mass fraction of carbon in the gas brought to the surface.

Regulation 11B: inserted, on 1 February 2012 (applying on and from 1 January 2011), by regulation 8 of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2011 (SR 2011/364).

11C Method of calculating emissions from coal converted to gas via UCG operation

Emissions for the year in relation to each class of mined coal, at each mining facility, that is converted to gas via a UCG operation must be calculated in accordance with the following formula:

$$E = C \times [(0.995 \times m_c \times 3.6641) + 0.011]$$

where—

E is the emissions for the class of coal in tCO_2e

C is the quantity, in tonnes, of gas brought to the surface, as recorded under regulation 11B(a)

0.995 is the relevant oxidation factor

m_c is the mass fraction of carbon in the gas brought to the surface, as recorded under regulation 11B(b)

3.6641 is the emissions factor for pure carbon

0.011 is the combined emissions factor for methane and nitrous oxide.

Regulation 11C: inserted, on 1 February 2012 (applying on and from 1 January 2011), by regulation 8 of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2011 (SR 2011/364).

Regulation 11C: amended, on 12 December 2013 (applying on and from 1 January 2013), by regulation 5 of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2013 (SR 2013/381).

Importing natural gas

12 Application of regulations 13 and 14

(1) A person must comply with regulations 13 and 14 if the person, in any year, is a participant under section 54(1)(a) of the Act in respect of the activity in Part 3 of Schedule 3 of the Act of importing natural gas where the volume of natural gas imported exceeds 10 000 litres in a year.

(2) Regulations 13 and 14 apply only if the natural gas is imported by the person on or after 1 January 2010.

(3) For the avoidance of doubt, a person who is required to comply with regulations 16 and 17 in relation to natural gas that is mined within the territorial limits of New Zealand, the exclusive economic zone, or in, on, or above the continental shelf, is not required to comply with regulations 13 and 14 in relation to the same natural gas.

13 Collection and recording of information for purpose of calculating emissions from importing natural gas

(1) The following information must be collected and recorded in relation to each class of imported natural gas (other than LNG) for the year:

(a) the total number of tonnes of natural gas of the class imported by the person in the year, as recorded at the customs point; and

(b) the total number of tonnes of natural gas of the class exported by the person in the year, as recorded at the customs point.

(2) Information must also be collected and recorded about—

(a) the total number of terajoules of LNG imported by the person in the year, as recorded at the customs point; and

(b) the total number of terajoules of LNG exported by the person in the year, as recorded at the customs point.

(3) If the person wishes to include a storage adjustment in relation to LNG under regulation 14(4), then the following information must be collected and recorded:

(a) the total number of terajoules of LNG injected into a gas storage facility by the person in the year; and

(b) the total number of terajoules of LNG extracted from a gas storage facility by the person in the year.

14 Method of calculating emissions from importing natural gas

(1) Emissions for the year in relation to each class of natural gas (other than LNG) must be calculated in accordance with the following formula:

$$E = (A - B) \times EF_1$$

where—

A is the total number of tonnes of natural gas of the class imported by the person in the year, as recorded under regulation 13(1)(a)

B is the total number of tonnes of natural gas of the class exported by the person in the year, as recorded under regulation 13(1)(b)

E is the emissions for the class of natural gas in tonnes

EF_1 is,—

(a) if the class of natural gas is a class of LPG with a propane content other than 60% by volume, the emissions factor for the class calculated in accordance with subclause (2); and

(b) in any other case, the emissions factor for the class of natural gas from table 4 in Schedule 2.

(2) For the purposes of subclause (1), the emissions factor for a class of LPG with a propane content other than 60% by volume must be calculated as follows:

$$EF = (OF_{GAS} \times EF_{LPG}) + EF_{M+N}$$

where—

EF is the emissions factor for the class of LPG

EF_{LPG} is the carbon dioxide emissions factor for LPG calculated as follows:

$$EF_{LPG} = 3.029 - \{(18.09 \times V_{PRO}) \div [572.6 - (65.9 \times V_{PRO})]\}$$

where—

v_{PRO} is the volume fraction of propane in the LPG

EF_{M+N} is the aggregate emission factor for CH_4 and N_2O emissions for natural gas expressed in tCO_2e/t from table 5 in Schedule 2

OF_{GAS} is the oxidation factor for gas (other than flared) from table 5 in Schedule 2.

(3) Emissions for LNG for the year must be calculated in accordance with the following formula:

$$E_{LNG} = (C - D - S) \times EF_{GAS}$$

where—

C is the total number of terajoules of LNG imported by the person in the year, as recorded under regulation 13(2)(a)

D is the total number of terajoules of LNG exported by the person in the year, as recorded under regulation 13(2)(b)

EF_{GAS} is the emissions factor for imported LNG from table 4 in Schedule 2

E_{LNG} is the emissions for LNG in tonnes

S is—

(a) the figure calculated under subclause (4), if the person includes a storage adjustment for LNG for the year; or

(b) the figure for S used in the previous year's emissions return, if the person elects not to include a storage adjustment for LNG for the year but a storage adjustment was included when emissions from importing LNG were calculated and reported in the previous emissions return submitted by the person for the activity; or

(c) zero, if the person does not include a storage adjustment and—

(i) it is the person's first emissions return for the activity; or

(ii) a storage adjustment for LNG was not included when emissions from importing natural gas were calculated and reported in the previous emissions return submitted by the person for the activity.

(4) For the purposes of subclause (3), a storage adjustment (if included) must be calculated as follows:

$$S = F - G$$

where—

F is the total number of terajoules of LNG injected by the person into a gas storage facility in the year, as recorded under regulation 13(3)(a)

G is the total number of terajoules of LNG extracted by the person from a gas storage facility in the year, as recorded under regulation 13(3)(b)

S is the storage adjustment for LNG for the year.

(5) Total emissions from the activity of importing natural gas for the year must be calculated as follows:

$$TE = \sum(E) + E_{LNG}$$

where—

E is the emissions from each class of imported natural gas for the year, as calculated under subclause (1)

E_{LNG} is the emissions from LNG for the year, as calculated under subclause (3)

TE is the total emissions for the activity of importing natural gas for the year in tonnes.

(6) If a person who is required to comply with this regulation is required to submit an emissions return for a period other than a year, this regulation applies with any necessary modifications.

Mining natural gas

15 Application of regulations 16 and 17

(1) A person must comply with regulations 16 and 17 if the person, in any year, is a participant under section 54(1)(a) of the Act in respect of the activity in Part 3 of Schedule 3 of the Act of mining natural gas other than for export.

(2) Regulations 16 and 17 apply in relation to mined natural gas only if the natural gas is gas mined by the person on or after 1 January 2010.

16 Collection and recording of information for purpose of calculating emissions from natural gas mined other than for export

(1) The following information must be collected and recorded in relation to mined natural gas for the year from each field, including (but not limited to) a field listed in table 10 in Schedule 2:

(a) the total number of tonnes of mined natural gas of each class sold by the person in the year (including for export), as measured at the point of sale; and

(b) the total number of tonnes of mined natural gas of each class exported by the person or a third party in the year, as recorded at the customs point; and

(ba) the total number of tonnes of mined natural gas of each class sold by the person in the year to each opt-in natural gas participant, as measured at the point of sale; and

(c) the total number of tonnes of mined natural gas combusted by the person for own use before the point of sale in the year; and

(d) the total number of tonnes of mined natural gas flared by the person before the point of sale in the year, that are not recorded under paragraph (c); and

(e) in respect of each of the quantities of mined natural gas referred to in paragraphs (a) to (d),—

(i) the mass fraction of carbon in the gas, as determined by reference to the results of the tests in subclause (3), or the accounting system referred to in subclause (4), as relevant; and

(ii) the total terajoules of the gas, as determined by reference to the results of the tests in subclause (3) or the accounting system referred to in subclause (4), as relevant.

(2) The following information must be collected and recorded in relation to natural gas that is vented by the person in the year from each field, including (but not limited to) a field listed listed in table 10 in Schedule 2:

(a) the total number of tonnes of natural gas vented by the person before the point of sale in the year; and

(b) in respect of the natural gas referred to in paragraph (a),—

(i) the mass fraction of carbon dioxide in the gas, as determined by the accounting system referred to in subclause (4); and

(ii) the mass fraction of methane in the gas, as determined by the accounting system referred to in subclause (4).

(2A) If, and to the extent that, the person combusts, flares, or vents mined natural gas for which there is no point of sale, subclause (1)(c) or (d) or (2)(a) applies as if "before the point of sale" were omitted.

(3) To obtain the information required by subclause (1)(e) in respect of the natural gas referred to in subclause (1)(a), (b), and (ba),—

(a) the gas must be sampled with continuous monitoring equipment where available at least every 30 minutes, or, where this is not available, periodically with sufficient frequency to be representative of the infor-

mation sought, but at least at intervals of not longer than 3 months, and in accordance with—

(i) GPA 2166:2005 (obtaining natural gas samples for analysis by gas chromatography, Parts 1–8); or

(ii) any equivalent standards or test methods related to an organisation that is listed in regulation 3(2) of the Climate Change (Unique Emissions Factors) Regulations 2009; and

(b) the samples must be tested, by a person or laboratory that is accredited as complying with ISO 17025:2005 by International Accreditation New Zealand, an overseas accreditation agency with whom International Accreditation New Zealand has a mutual recognition agreement, or an overseas accreditation agency recognised under New Zealand's mutual recognition arrangements, using gas chromatography in accordance with—

(i) ASTM D1945–03 (analysis of natural gas by gas chromatography); or

(ii) any equivalent standards or test methods related to an organisation that is listed in regulation 3(2) of the Climate Change (Unique Emissions Factors) Regulations 2009.

(4) To obtain the information required by subclause (1)(e) (in respect of the natural gas referred to in subclause (1)(c) and (d)) and subclause (2)(b) (in respect of the natural gas referred to in subclause (2)(a)), the person must use a hydrocarbon accounting system.

(5) For the purposes of subclause (1)(ba) and regulation 17, mined natural gas sold to an opt-in natural gas participant includes natural gas that—

(a) is sold by the person to any of the following related persons:

(i) a wholly owned subsidiary of the person:

(ii) a holding company of which the person is the wholly owned subsidiary:

(iii) a wholly owned subsidiary of a holding company of which the person is also a wholly owned subsidiary; and

(b) is then on-sold by the related person to the opt-in participant.

(6) In this regulation,—

(a) **third party** means a person, other than an opt-in natural gas participant, who purchased the mined natural gas from the person required to comply with this regulation and regulation 17; and

(b) the information required to be collected under subclause (1)(e) in relation to the quantity of mined natural gas of a class exported by the person or a third party in a year must be collected at the point of sale.

Regulation 16(1): amended, on 8 December 2009, by section 88(2) of the Climate Change Response (Moderated Emissions Trading) Amendment Act 2009 (2009 No 57).

Regulation 16(1)(a): amended, on 8 December 2009, by section 88(2) of the Climate Change Response (Moderated Emissions Trading) Amendment Act 2009 (2009 No 57).

Regulation 16(1)(b): amended, on 8 December 2009, by section 88(2) of the Climate Change Response (Moderated Emissions Trading) Amendment Act 2009 (2009 No 57).

Regulation 16(1)(ba): inserted, on 8 December 2009, by section 88(2) of the Climate Change Response (Moderated Emissions Trading) Amendment Act 2009 (2009 No 57).

Regulation 16(2): amended, on 8 December 2009, by section 88(2) of the Climate Change Response (Moderated Emissions Trading) Amendment Act 2009 (2009 No 57).

Regulation 16(2A): inserted (with effect on 1 January 2010), on 25 September 2010, by regulation 9 of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2010 (SR 2010/340).

Regulation 16(3): amended, on 8 December 2009, by section 88(2) of the Climate Change Response (Moderated Emissions Trading) Amendment Act 2009 (2009 No 57).

Regulation 16(5): replaced, on 8 December 2009, by section 88(2) of the Climate Change Response (Moderated Emissions Trading) Amendment Act 2009 (2009 No 57).

Regulation 16(6): inserted, on 8 December 2009, by section 88(2) of the Climate Change Response (Moderated Emissions Trading) Amendment Act 2009 (2009 No 57).

17 Method of calculating emissions from natural gas mined other than for export

(1) Emissions for the year in relation to each field, including (but not limited to) a field listed in table 10 of Schedule 2, must be calculated by calculating the emissions from each of the following quantities of mined natural gas in accordance with the formula in subclause (2) and adding them together under subclause (4):

(a) each class of mined natural gas from the field sold by the person in the year (including for export), as recorded under regulation 16(1)(a); and

(b) each class of mined natural gas from the field exported by the person or a third party in the year, as recorded under regulation 16(1)(b); and

(ba) each class of mined natural gas from the field sold by the person in the year to opt-in natural gas participants, as recorded under regulation 16(1)(ba); and

(c) mined natural gas from the field combusted by the person for own use in the year, as recorded under regulation 16(1)(c); and

(d) mined natural gas from the field flared by the person before the point of sale in the year, as recorded under regulation 16(1)(d).

(2) The formula for the calculation of emissions for each quantity of gas under subclause (1) is—

$$E = (OF_{GAS} \times m_C \times EF_C \times C) + (D \times EF_{M+N})$$

where—

C is the total number of tonnes of the quantity of natural gas for the year, as recorded under the relevant paragraph of regulation 16(1)(a) to (d)

D is total terajoules of the quantity of natural gas for the year, as recorded under regulation 16(1)(e)(ii)

E is the emissions from the quantity of natural gas in tonnes

EF_C the emissions factor for carbon content listed in table 9 of Schedule 2

EF_{M+N} is the aggregate emissions factor for CH_4 and N_2O emissions for natural gas expressed in tCO_2e/TJ from table 5 of Schedule 2

m_C is the mass fraction of carbon in the quantity of gas as recorded under regulation 16(1)(e)(i)

OF_{GAS} is an oxidation factor—

(a) of 1.0 for any class of natural gas that is injected into a high-pressure transmission pipeline:

(b) from table 5 of Schedule 2 for any other class or quantity of gas.

(3) Emissions in relation to venting from each field, including (but not limited to) a field listed in table 10 of Schedule 2, by the person in the year must be calculated in accordance with the following formula:

$$V = (m_{CO2} + (25\times m_{CH4})) \times C$$

where—

C is the total number of tonnes of natural gas vented from the field for the year, as recorded under regulation 16(2)(a)

m_{CH4} is the mass fraction of methane in the natural gas vented, as recorded under regulation 16(2)(b)(ii)

m_{CO2} is the mass fraction of carbon dioxide in the natural gas vented, as recorded under regulation 16(2)(b)(i)

V is the emissions from venting natural gas from the field in tonnes.

(4) Total emissions from each field for the year must be calculated as follows:

$$E_{field} = \sum(ES) + U + F + V - \sum(EE) - \sum(EO)$$

where—

E_{field} is the total emissions for the field for the year in tonnes

EE is the emissions from each class of mined natural gas from the field exported by the person or a third party in the year, as calculated under subclause (2)

EO is the emissions from each class of mined natural gas from the field sold by the person in the year to opt-in natural gas participants, as calculated under subclause (2)

F is the emissions from flaring natural gas from the field by the person for the year, as calculated under subclause (2)

ES is the emissions from each class of mined natural gas from the field sold by the person in the year, as calculated under subclause (2)

U is the emissions from combusting natural gas from the field for own use before the point of sale by the person for the year, as calculated under subclause (2)

V is the emissions from venting natural gas from the field for the year, as calculated under subclause (3).

(5) An emissions return submitted by a person required to comply with this regulation must record the person's total emissions from the activity of mining natural gas other than for export, calculated by adding together the emissions from each field calculated under subclause (4).

(6) If a person who is required to comply with this regulation is required to submit an emissions return for a period other than a year, this regulation applies with any necessary modifications.

Regulation 17(1): amended, on 8 December 2009, by section 88(2) of the Climate Change Response (Moderated Emissions Trading) Amendment Act 2009 (2009 No 57).

Regulation 17(1)(a): amended, on 8 December 2009, by section 88(2) of the Climate Change Response (Moderated Emissions Trading) Amendment Act 2009 (2009 No 57).

Regulation 17(1)(b): amended, on 8 December 2009, by section 88(2) of the Climate Change Response (Moderated Emissions Trading) Amendment Act 2009 (2009 No 57).

Regulation 17(1)(ba): inserted, on 8 December 2009, by section 88(2) of the Climate Change Response (Moderated Emissions Trading) Amendment Act 2009 (2009 No 57).

Regulation 17(3): amended, on 12 December 2013 (applying on and from 1 January 2013), by regulation 6 of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2013 (SR 2013/381).

Regulation 17(3): amended, on 8 December 2009, by section 88(2) of the Climate Change Response (Moderated Emissions Trading) Amendment Act 2009 (2009 No 57).

Regulation 17(4) formula: replaced, on 8 December 2009, by section 88(2) of the Climate Change Response (Moderated Emissions Trading) Amendment Act 2009 (2009 No 57).

Regulation 17(4) formula item EE: amended, on 8 December 2009, by section 88(2) of the Climate Change Response (Moderated Emissions Trading) Amendment Act 2009 (2009 No 57).

Regulation 17(4) formula item EO: inserted, on 8 December 2009, by section 88(2) of the Climate Change Response (Moderated Emissions Trading) Amendment Act 2009 (2009 No 57).

Using geothermal fluid

18 Application of regulations 19 and 20

A person must comply with regulations 19 and 20 if the person, in any year, is a participant under section 54(1)(a) of the Act in respect of the activity in Part 3 of Schedule 3 of the Act of using geothermal fluid for the purpose of generating electricity or industrial heat.

19 Collection and recording of information for purpose of calculating emissions from using geothermal fluid

(1) The following information must be collected and recorded in relation to each class of geothermal fluid used in the year for the purpose of generating electricity or industrial heat:

(a) for a class referred to in Part A of table 6 of Schedule 2, or a class defined in a unique emissions factor approval that relates to a plant that uses, or makes a particular use of, geothermal steam, the total number of tonnes of geothermal production steam used by the person in the year; and

(b) for a class referred to in Part B of table 6 of Schedule 2, or a class defined in a unique emissions factor approval by reference to a plant that uses, or makes a particular use of, geothermal fluid that does not relate to steam production, the total number of tonnes of 2-phase geothermal fluid used by the person in the year.

(2) For the purposes of subclause (1)(a), geothermal production steam used—

(a) includes non-condensable gases and steam vented from system emergency vent facilities; but

(b) does not include—

(i) fugitive steam released during well testing or well bleeding; or

(ii) steam released from the disposal of spent geothermal fluid; or

(iii) steam released from unused but maintained production wells.

20 Method of calculating emissions from using geothermal fluid

(1) Emissions in relation to each class of geothermal fluid referred to in regulation 19(1)(a) that is used for the purpose of generating electricity or industrial heat by the person in the year must be calculated in accordance with the following formula:

$$E = A \times EF$$

where—

A is the number of tonnes of geothermal production steam of the class used by the person during the year, as recorded under regulation 19(1)(a)

E is the emissions for the class of geothermal fluid used in tonnes

EF is,—

(a) in relation to a class of geothermal fluid listed in Part A of table 6 in Schedule 2 for which no unique emissions factor is in force, the emissions factor for the class of geothermal fluid from that table; and

(b) in relation to a class of geothermal fluid defined in an approval to use a unique emissions factor, the unique emissions factor for that class.

(2) Emissions in relation to each class of geothermal fluid referred to in regulation 19(1)(b) used for the purpose of generating electricity or industrial heat by the person in the year must be calculated in accordance with the following formula:

$$E = A \times EF$$

where—

A is the number of tonnes of 2-phase geothermal fluid of the class used by the person during the year, as recorded under regulation 19(1)(b)

E is the emissions for the class of geothermal fluid used in tonnes

EF is,—

(a) in relation to a class of geothermal fluid listed in Part B of table 6 in Schedule 2 for which no unique emissions factor is in force, the emissions factor for the class of geothermal fluid from that table; and

(b) in relation to a class of geothermal fluid defined in an approval to use a unique emissions factor, the unique emissions factor for that class.

(3) An emissions return submitted by a person who is required to comply with this regulation must record the person's total emissions from the activity of using geothermal fluid for the purpose of generating electricity or industrial heat in the relevant year, calculated by adding together the emissions for each class of geothermal fluid used, as calculated under subclauses (1) and (2).

(4) If a person who is required to comply with this regulation is required to submit an emissions return for a period other than a year, this regulation applies with any necessary modifications.

Combusting used oil, waste oil, used tyres, or waste

21 Application of regulations 22 to 26

(1) A person who in any year, is a participant under section 54(1)(a) of the Act in respect of the activity in Part 3 of Schedule 3 of the Act of combusting used oil, waste oil, used tyres, or waste for the purpose of generating electricity or industrial heat must—

(a) collect and record information and calculate emissions in respect of each class of used oil, waste oil, used tyres, or municipal waste combusted by the person in the year in accordance with 1 of the following regulations:

(i) regulation 22 (standard method option 1):

(ii) regulation 23 (standard method option 2):

(iii) regulation 24 (continuous emissions monitoring method):

(iv) regulation 25 (periodic source testing method); and

(b) comply with regulation 26.

(2) The person may—

(a) use different methods for calculating emissions for different classes of used oil, waste oil, used tyres, or municipal waste; but

(b) use the methods referred to in subclause (1)(a)(ii), (iii), and (iv) only if the class of used oil, waste oil, used tyres, or municipal waste is a class referred to in regulation 4(g)(i)(B) or a class referred to in regulation 4(g)(ii) that is defined by reference to being combusted in particular equipment.

(3) If the person is required to submit an emissions return for a period other than a year, subclause (1) and regulations 22 to 26 apply with any necessary modifications.

Regulation 21(1)(a): amended, on 1 February 2012 (applying on and from 1 January 2011), by regulation 9(1) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2011 (SR 2011/364).

Regulation 21(2)(a): amended, on 1 February 2012 (applying on and from 1 January 2011), by regulation 9(2) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2011 (SR 2011/364).

Regulation 21(2)(b): amended, on 1 February 2012 (applying on and from 1 January 2011), by regulation 9(3) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2011 (SR 2011/364).

22 Standard method for calculating emissions from combusting used oil, waste oil, used tyres, or municipal waste—option 1

A person who wishes to use the standard method option 1 to calculate emissions from a class of used oil, waste oil, used tyres, or municipal waste, for a year must—

(a) collect and record the following information:

(i) the total number of tonnes of the class of used or waste oil, used tyres, or municipal waste combusted by the person in the year, minus in the case of used or waste oil, the total number of tonnes of obligation fuel component of the used or waste oil; and

(ii) the calorific value of the used or waste oil, used tyres, or municipal waste referred to in paragraph (a); and

(b) calculate emissions in relation to the class of used or waste oil, used tyres, or municipal waste as follows:

$$E_1 = A \times CV \times EF$$

where—

A is the total number of tonnes of the class of used or waste oil, used tyres, or municipal waste combusted by the person in the year, as recorded under paragraph (a)(i)

CV is the weighted average calorific value of the class of used or waste oil, used tyres, or municipal waste calculated by reference to the information recorded under paragraph (a)(ii)

E_1 is the emissions for the class of used or waste oil, used tyres, or municipal waste combusted in the year in tonnes

EF is,—

(a) in relation to a class of used or waste oil, used tyres, or municipal waste for which no unique emissions factor is in force, the emissions factor for the class of used or waste oil, used tyres, or municipal waste from table 7 in Schedule 2:

(b) in relation to a class of used or waste oil, used tyres, or municipal waste for which a unique emissions factor is in force, the unique emissions factor.

Regulation 22 heading: amended, on 1 February 2012 (applying on and from 1 January 2011), by regulation 10(1) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2011 (SR 2011/364).

Regulation 22: amended, on 1 February 2012 (applying on and from 1 January 2011), by regulation 10(2) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2011 (SR 2011/364).

Regulation 22(a)(i): amended, on 1 February 2012 (applying on and from 1 January 2011), by regulation 10(3) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2011 (SR 2011/364).

Regulation 22(a)(ii): amended, on 1 February 2012 (applying on and from 1 January 2011), by regulation 10(4) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2011 (SR 2011/364).

Regulation 22(b): amended, on 1 February 2012 (applying on and from 1 January 2011), by regulation 10(5) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2011 (SR 2011/364).

Regulation 22(b) formula item A: amended, on 1 February 2012 (applying on and from 1 January 2011), by regulation 10(6) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2011 (SR 2011/364).

Regulation 22(b) formula item CV: amended, on 1 February 2012 (applying on and from 1 January 2011), by regulation 10(7) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2011 (SR 2011/364).

Regulation 22(b) formula item E_1: amended, on 1 February 2012 (applying on and from 1 January 2011), by regulation 10(8) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2011 (SR 2011/364).

Regulation 22(b) formula item EF paragraph (a): amended, on 1 February 2012 (applying on and from 1 January 2011), by regulation 10(9) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2011 (SR 2011/364).

Regulation 22(b) formula item EF paragraph (a): amended, on 1 February 2012 (applying on and from 1 January 2011), by regulation 10(10) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2011 (SR 2011/364).

Regulation 22(b) formula item EF paragraph (b): amended, on 1 February 2012 (applying on and from 1 January 2011), by regulation 10(11) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2011 (SR 2011/364).

23 Standard method for calculating emissions from combusting used oil, waste oil, used tyres, or municipal waste—option 2

A person who wishes to use the standard method option 2 to calculate emissions from a class of used oil, waste oil, used tyres, or municipal waste, for a year must—

(a) collect and record the following information:

(i) the total energy output produced by the particular equipment through combusting the class of used or waste oil, used tyres, or municipal waste in the year expressed in terajoules; and

(ii) the estimated efficiency, on a gross energy basis, of the particular equipment over the year; and

(iii) if the class relates to used or waste oil,—

(A) the total number of tonnes of the obligation fuel component of the class of used or waste oil combusted by the person in the year; and

(B) the calorific value of the used or waste oil; and

(b) calculate emissions from the class of used or waste oil, used tyres, or municipal waste as follows:

$$E_2 = [(D \div U) - B \times CV] \times EF$$

where—

B is,—

(a) if the class relates to used or waste oil, the total number of tonnes of the obligation fuel component of the used or waste oil of the class combusted by the person in the year, as recorded under paragraph (a)(iii)(A); and

(b) in every other case, zero

CV is,—

(a) if the class relates to used or waste oil, the weighted average calorific value of the class of used or waste oil as calculated by reference to the information recorded under paragraph (a)(iii)(B); and

(b) in every other case, zero

D is the total energy output produced by the particular equipment through its combustion of the class of used or waste oil, used tyres, or municipal waste in the year, as collected under paragraph (a)(i)

E_2 is the emissions for the class of used or waste oil, used tyres, or municipal waste combusted in the particular equipment in the year in tonnes

EF is,—

(a) in relation to a class of used or waste oil, used tyres, or municipal waste for which no unique emissions factor is in force, the emissions factor for the class of used or waste oil, used tyres, or municipal waste from table 7 in Schedule 2:

(b) in relation to a class of used or waste oil, used tyres, or municipal waste for which a unique emissions factor is in force, the unique emissions factor

U is the gross estimated efficiency of the particular equipment over the course of the year, as collected under paragraph (a)(ii).

Regulation 23 heading: amended, on 1 February 2012 (applying on and from 1 January 2011), by regulation 11(1) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2011 (SR 2011/364).

Regulation 23: amended, on 1 February 2012 (applying on and from 1 January 2011), by regulation 11(2) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2011 (SR 2011/364).

Regulation 23(a)(i): amended, on 1 February 2012 (applying on and from 1 January 2011), by regulation 11(3) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2011 (SR 2011/364).

Regulation 23(b): amended, on 1 February 2012 (applying on and from 1 January 2011), by regulation 11(4) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2011 (SR 2011/364).

Regulation 23(b) formula item D: amended, on 1 February 2012 (applying on and from 1 January 2011), by regulation 11(5) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2011 (SR 2011/364).

Regulation 23(b) formula item D: amended, on 1 February 2012 (applying on and from 1 January 2011), by regulation 11(6) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2011 (SR 2011/364).

Regulation 23(b) formula item E_2: amended, on 1 February 2012 (applying on and from 1 January 2011), by regulation 11(7) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2011 (SR 2011/364).

Regulation 23(b) formula item EF paragraph (a): amended, on 1 February 2012 (applying on and from 1 January 2011), by regulation 11(8) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2011 (SR 2011/364).

Regulation 23(b) formula item EF paragraph (a): amended, on 1 February 2012 (applying on and from 1 January 2011), by regulation 11(9) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2011 (SR 2011/364).

Regulation 23(b) formula item EF paragraph (b): amended, on 1 February 2012 (applying on and from 1 January 2011), by regulation 11(10) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2011 (SR 2011/364).

24 Continuous emissions monitoring method for calculating emissions from combusting used oil, waste oil, used tyres, or municipal waste

(1) A person who wishes to use the continuous emissions monitoring method to calculate emissions from a class of used oil, waste oil, used tyres, or municipal waste must,—

(a) using continuous monitoring equipment, at least every 30 minutes during the operation of the monitoring equipment,—

(i) measure in accordance with the procedures in ISO 10780:1994 or ISO 14164:1999 the volumetric flow rate for the stacks from which gases resulting from combustion of the class of used oil, waste oil, used tyres, or municipal waste are emitted; and

(ii) have tests to measure the CO_2, CH_4, and N_2O concentrations in the gas stream from the stacks carried out in accordance with one of the following standards by a person or laboratory that is accredited according to ISO 17025:2005 by International Accreditation New Zealand, an overseas accreditation agency with whom International Accreditation New Zealand has a mutual recognition agreement, or by an overseas accreditation agency recognised under New Zealand's mutual recognition arrangements to carry out the tests:

(A) ISO 12039:2001:

(B) USEPA—Method 3A—2006:

(C) USEPA—Method 3C—1996 (modified, if used for N_2O):

(D) VDI 2649–1 (measurement of nitrous oxide):

(E) ASTM D6348–03 (determination of gaseous compounds); and

(b) at the time of each of the measurements in paragraph (a), also measure and record—

(i) the pressure of the gas stream in kilopascals:

(ii) the temperature, in Kelvin, of the gas stream; and

(c) using each set of data obtained under paragraphs (a) and (b), calculate the rate of emissions of CO_2, CH_4, and N_2O from the stacks at the time of measurement in accordance with the following formula:

$$mr_{gastype} = (mw_{gastype} \times P \times F \times C) \div (R \times T)$$

where—

C is the concentration by volume of CO_2, CH_4, or N_2O, as the case may be, in the gas stream at the time of measurement

F is the flow rate of the gas stream in cubic metres per second, at the time of measurement

$mr_{gastype}$ is the rate of each of CO_2, CH_4, and N_2O emitted in tonnes of gas type released per second

$mw_{gastype}$ is the molecular mass of CO_2, CH_4, or N_2O, as the case may be, in tonnes per kilomole, where—

(a) CO_2 and N_2O values are 0.044; and

(b) CH_4 value is 0.016

P is the pressure of the gas stream in kilopascals at the time of measurement

R is 8.314, the universal gas constant when expressed in J/K.mol; and

T is the temperature, in Kelvin, of the gas at the time of measurement; and

(d) using the results of the calculations under paragraph (c), estimate a representative rate of emissions for each $mr_{gastype}$ per hour; and

(e) estimate total emissions for the year of each of CO_2, CH_4, and N_2O in accordance with the following formula:

$$E_{gastype\ year} = mr_{gastype\ hour} \times t$$

where—

$E_{gastype\ year}$ is the emissions for each of CO_2, CH_4, and N_2O emitted for the year in tonnes

$mr_{gastype\ hour}$ is the representative rate of each of CO_2, CH_4, and N_2O per hour for each hour of the year, as determined under paragraph (d)

t is the number of hours that the equipment has operated in the year.

(f) calculate the emissions for the class of used or waste oil, used tyres, or municipal waste in accordance with the following formula:

$$E_3 = (E_{CO2\ year} \times G) + (E_{CH4\ year} \times 25) + (E_{N2O\ year} \times 298)$$

where—

E_3 is the emissions for the class of used or waste oil, used tyres, or municipal waste combusted in the particular equipment in the year in tonnes

$E_{gastype\ year}$ is the emissions of each of CO_2, CH_4 and N_2O for the year, as determined under paragraph (e)

G is,—

(a) if the fuel combusted contains biomass, the representative non-biomass fraction of $E_{CO2\ year}$ determined in accordance with ASTM D6866–08; or

(b) in every other case, 1.

(2) For the purposes of the tests in subclause (1)(a) and(b),—

(a) the relevant monitoring equipment must operate for more than 90% of the time period over which emissions are monitored (excluding any period during which the equipment is not in operation because it is being calibrated); and

(b) if part of the monitoring equipment is not operating for a period, readings taken during periods when the equipment was operating may be used to estimate data on a pro rata basis for the period that the equipment was not operating; and

(c) the calibration gases used in characterisation of the monitoring equipment must be certified by a person or laboratory accredited to ISO 34:2000 by International Accreditation New Zealand, an overseas ac-

creditation agency with whom International Accreditation New Zealand has a mutual recognition agreement, or an overseas accreditation agency recognised under New Zealand's mutual recognition arrangements, as being within 2% of the concentration specified on the cylinder label.

Regulation 24 heading: amended, on 1 February 2012 (applying on and from 1 January 2011), by regulation 12(1) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2011 (SR 2011/364).

Regulation 24(1): amended, on 1 February 2012 (applying on and from 1 January 2011), by regulation 12(2) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2011 (SR 2011/364).

Regulation 24(1)(a)(i): amended, on 1 February 2012 (applying on and from 1 January 2011), by regulation 12(3) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2011 (SR 2011/364).

Regulation 24(1)(e): replaced (with effect on 1 January 2010), on 25 September 2010, by regulation 10 of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2010 (SR 2010/340).

Regulation 24(1)(f): amended, on 12 December 2013 (applying on and from 1 January 2013), by regulation 7(1) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2013 (SR 2013/381).

Regulation 24(1)(f): amended, on 12 December 2013 (applying on and from 1 January 2013), by regulation 7(2) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2013 (SR 2013/381).

Regulation 24(1)(f): amended, on 1 February 2012 (applying on and from 1 January 2011), by regulation 12(4) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2011 (SR 2011/364).

Regulation 24(1)(f): amended, on 1 February 2012 (applying on and from 1 January 2011), by regulation 12(5) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2011 (SR 2011/364).

Regulation 24(1)(f) formula item E_3: amended, on 1 February 2012 (applying on and from 1 January 2011), by regulation 12(6) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2011 (SR 2011/364).

25 Periodic source testing method for calculating emissions from combusting used oil, waste oil, used tyres, or municipal waste

A person who wishes to use the periodic source testing method to calculate emissions from a class of used oil, waste oil, used tyres, or municipal waste must—

(a) take the measurements and have the tests specified in regulation 24(1)(a) and (b) carried out over the period of a year at intervals that are sufficient to produce representative data that may be reliably extrapolated to provide estimates of emissions across the full range of operating conditions for that year; and

(b) using each set of data obtained under paragraph (a), calculate the rate of emissions of CO_2, CH_4, and N_2O from the relevant stacks at the time of measurement in accordance with the formula in regulation 24(1)(c); and

(c) estimate total tonnes of emissions for the year of each of CO_2, CH_4, and N_2O by reference to the results of the calculations under paragraph (b),

the number of seconds during the year when the particular equipment was operating, and the full range of operating conditions for the year; and

(d) estimate total tonnes of emissions for the class of used or waste oil, used tyres, or municipal waste, in accordance with the following formula:

$$E_4 = (E_{CO2\ year} \times G) + (E_{CH4\ year} \times 25) + (E_{N2O\ year} \times 298)$$

where—

E_4 is the emissions for the class of used or waste oil, used tyres, or municipal waste combusted in the particular equipment in the year in tonnes

$E_{gastype\ year}$ is the emissions for each of CO_2, CH_4, and N_2O for the year as determined under paragraph (c)

G is,—

(a) if the fuel combusted contains biomass, the representative non-biomass fraction of $E_{CO2\ year}$ determined in accordance with ASTM D6866–08; or

(b) in every other case, 1.

Regulation 25 heading: amended, on 1 February 2012 (applying on and from 1 January 2011), by regulation 13(1) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2011 (SR 2011/364).

Regulation 25: amended, on 1 February 2012 (applying on and from 1 January 2011), by regulation 13(2) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2011 (SR 2011/364).

Regulation 25(d): amended, on 12 December 2013 (applying on and from 1 January 2013), by regulation 8(1) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2013 (SR 2013/381).

Regulation 25(d): amended, on 12 December 2013 (applying on and from 1 January 2013), by regulation 8(2) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2013 (SR 2013/381).

Regulation 25(d): amended, on 1 February 2012 (applying on and from 1 January 2011), by regulation 13(3) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2011 (SR 2011/364).

Regulation 25(d) formula item E_4: amended, on 1 February 2012 (applying on and from 1 January 2011), by regulation 13(4) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2011 (SR 2011/364).

26 Calculating total emissions from combusting used oil, waste oil, used tyres, or municipal waste

An emissions return submitted by a person who is required to comply with this regulation must record the person's total emissions from the activity of combusting used oil, waste oil, used tyres, or municipal waste for the purpose of generating electricity or industrial heat in the relevant year calculated by adding together the emissions for each class of used or waste oil, used tyres, or municipal waste combusted in the year calculated under regulations 22 to 25.

Regulation 26 heading: amended, on 1 February 2012 (applying on and from 1 January 2011), by regulation 14(1) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2011 (SR 2011/364).

Regulation 26: amended, on 1 February 2012 (applying on and from 1 January 2011), by regulation 14(2) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2011 (SR 2011/364).

Regulation 26: amended, on 1 February 2012 (applying on and from 1 January 2011), by regulation 14(3) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2011 (SR 2011/364).

26A Application of regulations 26B and 26C

A person who, in any year, is a participant under section 54(1)(a) of the Act in respect of the activity in Part 3 of Schedule 3 of the Act of combusting used oil, waste oil, used tyres, or waste for the purpose of generating electricity or industrial heat must—

(a) collect and record information in respect of each class of industrial waste combusted by the person in the year in accordance with regulation 26B; and

(b) calculate emissions in respect of each class of industrial waste combusted by the person in the year in accordance with regulation 26C.

Regulation 26A: inserted, on 1 February 2012 (applying on and from 1 January 2011), by regulation 15 of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2011 (SR 2011/364).

26B Collection and recording of information for purpose of calculating emissions in respect of industrial waste

The information that must be collected and recorded in relation to each class of industrial waste combusted in the year is the total quantity, in tonnes, of pure carbon in the industrial waste.

Regulation 26B: inserted, on 1 February 2012 (applying on and from 1 January 2011), by regulation 15 of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2011 (SR 2011/364).

26C Method of calculating emissions from coal converted to gas via UCG operation in respect of industrial waste

Emissions for the year in relation to each class of industrial waste must be calculated in accordance with the following formula:

$$E = (C \times 3.6641)$$

where—

E is the emissions from the activity of combusting industrial waste for the year

C is the quantity, in tonnes, of carbon in the class of industrial waste combusted in the year, as recorded under regulation 26B

3.6641 is the emissions factor for pure carbon.

Regulation 26C: inserted, on 1 February 2012 (applying on and from 1 January 2011), by regulation 15 of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2011 (SR 2011/364).

Refining petroleum

27 Application of regulations 28 and 29

A person must comply with regulations 28 and 29 if the person, in any year, is a participant under section 54(1)(a) of the Act in respect of the activity in Part 3 of Schedule 3 of the Act of refining petroleum where the refining involves the use of intermediate crude oil products for energy or feedstock purposes.

28 Collection and recording of information for purpose of calculating emissions from refining petroleum

The following information must be collected and recorded in relation to intermediate crude oil products used for energy or feedstock purposes in petroleum refining in the year:

(a) the total number of tonnes of refinery asphalt used for combustion by the person in the year; and

(b) the total number of tonnes of refinery fuel oil used for combustion by the person in the year; and

(c) the total number of tonnes of refinery fuel gas used for combustion by the person in the year; and

(d) the total number of tonnes of CO_2 vented from manufacturing hydrogen by the person in the year, excluding CO_2 from obligation natural gas; and

(e) the total number of tonnes of refinery flare gas used for combustion by the person in the year; and

(f) the total number of tonnes of other intermediate crude oil products used for combustion or hydrogen manufacture by the person in the year.

29 Method of calculating emissions from refining petroleum

(1) Emissions in relation to intermediate crude oil products used for energy or feedstock purposes in petroleum refining by the person in the year must be calculated in accordance with the following formula:

$$TE = (A \times EF) + (B \times EF) + (C \times EF) + D + (F \times EF) + (G \times EF)$$

where—

A is the total number of tonnes of refinery asphalt used for combustion by the person in the year, as recorded under regulation 28(a)

B is the total number of tonnes of refinery fuel oil used for combustion by the person in the year, as recorded under regulation 28(b)

C is the total number of tonnes of refinery fuel gas used for combustion by the person in the year, as recorded under regulation 28(c)

D is the the total number of tonnes of CO_2 vented from manufacturing hydrogen by the person in the year, as recorded under regulation 28(d)

EF is the relevant emissions factor from table 8 in Schedule 2

F is the total number of tonnes of refinery flare gas used for combustion by the person in the year, as recorded under regulation 28(e)

G is the total number of tonnes of other intermediate crude oil products used for combustion by the person in the year, as recorded under regulation 28(f)

TE is the total emissions for the activity of refining petroleum for the year in tonnes.

(2) If a person required to comply with this regulation is required to submit an emissions return for a period other than a year, this regulation applies with any necessary modifications.

29A Application of regulations 29B and 29C

(1) A person must comply with regulations 29B and 29C if the person, in any year, is a participant under section 54(1)(a) of the Act in respect of the activity in subpart 2 of Part 3 of Schedule 3 of the Act of using specified liquid hydrocarbons.

(2) Regulations 29B and 29C apply in relation to specified liquid hydrocarbons only if they are used on or after 1 January 2014.

(3) In this regulation and regulations 29B and 29C, **specified liquid hydrocarbons** means the liquid hydrocarbons described in subpart 2 of Part 3 of Schedule 3 of the Act, being crude oil or other liquid hydrocarbons (other than obligation fuel or any used as specified in the rest of that Part 3).

Regulation 29A: inserted, on 1 January 2014, by regulation 9 of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2013 (SR 2013/381).

29B Collection and recording of information for purpose of calculating emissions from using specified liquid hydrocarbons

The following information must be collected and recorded in relation to each type of specified liquid hydrocarbon used in the year:

(a) the total quantity, in tonnes:

(b) the mass fraction of carbon.

Regulation 29B: inserted, on 1 January 2014, by regulation 9 of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2013 (SR 2013/381).

29C Method of calculating emissions from using specified liquid hydrocarbons

(1) Emissions in relation to each type of specified liquid hydrocarbon used in the year must be calculated in accordance with the following formula:

$$E = [(OF_{SLH} \times m_C \times EF_C) + EF_{M+N}] \times C$$

where—

C is the total number of tonnes of the specified liquid hydrocarbon, as recorded under regulation 29B(a)

E is the emissions from the specified liquid hydrocarbon in tonnes

EF_C is the emissions factor for carbon content listed in table 9 of Schedule 2

EF_{M+N} is the aggregate emissions factor for CH_4 and N_2O emissions for specified liquid hydrocarbons listed in table 8A of Schedule 2

m_C is the mass fraction of carbon in the specified liquid hydrocarbon, as recorded under regulation 29B(b)

OF_{SLH} is the oxidation factor for specified liquid hydrocarbons listed in table 8A of Schedule 2.

(2) An emissions return submitted by a person required to comply with this regulation must record the person's total emissions from the activity of using specified liquid hydrocarbons in the relevant year, calculated by adding together the emissions for each type of specified liquid hydrocarbon calculated under subclause (1).

(3) If a person who is required to comply with this regulation is required to submit an emissions return for a period other than a year, this regulation applies with any necessary modifications.

Regulation 29C: inserted, on 1 January 2014, by regulation 9 of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2013 (SR 2013/381).

Part 3
Industrial processes participants

Producing iron or steel

30 Application of regulations 31 and 32

A person must comply with regulations 31 and 32 if the person, in any year, is a participant under section 54(1)(a) of the Act in respect of the activity in subpart 1 of Part 4 of Schedule 3 of the Act of producing iron or steel.

31 Collection and recording of information for purpose of calculating emissions from producing iron or steel

The following information must be collected and recorded in relation to iron or steel produced:

(a) the total number of tonnes of uncalcined limestone used by the person in the year, expressed as tonnes of pure calcium carbonate; and

(b) the total number of tonnes of uncalcined dolomite used by the person in the year, expressed as tonnes of pure calcium magnesium carbonate; and

(c) the total number of tonnes of carbon in each type of carbon-containing input (other than obligation coal, or limestone or dolomite collected

under paragraphs (a) and (b)) used in processing up to but not including the tapping of hot metal by the person in the year, expressed as tonnes of pure carbon.

32 Method of calculating emissions from producing iron or steel

(1) Emissions in relation to iron or steel produced by the person in the year must be calculated in accordance with the following formula:

$$TE = (A \times EF_{LST}) + (B \times EF_{DOL}) + \Sigma(C \times EF_{C})$$

where—

A is the total number of tonnes of uncalcined limestone used by the person in the year, expressed in tonnes of pure calcium carbonate, as recorded under regulation 31(a)

B is the total number of tonnes of uncalcined dolomite used by the person in the year, expressed in tonnes of pure calcium magnesium carbonate, as recorded under regulation 31(b)

C is the total number of tonnes of carbon in each type of carbon-containing input, other than obligation coal, limestone, or dolomite, used by the person in the year, as recorded under regulation 31(c)

EF_C is the emissions factor for carbon content from table 9 in Schedule 2

EF_{DOL} is the emissions factor for uncalcined dolomite from table 9 in Schedule 2

EF_{LST} is the emissions factor for uncalcined limestone from table 9 in Schedule 2

TE is the total emissions for the activity of producing iron or steel in the year in tonnes.

(2) If a person who is required to comply with this regulation is required to submit an emissions return for a period other than a year, this regulation applies with any necessary modifications.

Producing aluminium

33 Application of regulations 34 and 35

A person must comply with regulations 34 and 35 if the person, in any year, is a participant under section 54(1)(a) of the Act in respect of the activity in subpart 1 of Part 4 of Schedule 3 of the Act of producing aluminium, resulting in the consumption of anodes or the production of anode effects.

34 Collection and recording of information for purpose of calculating emissions from producing aluminium

The following information must be collected and recorded in relation to aluminium produced in the year:

(a) the total number of tonnes of carbon dioxide resulting from baked anodes used by the person in the year, as calculated in accordance with the Aluminium Sector Greenhouse Gas Protocol; and

(b) the total number of tonnes of carbon dioxide resulting from pitch volatiles used by the person in the year, as calculated in accordance with the Aluminium Sector Greenhouse Gas Protocol; and

(c) the total number of tonnes of carbon dioxide resulting from packing material, other than obligation coal, used by the person in the year as calculated in accordance with the Aluminium Sector Greenhouse Gas Protocol; and

(d) the total number of tonnes of hot metal aluminium produced by the person in the year; and

(e) the anode effect minutes per cell-day (excluding non-steady state emissions and as defined in Appendix C of the Aluminium Sector Greenhouse Gas Protocol); and

(f) the slope coefficient for C_2F_6 (in kg C_2F_6/tAl) and for CF_4 (in kg CF_4/tAl), as provided by the Aluminium Sector Greenhouse Gas Protocol.

35 Method of calculating emissions from producing aluminium

(1) Emissions in relation to aluminium produced by the person in the year must be calculated in accordance with the following formula:

$$TE = A + B + C + \{D \times F \times [(G \times H) + (I \times J)] \times 0.001\}$$

where—

A is the total number of tonnes of carbon dioxide resulting from baked anodes used by the person in the year, as recorded under regulation 34(a)

B is the total number of tonnes of carbon dioxide resulting from pitch volatiles used by the person in the year, as recorded under regulation 34(b)

C is the total number of tonnes of carbon dioxide resulting from packing material used by the person in the year, as recorded under regulation 34(c)

D is the total number of tonnes of hot metal aluminium produced in the year, as recorded under regulation 34(d)

F is the anode effect minutes per cell-day, as recorded under regulation 34(e)

G is the slope coefficient for C_2F_6, as recorded under regulation 34(f)

H is 12 200 (the global warming potential for C_2F_6)

I is the slope coefficient for CF_4, as recorded under regulation 34(f)

J is 7 390 (the global warming potential for CF_4)

TE is the total emissions for the activity of producing aluminium for the year in tonnes.

(2) If a person who is required to comply with this regulation is required to submit an emissions return for a period other than a year, this regulation applies with any necessary modifications.

Regulation 35(1) formula item H: amended, on 12 December 2013 (applying on and from 1 January 2013), by regulation 10(1) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2013 (SR 2013/381).

Regulation 35(1) formula item J: amended, on 4 March 2015 (applying from 31 December 2014), by regulation 5 of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2014 (LI 2014/365).

Producing clinker or burnt lime

36 Application of regulations 37 and 38

A person must comply with regulations 37 and 38 if the person, in any year, is a participant under section 54(1)(a) of the Act in respect of the activity in subpart 1 of Part 4 of Schedule 3 of the Act of producing clinker or burnt lime, resulting in calcination of limestone, or calcium carbonates.

37 Collection and recording of information for purpose of calculating emissions from producing clinker or burnt lime

(1) The following information must be collected and recorded in relation to clinker and burnt lime produced in the year:

(a) the total number of tonnes of pure calcium oxide in clinker or burnt lime products derived from calcium carbonate calcined in a cement or lime kiln by the person in the year; and

(b) the total number of tonnes of pure magnesium oxide in clinker or burnt lime products derived from magnesium carbonate calcined in a cement or lime kiln by the person in the year and not recorded under paragraph (a); and

(c) the total number of tonnes of calcium oxide or magnesium oxide in cement kiln dust or lime kiln dust produced by the person in the year, excluding any dust that is recycled into a cement or lime kiln.

(2) For the purposes of subclause (1)(a), up to 5% by weight of magnesium oxide, if present as an impurity, may be included and calculated as calcium oxide.

38 Method of calculating emissions from producing clinker or burnt lime

(1) Emissions in relation to clinker and burnt lime produced by the person in the year must be calculated in accordance with the following formula:

$$TE = (A \times EF_{CAO}) + (B \times EF_{MGO}) + (C \times EF_{CAO})$$

where—

A is the total number of tonnes of calcium oxide in clinker or burnt lime produced by the person in the year, as recorded under regulation 37(1)(a)

B is the total number of tonnes of magnesium oxide in clinker or burnt lime produced by the person in the year, as recorded under regulation 37(1)(b)

C is the total number of tonnes of calcium oxide and magnesium oxide in cement kiln dust or lime kiln dust produced by the person in the year, as recorded under regulation 37(1)(c)

EF_{CAO} is the emissions factor for calcium oxide from table 9 in Schedule 2

EF_{MGO} is the emissions factor for magnesium oxide from table 9 in Schedule 2

TE is the total emissions for the activity of producing clinker or burnt lime for the year in tonnes.

(2) If a person who is required to comply with this regulation is required to submit an emissions return for a period other than a year, this regulation applies with any necessary modifications.

Producing glass using soda ash

39 Application of regulations 40 and 41

A person must comply with regulations 40 and 41 if the person, in any year, is a participant under section 54(1)(a) of the Act in respect of the activity in subpart 1 of Part 4 of Schedule 3 of the Act of producing glass using soda ash.

40 Collection and recording of information for purpose of calculating emissions from producing glass

The following information must be collected and recorded in relation to the glass produced in the year:

(a) the total number of tonnes of soda ash used by the person in the year, expressed as tonnes of pure sodium carbonate; and

(b) the total number of tonnes of uncalcined limestone used by the person in the year, expressed as tonnes of pure calcium carbonate; and

(c) the total number of tonnes of uncalcined dolomite used by the person in the year, expressed as tonnes of pure calcium magnesium carbonate.

41 Method of calculating emissions from producing glass

(1) Emissions in relation to the glass produced by the person in the year must be calculated in accordance with the following formula:

$$TE = (A \times EF_{SOA}) + (B \times EF_{LST}) + (C \times EF_{DOL})$$

where—

A is the total number of tonnes of soda ash used by the person in the year, as recorded under regulation 40(a)

B is the total number of tonnes of uncalcined limestone used by the person in the year, as recorded under regulation 40(b)

C is the total number of tonnes of uncalcined dolomite used by the person in the year, as recorded under regulation 40(c)

EF_{DOL} is the emissions factor for uncalcined dolomite from table 9 in Schedule 2

EF_{LST} is the emissions factor for uncalcined limestone from table 9 in Schedule 2

EF_{SOA} is the emissions factor for soda ash from table 9 in Schedule 2

TE is the total emissions for the activity of producing glass in the year in tonnes.

(2) If a person who is required to comply with this regulation is required to submit an emissions return for a period other than a year, this regulation applies with any necessary modifications.

Producing gold

42 Application of regulations 43 and 44

A person must comply with regulations 43 and 44 if the person, in any year, is a participant under section 54(1)(a) of the Act in respect of the activity in subpart 1 of Part 4 of Schedule 3 of the Act of producing gold.

43 Collection and recording of information for purpose of calculating emissions from producing gold

The following information must be collected and recorded in relation to gold produced in the year:

(a) the total number of tonnes of uncalcined limestone reacted in use by the person in producing gold in the year, expressed as tonnes of pure calcium carbonate; and

(b) the total number of tonnes of uncalcined dolomite reacted in use by the person in producing gold in the year, expressed as tonnes of pure calcium magnesium carbonate.

44 Method of calculating emissions from producing gold

(1) Emissions in relation to the gold produced by the person in the year must be calculated in accordance with the following formula:

$$TE = (A \times EF_{LST}) + (B \times EF_{DOL})$$

where—

A is the total number of tonnes of uncalcined limestone reacted in use by the person in the year, as collected under regulation 43(a)

B is the total number of tonnes of uncalcined dolomite reacted in use by the person in the year, as collected under regulation 43(b)

EF_{DOL} is the emissions factor for uncalcined dolomite from table 9 in Schedule 2

EF_{LST} is the emissions factor for uncalcined limestone from table 9 in Schedule 2

TE is the total emissions for the activity of producing gold in the year in tonnes.

(2) If a person who is required to comply with this regulation is required to submit an emissions return for a period other than a year, this regulation applies with any necessary modifications.

Using sulphur hexafluoride in electrical switchgear

Heading: replaced, on 1 April 2013, by regulation 4 of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2012 (SR 2012/401).

44A Application of regulations 44B and 44C

A person must comply with regulations 44B and 44C if the person, in any year, is a participant under section 54(1)(a) of the Act in respect of the activity in subpart 2 of Part 4 of Schedule 3 of the Act of operating electrical switchgear that uses sulphur hexafluoride.

Regulation 44A: replaced, on 1 April 2013, by regulation 4 of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2012 (SR 2012/401).

44B Collection and recording of information for calculating emissions from use of sulphur hexafluoride in pre-charged equipment

(1) The person must collect and record information in relation to electrical switchgear that uses sulphur hexafluoride and that is operated by the person in the year.

(2) The information is—

(a) the total amount (in kilograms) of sulphur hexafluoride that is added into the electrical switchgear in the year; and

(b) the capacity for sulphur hexafluoride (in kilograms) of the electrical switchgear; and

(c) in relation to electrical switchgear that is installed in the year, the total amount (in kilograms) of sulphur hexafluoride in the electrical switchgear immediately before it is installed; and

(d) in relation to electrical switchgear that ceases to be operated in the year, the total amount of sulphur hexafluoride (in kilograms) in the electrical switchgear immediately after it ceases to be operated.

(3) If the person is required to collect and record information under this regulation in the year beginning on 1 January 2013 and ending with the close of 31 December 2013, the information must relate to that period.

Regulation 44B: replaced, on 1 April 2013, by regulation 4 of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2012 (SR 2012/401).

44C Method of calculating emissions from use of sulphur hexafluoride

Emissions in relation to an item of electrical switchgear that uses sulphur hexafluoride and is operated by the person in the year must be calculated in accordance with the following formula:

$$TE = 0.001 \times GWP \times [A - \Sigma (B - C) + \Sigma (D - E)]$$

where—

A is the total number of kilograms of sulphur hexafluoride that is added into the electrical switchgear after it is installed in the year as recorded under regulation 44B

B is,—

(a) if the item of electrical switchgear was installed in the year, the capacity of the item; or

(b) otherwise, zero

C is,—

(a) if the item of electrical switchgear was installed in the year, the total number of kilograms of sulphur hexafluoride in the item immediately before it is installed; or

(b) otherwise, zero

D is,—

(a) if the item of electrical switchgear ceases to be operated in the year, the capacity of the item; or

(b) otherwise, zero

E is,—

(a) if the item of electrical switchgear ceases to be operated by the person in the year, the total number of kilograms of sulphur hexafluoride in the item immediately after it ceases to be operated; or

(b) otherwise, zero

GWP is the GWP figure for sulphur hexafluoride in table 1 of Schedule 2A

TE is the total emissions in tonnes for operating electrical switchgear.

Regulation 44C: replaced, on 1 April 2013, by regulation 4 of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2012 (SR 2012/401).

44D Method of calculating emissions from importing bulk sulphur hexafluoride

[Revoked]

Regulation 44D: revoked, on 1 January 2013, by section 103 of the Climate Change Response (Emissions Trading and Other Matters) Amendment Act 2012 (2012 No 89).

44E Collection of information for purpose of calculating emissions from importing sulphur hexafluoride in pre-charged equipment

[Revoked]

Regulation 44E: revoked, on 1 January 2013, by section 103 of the Climate Change Response (Emissions Trading and Other Matters) Amendment Act 2012 (2012 No 89).

44F Method of calculating emissions from importing sulphur hexafluoride in pre-charged equipment

[Revoked]

Regulation 44F: revoked, on 1 January 2013, by section 103 of the Climate Change Response (Emissions Trading and Other Matters) Amendment Act 2012 (2012 No 89).

Importing hydrofluorocarbons or perfluorocarbons

Heading: inserted, on 1 January 2011, by regulation 11 of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2010 (SR 2010/340).

44G Application of regulations 44H to 44N

A person must comply with regulations 44H to 44N if the person, in any year, is a participant in respect of the activity in subpart 2 of Part 4 of Schedule 3 of the Act of importing hydrofluorocarbons or perfluorocarbons.

Regulation 44G: inserted, on 1 January 2011, by regulation 11 of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2010 (SR 2010/340).

Regulation 44G: amended, on 1 January 2013, by section 103 of the Climate Change Response (Emissions Trading and Other Matters) Amendment Act 2012 (2012 No 89).

44H Collection and recording of information for purpose of calculating emissions from importing hydrofluorocarbons or perfluorocarbons

(1) Information must be collected and recorded and emissions must be calculated in respect of imported hydrofluorocarbons or imported perfluorocarbons in accordance with regulations 44I and 44J, if the hydrofluorocarbons or perfluorocarbons are imported in bulk in the year.

(2) An emissions return for the activity must record the person's total emissions for the period covered by the return, calculated by adding together the emissions for each class of hydrofluorocarbons or perfluorocarbons imported in bulk by the person in the period, as calculated under regulation 44J.

Regulation 44H: replaced, on 1 January 2013, by section 103 of the Climate Change Response (Emissions Trading and Other Matters) Amendment Act 2012 (2012 No 89).

44I Collection of information for purpose of calculating emissions from importing bulk hydrofluorocarbons or perfluorocarbons

The person must collect and record—

(a) the constituents of each class of hydrofluorocarbons or perfluorocarbons imported in bulk by the person in the year; and

(b) the total number of kilograms of each class of hydrofluorocarbons or perfluorocarbons imported in bulk by the person in the year, as recorded at the customs point.

Regulation 44I: inserted, on 1 January 2011, by regulation 11 of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2010 (SR 2010/340).

44J Method of calculating emissions from importing bulk hydrofluorocarbons or perfluorocarbons

(1) Emissions in relation to each class of hydrofluorocarbons or perfluorocarbons imported in bulk by the person in the year must be calculated in accordance with the following formula:

$$E = A \times GWP \times 0.001$$

where—

A is the total number of kilograms of the class of hydrofluorocarbons or perfluorocarbons imported in bulk in the year, as recorded under regulation 44I(b)

E is the emissions in tonnes for the class of hydrofluorocarbons or perfluorocarbons imported in bulk

GWP is, for a class of hydrofluorocarbons or perfluorocarbons—

(a) listed in the first column of table 2 of Schedule 2A, the GWP figure for the class specified in the right-hand column of the table; and

(b) not listed in table 2 of Schedule 2A and that contains more than 1 hydrofluorocarbon or perfluorocarbon, the GWP figure determined under regulation 44R; and

(c) that contains a single hydrofluorocarbon or perfluorocarbon, the GWP figure for the hydrofluorocarbon or perfluorocarbon in table 1 of Schedule 2A.

(2) If a person who is required to comply with this regulation is required to submit an emissions return for a period other than a year, this regulation applies with any necessary modifications.

Regulation 44J: inserted, on 1 January 2011, by regulation 11 of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2010 (SR 2010/340).

44K Collection of information for purpose of calculating emissions from importing hydrofluorocarbons or perfluorocarbons in pre-charged equipment

[Revoked]

Regulation 44K: revoked, on 1 January 2013, by section 103 of the Climate Change Response (Emissions Trading and Other Matters) Amendment Act 2012 (2012 No 89).

44L Method of calculating emissions from importing hydrofluorocarbons or perfluorocarbons in pre-charged equipment

[Revoked]

Regulation 44L: revoked, on 1 January 2013, by section 103 of the Climate Change Response (Emissions Trading and Other Matters) Amendment Act 2012 (2012 No 89).

44M Collection of information for purpose of calculating emissions from importing hydrofluorocarbons or perfluorocarbons in motor vehicles

[Revoked]

Regulation 44M: revoked, on 1 January 2013, by section 103 of the Climate Change Response (Emissions Trading and Other Matters) Amendment Act 2012 (2012 No 89).

44N Method of calculating emissions from importing hydrofluorocarbons or perfluorocarbons in motor vehicles

[Revoked]

Regulation 44N: revoked, on 1 January 2013, by section 103 of the Climate Change Response (Emissions Trading and Other Matters) Amendment Act 2012 (2012 No 89).

Manufacturing synthetic greenhouse gases

Heading: inserted, on 1 January 2011, by regulation 11 of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2010 (SR 2010/340).

44O Application of regulations 44P and 44Q

A person must comply with regulations 44P and 44Q if the person, in any year, is a participant under section 54(1)(a) of the Act in respect of the activity in subpart 2 of Part 4 of Schedule 3 of the Act of manufacturing hydrofluorocarbons, or perfluorocarbons, other than through producing aluminium resulting in the consumption of anodes or the production of anode effects.

Regulation 44O: inserted, on 1 January 2011, by regulation 11 of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2010 (SR 2010/340).

Regulation 44O: amended, on 1 January 2013, by section 103 of the Climate Change Response (Emissions Trading and Other Matters) Amendment Act 2012 (2012 No 89).

44P Collection of information for purpose of calculating emissions from manufacturing synthetic greenhouse gases

The person must collect and record the following information in relation to each class of synthetic greenhouse gas and each facility at which synthetic greenhouse gases are manufactured by the person in the year (whether the gas is manufactured in bulk or as a by-product of another manufacturing process, other than aluminium production):

(a) the constituents of the class of synthetic greenhouse gas; and

(b) the total number of kilograms of the class of synthetic greenhouse gas manufactured at the facility in the year; and

(c) the number of kilograms of the class of synthetic greenhouse gas emitted during manufacturing at the facility in the year; and

(d) the number of kilograms of the class of synthetic greenhouse gas emitted during handling at the facility in the year.

Regulation 44P: inserted, on 1 January 2011, by regulation 11 of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2010 (SR 2010/340).

44Q Method of calculating emissions from manufacturing synthetic greenhouse gases

(1) Emissions in relation to each class of synthetic greenhouse gas manufactured by the person in the year at each facility used by the person to manufacture a synthetic greenhouse gas (whether in bulk or as a by-product of another manufacturing process) must be calculated in accordance with the following formula:

$$E = (A + B + C) \times GWP \times 0.001$$

where—

A is the total number of kilograms of the class of synthetic greenhouse gas manufactured by the person in the year at the facility, as recorded under regulation 44P(b)

B is the total number of kilograms of the class of synthetic greenhouse gas emitted during manufacturing in the year at the facility, as recorded under regulation 44P(c)

C is the total number of kilograms of the class of synthetic greenhouse gas emitted during handling in the year at the facility, as recorded under regulation 44P(d)

E is the emissions in tonnes for the class of synthetic greenhouse gas manufactured at the facility

GWP is, for a class of synthetic greenhouse gas—

(a) listed in the first column of table 2 of Schedule 2A, the GWP figure for the class specified in the right-hand column of the table:

(b) not listed in table 2 of Schedule 2A and that contains more than 1 synthetic greenhouse gas, the GWP figure determined under regulation 44R; and

(c) that contains a single synthetic greenhouse gas, the GWP figure for the synthetic greenhouse gas in table 1 of Schedule 2A.

(2) An emissions return submitted by a person required to comply with this regulation must record the person's total emissions from the manufacturing synthetic greenhouse gases activity in the year, calculated by adding together the emissions for each class of synthetic greenhouse gas manufactured at each facility in the year, as calculated under subclause (1).

(3) If a person who is required to comply with this regulation is required to submit an emissions return for a period other than a year, this regulation applies with any necessary modifications.

Regulation 44Q: inserted, on 1 January 2011, by regulation 11 of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2010 (SR 2010/340).

Determination of GWP

Heading: inserted, on 1 January 2011, by regulation 11 of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2010 (SR 2010/340).

44R Determination of GWP figure for class of synthetic greenhouse gas

If a person is required to use a GWP figure for a class of synthetic greenhouse gas that contains more than 1 synthetic greenhouse gas and the GWP figure for the class of synthetic greenhouse gas is not listed in table 2 of Schedule 2A, then the GWP figure for the class of synthetic greenhouse gas must be calculated in accordance with the following formula:

$$GWP = \Sigma (A \times B)$$

where—

A is, for each synthetic greenhouse gas specified in table 1 of Schedule 2A that is contained in the class of synthetic greenhouse gas, the GWP figure specified in that table

B is, for the relevant synthetic greenhouse gas, the percentage by mass of the synthetic greenhouse gas in the class of synthetic greenhouse gas

GWP is the GWP figure for the class, being—

(a) the product of the equation rounded down to the nearest 10 if the last number of the product is 1, 2, 3, or 4:

(b) the product of the equation rounded up to the nearest 10 if the last number of the product is 5, 6, 7, 8, or 9.

Regulation 44R: inserted, on 1 January 2011, by regulation 11 of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2010 (SR 2010/340).

Part 4
Opt-in participants

Purchasing coal

45 Application of regulations 46 and 47

(1) A person must comply with regulations 46 and 47 if the person, in any year, is a participant under section 54(1)(b) of the Act in respect of the activity in Part 4 of Schedule 4 of the Act of purchasing coal from 1 or more participants who mine coal where the total coal purchased exceeds 250 000 tonnes per year.

(2) Regulations 46 and 47 apply only if the purchased coal is coal mined—

(a) on or after 1 January 2010; and

(b) by a person who is required to comply with regulations 10 and 11.

46 Collection and recording of information for purpose of calculating emissions from purchasing coal

(1) The following information must be collected and recorded in relation to each class of coal for the year:

(a) the total number of tonnes of coal of the class purchased from each coal miner in the year, as recorded at the point of sale; and

(b) the calorific value of the coal referred to in paragraph (a); and

(c) the total number of tonnes of coal of the class purchased from a coal miner that are exported by the person in the year, as recorded at the customs point; and

(d) the calorific value of the coal referred to in paragraph (c).

(2) If the person wishes to include a stockpile adjustment for the class of coal under regulation 47(1), then the person must also collect and record the information specified in clause 3 of Schedule 1.

47 Method of calculating emissions in relation to purchasing coal

(1) Emissions for the year in relation to each class of coal must be calculated in accordance with the following formula:

$$E = ((A \times CV_1) - (S \times CV_2) - (C \times CV_1)) \times EF$$

where—

A is the total number of tonnes of coal of the class purchased from coal miners in the year, as collected under regulation 46(1)(a)

C is the total number of tonnes of coal of the class exported by the person in the year, as collected under regulation 46(1)(c)

CV_1 is the weighted average calorific value of the coal of the class purchased or exported, as the case may be, calculated by reference to the information collected under regulation 46(1)(b) or (d)

CV_2 is—

(a) the figure for CV_2 determined in accordance with Schedule 1 if the person—

(i) includes a stockpile adjustment for the class of coal; or

(ii) does not include a stockpile adjustment, but a stockpile adjustment was included when emissions from importing the class of coal were calculated and reported in the previous emissions return submitted for the activity; or

(b) zero, if S is zero

E is the emissions in tonnes from the class of coal

EF is,—

(a) in relation to a class of coal for which no unique emissions factor is in force, the emissions factor for the class of coal from table 2 in Schedule 2; or

(b) in relation to a class of coal for which a unique emissions factor is in force, the unique emissions factor

S is—

(a) the figure determined in accordance with Schedule 1, if the person—

(i) includes a stockpile adjustment for the class of coal; or

(ii) does not include a stockpile adjustment, but a stockpile adjustment was included when emissions from purchasing the class of coal were calculated and reported in the previous emissions return submitted for the activity; or

(b) zero, if the person does not include a stockpile adjustment for the class of coal and—

(i) it is the person's first emissions return for the activity; or

(ii) a stockpile adjustment was not included when emissions from purchasing the class of coal were calculated and reported in the previous emissions return submitted for the activity.

(1A) For the purposes of subclause (1), a person must include a stockpile adjustment if the emissions return is the final emissions return relating to the period ending on the date on which the name of the person is removed from the register of participants in respect of the activity of purchasing coal.

(2) An emissions return submitted by a person who is required to comply with this regulation must record the person's total emissions from the activity of purchasing coal in the relevant year, calculated by adding together the emissions for each class of coal purchased calculated under subclause (1).

(3) If a person who is required to comply with this regulation is required to submit an emissions return for a period other than a year, this regulation applies with any necessary modifications.

Regulation 47(1A): inserted (with effect on 1 January 2010), on 25 September 2010, by regulation 12 of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2010 (SR 2010/340).

Purchasing natural gas

48 Application of regulations 49 and 50

(1) A person must comply with regulations 49 and 50 if the person, in any year, is a participant under section 54(1)(b) of the Act in respect of the activity in Part 4 of Schedule 4 of the Act of purchasing natural gas from 1 or more partici-

pants who mine natural gas where the total natural gas purchased exceeds 2 petajoules in a year.

(2) Regulations 49 and 50 apply only if the purchased natural gas (**opt-in natural gas**) is mined—

(a) on or after 1 January 2010; and

(b) by a person who is required to comply with regulations 16 and 17.

49 Collection and recording of information for purpose of calculating emissions from purchasing natural gas

(1) The following information must be collected and recorded in relation to each class of opt-in natural gas for the year:

(a) the total number of tonnes of opt-in natural gas of the class purchased by the person from each gas miner in the year, as measured at the point of sale; and

(b) the total number of tonnes of opt-in natural gas of the class exported by the person in the year, as measured at the point of sale; and

(c) in respect of each of the quantities of opt-in natural gas referred to in paragraphs (a) and (b) (other than LPG butane or propane),—

(i) the total terajoules of the natural gas, as determined in accordance with subclause (2); and

(ii) if the standard emissions calculation formula in clause 50(3) is intended to be used, the mass fraction of carbon in the natural gas, as determined by reference to the tests in subclause (2)(b).

(2) To obtain the information required by subclause (1)(c),—

(a) the opt-in natural gas must be sampled with continuous monitoring equipment where available at least every 30 minutes, or where this is not available, periodically with sufficient frequency to be representative of the information sought, but at least at intervals of no more than 3 months, and in accordance with—

(i) GPA 2166:2005 (obtaining natural gas samples for analysis by gas chromatography, Parts 1–8); or

(ii) any equivalent standard or test method related to an organisation that is listed in regulation 3(2) of the Climate Change (Unique Emissions Factors) Regulations 2009; and

(b) the samples must be tested, by a person or laboratory that is accredited as complying with ISO 17025:2005 by International Accreditation New Zealand, an overseas accreditation agency with whom International Accreditation New Zealand has a mutual recognition agreement, or an overseas accreditation agency recognised under New Zealand's mutual recognition arrangements, using gas chromatography in accordance with—

(i) ASTM D1945–03 (analysis of natural gas by gas chromatography); or

(ii) any equivalent standard or test method related to an organisation that is listed in regulation 3(2) of the Climate Change (Unique Emissions Factors) Regulations 2009).

(3) In addition, for the purposes of the gas storage adjustment under regulation 50(7), the person must also collect and record the following information:

(a) the total number of terajoules of opt-in natural gas injected in the year into a gas storage facility by or on behalf of the person; and

(b) the total number of terajoules of opt-in natural gas extracted in the year from a gas storage facility by or on behalf of the person.

(4) In this regulation, **gas storage facility** means an underground feature or formation used for storing mined natural gas transferred from its original location for subsequent recovery, whether or not the underground feature or formation also contains natural gas that has not been mined.

Regulation 49(3): replaced (with effect on 1 January 2010), on 25 September 2010, by regulation 13 of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2010 (SR 2010/340).

Regulation 49(4): inserted (with effect on 1 January 2010), on 25 September 2010, by regulation 13 of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2010 (SR 2010/340).

50 Method of calculating emissions in relation to purchasing natural gas

(1) Emissions for the year in relation to each of the following quantities of opt-in natural gas must be calculated in accordance with the standard formula in subclause (3), the field specific formula in subclause (4), or the unique emissions factor formula in subclause (4A):

(a) each class of natural gas (other than LPG, propane, or butane) purchased by the person in the year; and

(b) each class of natural gas (other than LPG, propane, or butane) exported by the person in the year.

(2) Emissions for the year in relation to each of the following quantities of natural gas must be calculated in accordance with the formula in subclause (5):

(a) LPG, propane, or butane purchased by the person in the year; and

(b) LPG, propane, or butane exported by the person in the year.

(3) The standard formula for the calculation of emissions under this regulation is—

$$E = (m_C \times EF_C \times C) + (D \times EF_{M+N})$$

where—

C is the total number of tonnes of the quantity of natural gas, as recorded under regulation 49(1)(a) or (b)

D is the total terajoules of the quantity of natural gas, as recorded under regulation 49(1)(c)(i)

E is the emissions from the quantity of natural gas

EF_C is the emissions factor for carbon content from table 9 in Schedule 2

EF_{M+N} is,—

(a) in relation to a class of natural gas for which no unique emissions factor is in force, the aggregate emissions factor for CH_4 and N_2O emissions for natural gas expressed in tCO_2e/TJ from table 5 of Schedule 2:

(b) in relation to a class of natural gas for which a unique emissions factor for CH_4 and N_2O is in force, the unique emissions factor

m_C is the mass fraction of carbon in the quantity of gas as recorded under regulation 49(1)(c)(ii).

(4) A person may calculate emissions for a class of opt-in natural gas under the following field specific formula, if the field is listed in table 10 in Schedule 2:

$$E = EF_{fieldn} \times D$$

where—

D is the total terajoules of the quantity of natural gas, as recorded under regulation 49(1)(c)(i)

E is the emissions from the quantity of natural gas

EF_{fieldn} is the emissions factor for the relevant natural gas field from table 10 in Schedule 2.

(4A) A person may calculate emissions for a class of opt-in natural gas under the following unique emissions factor formula, if the EPA has approved the use by that person of a unique emissions factor for calculating emissions in relation to that class of opt-in natural gas:

$$E = EF_{UEF} \times D$$

where—

D is the total terajoules of the quantity of natural gas, as recorded under regulation 49(1)(c)(i)

E is the emissions from the quantity of natural gas

EF_{UEF} is the unique emissions factor that the EPA has approved the person to use when calculating emissions in relation to that class of opt-in natural gas.

(5) Emissions for LPG, propane, or butane must be calculated in accordance with the following formula:

$$E = A \times EF$$

where—

A is the total number of tonnes of natural gas of the class purchased by the person in the year, as collected under regulation 49(1)(a)

E is the emissions for the class of natural gas in tonnes

EF is,—

(a) if the class of natural gas is a class of LPG with a propane content other than 60% by volume, the emissions factor for the class calculated in accordance with subclause (6); and

(b) in any other case, the emissions factor for the class of natural gas from table 4 in Schedule 2.

(6) For the purposes of subclause (5), the emissions factor for a class of LPG with a propane content other than 60% by volume, must be calculated as follows:

$$EF = (OF_{GAS} \times EF_{LPG}) + EF_{M+N}$$

where—

EF is the emissions factor for the class of LPG in tCO_2e/t

EF_{LPG} is the carbon dioxide emissions factor for LPG calculated as follows:

$$EF_{LPG} = 3.029 - \{(18.09 \times V_{PRO}) \div [572.6 - (65.9 \times V_{PRO})]\}$$

where—

v_{PRO} is the volume fraction of propane in the LPG

EF_{M+N} is the aggregate emissions factor for CH_4 and N_2O emissions for natural gas expressed in tCO_2e/t from table 5 in Schedule 2

OF_{GAS} is the oxidation factor for gas (other than flared) from table 5 in Schedule 2.

(7) Total emissions from the activity of purchasing natural gas for the year must be calculated as follows:

$$TE = \Sigma(EP) - \Sigma(EE) - S \times EF_{avge}$$

where—

EE is the emissions from each class of opt-in natural gas exported by the person in the year, as calculated under subclause (3), (4), (4A), or (5)

EF_{avge} is the national average emissions factor for natural gas from table 10 of Schedule 2

EP is the emissions from each class of opt-in natural gas purchased by the person in the year, as calculated under subclause (3), (4), (4A), or (5)

S is the figure calculated in accordance with Schedule 3

TE is the total emissions for the activity of purchasing natural gas from 1 or more participants who mine natural gas where the total natural gas purchased exceeds 2 petajoules per year in tonnes.

(8) If a person who is required to comply with this regulation is required to submit an emissions return for a period other than a year, this regulation applies with any necessary modifications.

Regulation 50(1): amended, on 1 January 2016, by regulation 6(1) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2015 (LI 2015/218).

Regulation 50(4) formula item E: inserted, on 1 January 2016, by regulation 6(2) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2015 (LI 2015/218).

Regulation 50(4A): inserted, on 1 January 2016, by regulation 6(3) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2015 (LI 2015/218).

Regulation 50(7) formula: replaced (with effect on 1 January 2010), on 25 September 2010, by regulation 14(1) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2010 (SR 2010/340).

Regulation 50(7) formula item EE: amended, on 1 January 2016, by regulation 6(4) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2015 (LI 2015/218).

Regulation 50(7) formula item EF_{avge}: inserted (with effect on 1 January 2010), on 25 September 2010, by regulation 14(2) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2010 (SR 2010/340).

Regulation 50(7) formula item EP: amended, on 1 January 2016, by regulation 6(5) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2015 (LI 2015/218).

Regulation 50(7) formula item S: replaced (with effect on 1 January 2010), on 25 September 2010, by regulation 14(3) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2010 (SR 2010/340).

Schedule 1
Stockpile adjustments for activities of importing and purchasing coal

rr 7, 8, 46, 47

1 Interpretation

In this schedule,—

amalgamated stockpile means a stockpile—

(a) that has been formed by adding obligation coal to a base stockpile; and

(b) in respect of which the aggregate number of tonnes of coal removed from the stockpile has not, at 1 January in the year, exceeded the number of tonnes in the base stockpile

base date means the later of the following dates:

(a) 1 July 2010:

(b) the date from which a participant's current registration takes effect under section 57 of the Act

base stockpile means a stockpile owned by the person at the base date

coal includes coal that was imported or mined (in the case of purchased coal) before 1 January 2010

first stockpile adjustment year means—

(a) the first year in respect of which a stockpile adjustment is claimed in relation to a stockpile; or

(b) where a stockpile adjustment has not been claimed in respect of a year, the next year in respect of which a stockpile adjustment for the stockpile is claimed

mixed stockpile means a stockpile that is made up of—

(a) imported coal of more than 1 class; or

(b) coal purchased from a coal miner of more than one class; or

(c) imported coal and coal purchased from a coal miner

stockpile means an amount of coal owned by a person as determined by—

(a) the person's accounting and business records; or

(b) physical measurement.

Schedule 1 clause 1 **base date**: replaced (with effect on 1 January 2010), on 25 September 2010, by regulation 15(1) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2010 (SR 2010/340).

Schedule 1 clause 1 **base stockpile**: amended (with effect on 1 January 2010), on 25 September 2010, by regulation 15(2) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2010 (SR 2010/340).

Schedule 1 clause 1 **first stockpile adjustment year** paragraph (a): amended (with effect on 1 January 2010), on 25 September 2010, by regulation 15(3) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2010 (SR 2010/340).

Schedule 1 clause 1 **stockpile**: inserted (with effect on 1 January 2010), on 25 September 2010, by regulation 15(4) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2010 (SR 2010/340).

2 Status of examples

(1) An example is only illustrative of the provision it relates to and does not limit the provision.

(2) If an example and the provision it relates to are inconsistent, the provision prevails.

3 Information to be collected and recorded for purposes of stockpile adjustment

(1) A person who wishes or is required to include a stockpile adjustment in relation to a class of coal under regulation 8(1) or 47(1) must collect and record information about—

(a) the total number of tonnes of coal of the class added to the stockpile in the year; and

(b) the calorific value of the coal referred to in paragraph (a); and

(c) the total number of tonnes of coal of the class removed from the stockpile in the year.

(2) If a person wishes or is required to include a stockpile adjustment in relation to a class of coal on a mixed stockpile, subclause (1)(c) must be read as referring to the total tonnes of coal removed from the mixed stockpile in the year.

(3) If a person wishes or is required to include a stockpile adjustment in relation to an amalgamated stockpile in a year, the person must collect and record the following information:

(a) the total number of tonnes of the person's base stockpile; and

(b) the aggregate number of tonnes of coal removed from the amalgamated stockpile between the base date and 31 December in the year.

(4) For the purposes of these regulations, a person may determine the amount of coal added to or removed from a stockpile using—

(a) the person's accounting and business records; or

(b) physical measurement.

Schedule 1 clause 3(1): amended (with effect on 1 January 2010), on 25 September 2010, by regulation 15(5) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2010 (SR 2010/340).

Schedule 1 clause 3(2): amended (with effect on 1 January 2010), on 25 September 2010, by regulation 15(5) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2010 (SR 2010/340).

Schedule 1 clause 3(3): amended (with effect on 1 January 2010), on 25 September 2010, by regulation 15(5) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2010 (SR 2010/340).

Schedule 1 clause 3(4): inserted (with effect on 1 January 2010), on 25 September 2010, by regulation 15(6) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2010 (SR 2010/340).

4 Calculating S where stockpile contains single class of imported coal or purchased coal

(1) This clause applies where a person includes a stockpile adjustment in relation to a class of coal under regulation 8(1) or 47(1) and the stockpile contains only 1 class of imported coal or 1 class of purchased coal.

(2) S in the formula in regulation 8(1) or 47(1) must be calculated in accordance with the following formula:

$$S = TC_{added} - TC_{removed}$$

where—

TC_{added} is the total number of tonnes of coal of the class added to the stockpile during the year, as recorded under clause 3(1)(a)

$TC_{removed}$ is,—

(a) if the stockpile is an amalgamated stockpile,—

(i) zero, for every year until the aggregate number of tonnes of coal removed from the stockpile as recorded under clause 3(3)(b) is greater than the total number of tonnes of the base stockpile as recorded under clause 3(3)(a); and

(ii) in the year that the aggregate number of tonnes of coal removed from the stockpile as collected under clause 3(3)(b) equals or exceeds the total number of tonnes of the base stockpile as recorded under clause 3(3)(a), the figure calculated in accordance with the following formula:

$$TC_{removed} = TotCR - BS$$

where—

BS is the total number of tonnes of coal in the base stockpile, as recorded under clause 3(3)(a)

TotCR is the total number of tonnes of coal removed from the stockpile between the base date and 31 December in the year as recorded under clause 3(3)(b):

(b) if the stockpile is not, or is no longer, an amalgamated stockpile, the total number of tonnes of coal of the class removed from the stockpile during the year, as recorded under clause 3(1)(c).

Example

A participant has a base stockpile of 100 000 tonnes of imported lignite as at 1 January 2010 and intends to add coal to the stockpile and include a stockpile adjustment for that year. 1 January 2010 is thus the person's base date for the stockpile

Year 1

During 2010, 40 000 tonnes of imported lignite are added to the base stockpile and 50 000 tonnes are removed. Paragraph (a)(i) of the definition of $TC_{removed}$ applies. Compared to the base stockpile of 100 000 tonnes, 50 000 tonnes have been removed, so $TC_{removed}$ is zero.

$S = TC_{added} - TC_{removed}$

$40\,000 - 0$

$= 40\,000$ tonnes

Year 2

During 2011, 70 000 tonnes of imported lignite are added to the stockpile and 40 000 tonnes are removed. Paragraph (a)(i) of the definition of $TC_{removed}$ continues to apply. Compared to the base stockpile of 100 000, 90 000 tonnes have been removed (50 000 in 2010 and 40 000 in 2011) so $TC_{removed}$ remains zero.

$S = TC_{added} - TC_{removed}$

$70\,000 - 0$

$= 70\,000$ tonnes

Year 3

During 2012, 50 000 tonnes of imported lignite are added to the stockpile and 80 000 tonnes are removed. Paragraph (a)(ii) of the definition of $TC_{removed}$ now applies as the total tonnes removed exceeds the base stockpile during the year. Compared to the base stockpile of 100 000, 170 000 tonnes have been removed (50 000 in 2010, 40 000 in 2011, and 80,000 in 2012). $TC_{removed}$ is 70 000 (170 000 − 100 000 = 70 000)

$S = TC_{added} - TC_{removed}$

$50\,000 - 70\,000$

$= -20\,000$ tonnes

Year 4

During 2013, 40 000 tonnes of imported lignite are added to the stockpile and 30 000 tonnes are removed. Paragraph (b) of the definition of $TC_{removed}$ applies because the total aggregate of coal removed from the stockpile has exceeded the base stockpile.

$S = TC_{added} - TC_{removed}$

$40\,000 - 30\,000$

$= 10\,000$ tonnes

5 Calculating S where stockpile of class of coal is mixed stockpile

(1) This clause applies if a person includes a stockpile adjustment in relation to a class of coal under regulation 8(1) or 47(1) and the relevant stockpile is a mixed stockpile.

(2) However, a person must not include a stockpile adjustment in relation to a class of coal on a mixed stockpile unless a stockpile adjustment is also included in relation to all other classes of coal on the stockpile.

(3) S in the formula in regulation 8(1) or 47(1) must be calculated in accordance with the following formula:

$$S = TC_{added} - \{TS_{removed} \times [(SC_{opening} + TC_{added}) \div TS]\}$$

where—

$SC_{opening}$ is,—

(a) for the first stockpile adjustment year, zero; and

(b) for any other year, $\sum(SY)$

where—

SY is the figure used to claim a stockpile adjustment for the class of coal for each year since the base date

TC_{added} is the total number of tonnes of coal of the class added to the stockpile during the year, as recorded under clause 3(1)(a)

TS is the total tonnes of coal on or added to the stockpile during the year, as determined under subclause (4)

$TS_{removed}$ is,—

(a) if the stockpile is an amalgamated stockpile,—

(i) zero, for every year until the aggregate number of tonnes of coal removed from the stockpile as collected under clause 3(3)(b) is greater than the total number of tonnes of the base stockpile as recorded under clause 3(3)(a); and

(ii) in the year that the aggregate number of tonnes of coal removed from the stockpile as recorded under clause 3(3)(b) equals or exceeds the total number of tonnes of the base stockpile as recorded under clause 3(3)(a), the figure calculated in accordance with the following formula:

$$TS_{removed} = TotCR - BS$$

where—

BS is the total number of tonnes of coal in the base stockpile, as recorded under clause 3(3)(a)

TotCR is the total number of tonnes of coal removed from the stockpile between the base date and 31 December in the year, as recorded under clause 3(3)(b):

(b) if the stockpile is not, or is no longer, an amalgamated stockpile, the total number of tonnes of coal removed from the stockpile during the year, as collected under clause 3(1)(c).

(4) TS must be calculated in accordance with the following formula:

$$TS = TS_{opening} + TS_{added}$$

where—

TS_{added} is the total number of tonnes of coal added to the stockpile during the year, determined by adding together the figures for all classes of imported coal or purchased coal that were added to the stockpile during the year, as collected under clause 3(1)(a)

$TS_{opening}$ is,—

(a) for the first stockpile adjustment year, zero; or

(b) for any other year, the total number of tonnes of the stockpile of coal at 1 January determined by adding together the figures for $SC_{opening}$ for all classes of imported coal or purchased coal that constitute the stockpile.

Example

A participant has a stockpile made up of imported and purchased lignite and decides to claim a stockpile adjustment. As at 1 January in the year, the stockpile contained 20 000 tonnes of mixed imported and purchased lignite. This is the base stockpile.

Year 1

During the year 60 000 tonnes of imported lignite were added (40 000 of a new class to which a unique emissions factor applied, and 20 000 other tonnes) and 20 000 tonnes of purchased lignite were added. 50 000 tonnes of lignite were removed during the year.

Three calculations are necessary. Two to determine the stockpile adjustment for the two classes of imported coal and 1 for the class of purchased coal.

Paragraph (a)(ii) of the definition of $TS_{removed}$ applies. Compared to the base stockpile of 20 000 tonnes, 50 000 tonnes have been removed. $TS_{removed}$ is 30 000 (50 000 − 20 000).

Imported coal of the class to which the default emissions factor applies

$$\begin{aligned} S &= TC_{added} - (TS_{removed} \times ((SC_{opening} + TC_{added})/TS)) \\ &= 20\,000 - (30\,000 \times (0 + 20\,000) / (0 + 80\,000)) \\ &= 20\,000 - (30\,000 \times (20\,000 / 80\,000)) \\ &= 20\,000 - (30\,000 \times 0.25) \\ &= 20\,000 - 7\,500 \\ &= 12\,500 \text{ tonnes} \end{aligned}$$

Imported coal of the class to which the unique emission factor applies

$$\begin{aligned} S &= TC_{added} - (TS_{removed} \times ((SC_{opening} + TC_{added})/TS)) \\ &= 40\,000 - (30\,000 \times (0 + 40\,000) / (0 + 80\,000)) \end{aligned}$$

= 40 000 − (30 000 × (40 000 / 80 000))
= 40 000 − (30 000 × 0.5)
= 40 000 − 15 000
= 25 000 tonnes

Purchased coal

S = TC_{added} − ($TS_{removed}$ × (($SC_{opening}$ + TC_{added})/TS))
= 20 000 − (30 000 × (0 + 20 000) / (0 + 80 000))
= 20 000 − (30 000 × (20 000 / 80 000))
= 20 000 − (30 000 × 0.25)
= 20 000 − 7 500
= 12 500 tonnes

Year 2

During the year 20 000 tonnes of the class of imported lignite to which a unique emissions factor applied, 20 000 tonnes of imported lignite without a unique emissions factor, and 10 000 tonnes of purchased lignite were added. 50 000 tonnes of lignite were removed during the year.

Paragraph (b) of the definition of $TS_{removed}$ applies because the total aggregate quantity of coal from the stockpile has exceeded the base stockpile.

Imported coal of the class to which the default emissions factor applies

S = TC_{added} − ($TS_{removed}$ × (($SC_{opening}$ + TC_{added})/TS))
= 20 000 − (50 000 × (12 500 + 20 000) / (50 000 + 50 000))
= 20 000 − (50 000 × (32 500 / 100 000))
= 20 000 − (50 000 × 0.325)
= 20 000 − 16 250
= 3 750 tonnes

Imported coal of the class to which the unique emission factor applies

S = TC_{added} – ($TS_{removed}$ × (($SC_{opening}$ + TC_{added})/TS))
= 20 000 − (50 000 × (25 000 + 20 000) / (50 000 + 50 000))
= 20 000 − (50 000 × (45 000 / 100 000))
= 20 000 − (50 000 × 0.45)
= 20 000 − 22 500
= −2 500 tonnes

Purchased coal

S = TC_{added} − ($TS_{removed}$ × (($SC_{opening}$ + TC_{added})/TS))
= 10 000 − (50 000 × (12 500 + 10 000) / (50 000 + 50 000))
= 10 000 − (50 000 × (22 500 / 100 000))
= 10 000 − (50 000 × 0.225)
= 10 000 − 11 250
= −1 250 tonnes

6 Calculating S where stockpile adjustment is not included in year, but was included in previous emissions return for activity

(1) This clause applies if a person does not include a stockpile adjustment for a class of coal, but a stockpile adjustment was included when emissions from the class of coal were calculated and reported in the previous emissions return submitted for the activity of importing coal or purchasing coal from a coal miner, as the case may be.

(2) If this clause applies, S must be calculated in accordance with the following formula:

$$S = -1 \times \sum(SY)$$

where—

SY is the figure for S used to claim a stockpile adjustment for the class of coal for each year since the base date.

Example

Using the figures from the example for clause 4, if the participant referred to in that example did not claim a stockpile adjustment in year 5, S for year 5 would be calculated as follows:

S = −1 × ∑(SY)

S = −1 × ∑(40 000 + 70 000 + −20 000 + 10 000)

S = −1 × 100 000

S = −100 000 tonnes

Using the figures from the example for clause 5, if the participant referred to in that example did not claim a stockpile adjustment in year 3, S for year 3 for each class would be calculated as follows:

Imported coal of the class to which the default emissions factor applies

S = −1 × ∑(SY)

S = −1 × ∑(12 500 + 3 750)

S = −1 × 16 250

S = −16 250 tonnes

Imported coal of the class to which the unique emissions factor applies

S = −1 × ∑(SY)

S = −1 × ∑(25 000 + −2 500)

S = −1 × 22 500

S = −22 500 tonnes

Purchased coal

S = −1 × ∑(SY)

S = −1 × ∑(12 500 + −1 250)

S = −1 × 11 250

S = −11 250 tonnes

7 Calculating CV_2 for purposes of regulation 8(1) or 47(1)

(1) In regulation 8(1) or 47(1), if the person—

(a) is claiming a stockpile adjustment, CV_2 is the figure calculated under subclause (2):

(b) is not claiming a stockpile adjustment for the class of coal in the current year, but claimed a stockpile adjustment when emissions from the class of coal were calculated and reported in the previous emissions return for the activity, CV_2 is the figure that was used as CV_2 when calculating emissions for the stockpile of the class of coal in the previous year's emissions return.

(2) For the purposes of subclause (1)(a), CV_2 is the figure calculated in accordance with the following formula:

$$CV_2 = [(SC_{opening} \times CV_{opening}) + (TC_{added} \times CVT_{added})] \div (SC_{opening} + TC_{added})$$

where—

$CV_{opening}$ is—

(a) in the first stockpile adjustment year, zero:

(b) in every subsequent year, the figure of CV_2 from the previous year (as determined and recorded under this clause)

CVT_{added} is the weighted average calorific value of the tonnes of the class of coal added, calculated by reference to the information recorded under clause 3(1)(b)

$SC_{opening}$ is—

(a) in the first stockpile adjustment year, zero:

(b) in every subsequent year, the figure determined in accordance with the following formula:

$$\sum(SY)$$

where—

SY is the figure for S used to claim a stockpile adjustment for the class of coal for each year since the base date

TC_{added} is the tonnes of the class of coal added, as collected under clause 3(1)(a).

Example

Year 1

A participant has a stockpile of lignite. In the first stockpile adjustment year 20 000 tonnes of imported lignite with a calorific value of 0.01675 TJ/t and 15 000 tonnes of purchased lignite with a calorific value of 0.01695 TJ/t were added. No tonnes were removed. CV_2 for the first year is calculated in accordance with the following formula:

$$CV_2 = [(SC_{opening} \times CV_{opening}) + (TC_{added} \times CVT_{added})] \div (SC_{opening} + TC_{added})$$

Imported lignite

CV_2 = [(0 × 0) + (20 000 × 0.01675)] ÷ (0 + 20 000) = 0.01675 TJ/t

Purchased lignite

CV_2 = [(0 × 0) + (15 000 × 0.01695)] ÷ (0 + 15 000) = 0.01695 TJ/t

Year 2

$SC_{opening}$ for the next year is ∑(SY). This was 20 000 for the imported lignite and 15 000 for the purchased lignite. During the year the participant adds the following:

(a) 60 000 tonnes of imported lignite with CV of 0.01695 TJ/t:

(b) 18 000 tonnes of purchased lignite with CV of 0.01675 TJ/t.

Imported lignite

CV_2 = [(20 000 × 0.01675) + (60 000 × 0.01695)] ÷ (20 000 + 60 000) = 0.01690 TJ/t

Purchased lignite

CV_2 = [(15 000 × 0.01695) + (18 000 × 0.01675)] ÷ (15 000 + 18 000) = 0.01684 TJ/t

Schedule 2
Emissions and oxidation factors

rr 3, 8, 14, 17, 20, 23, 29, 29C, 32, 38, 41, 44, 47, 50

Schedule 2 heading: amended, on 12 December 2013 (applying on and from 1 January 2013), by regulation 11(1) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2013 (SR 2013/381).

In this schedule—

bituminous coal—

(a) means coal—

(i) the gross calorific value of which is greater than 17.44 MJ/kg, measured on an ash free but bed (or in-ground) moist basis as defined by ISO 1170:1977 (Coal and coke—Calculation of analyses to different bases); and

(ii) the crucible swelling index of which is greater than zero as measured according to ISO 501:2003 (Hard coal—Determination of the crucible swelling number); and

(b) includes anthracite

lignite means coal of which the gross calorific value is less than or equal to 17.44 MJ/kg, measured on an ash free but bed (or in-ground) moist basis as defined by ISO 1170:1977 (Coal and coke—Calculation of analyses to different bases)

peat means combustible, soft, porous, or compressed sedimentary deposit of plant origin with a high water content

sub-bituminous coal means coal—

(a) the gross calorific value of which is greater than 17.44 MJ/kg, measured on an ash free but bed (or in-ground) moist basis as defined by ISO 1170:1977 (Coal and coke—Calculation of analyses to different bases); and

(b) the crucible swelling index of which is zero as measured according to ISO 501:2003 (Hard coal—Determination of the crucible swelling number).

Table 1
Importing coal

Class	Emissions factor	Unit
Lignite or peat	94.40	tCO_2e/TJ
Sub-bituminous	90.48	tCO_2e/TJ
Bituminous	87.68	tCO_2e/TJ

Table 2
Mining or purchasing coal

Class	Emissions factor	Unit
Lignite—Waimumu and Roxburgh fields	91.57	tCO_2e/TJ
Lignite—all other fields, or peat	94.40	tCO_2e/TJ
Sub-bituminous	90.48	tCO_2e/TJ
Bituminous	87.68	tCO_2e/TJ

Table 3
Fugitive coal seam gas

Part A—Underground and surface mining

Category of coal	Emissions factor	Unit
Coal mined from surface mining	0.022	tCO_2e/t coal
Bituminous coal mined from underground mining	0.459	tCO_2e/t coal
Sub-bituminous coal mined from underground mining	0.343	tCO_2e/t coal

Part B—Flaring and combusting for energy

	Emissions factor	Unit
Flaring, combusting for energy, or otherwise oxidising coal seam gas	21.81	tCO_2e/t methane

Table 4
Importing or purchasing natural gas

Class	Emissions factor	Unit
Propane	2.988	tCO_2e/t
Butane	3.024	tCO_2e/t
LPG (P60:B40)	3.003	tCO_2e/t
LNG	53.64	tCO_2e/TJ

Table 5
Combustion of natural gas (mined or purchased)

	Class	Emissions factor	Unit
EF_{M+N}	Aggregate CH_4 and N_2O	0.058	tCO_2e/TJ
	Aggregate CH_4 and N_2O	0.011	tCO_2e/t
OF_{GAS}	Oxidation factor for gas other than flared	0.995	n/a
	Oxidation factor for flared gas	0.980	n/a

Table 6
Geothermal fluid

Part A

Class Geothermal fluid used by	Emissions factor	Unit
Kawerau II	0.0194	tCO_2e/t steam
Kawerau Industrial	0.0194	tCO_2e/t steam
Kawerau KA24	0.0194	tCO_2e/t steam
Mokai I and II	0.0052	tCO_2e/t steam
Nga Awa Purua	0.0176	tCO_2e/t steam
Ngawha I and II	0.0930	tCO_2e/t steam
Ohaaki	0.0591	tCO_2e/t steam
Poihipi Road	0.0049	tCO_2e/t steam
Rotokawa I	0.0220	tCO_2e/t steam
Wairakei station site	0.0050	tCO_2e/t steam
Any other plant or process using geothermal steam to produce electricity or industrial heat	0.0300	tCO_2e/t steam

Part B

Class Geothermal fluid used by	Emissions factor	Unit
Mokai Greenhouse	0.0000	tCO_2e/t2-phase fluid
Tauhara Tenon	0.0008	tCO_2e/t2-phase fluid
Any other plant or process using geothermal fluid to produce electricity or industrial heat through a process other than production of geothermal steam	0.0008	tCO_2e/t2-phase fluid

Table 7
Combusting used oil, waste oil, used tyres, and waste

Class	Emissions factor	Unit
Used or waste oil	70.71	tCO_2e/TJ
Used tyres	136.27	tCO_2e/TJ
Municipal waste—biomass	1.78	tCO_2e/TJ
Municipal waste—non-biomass	88.02	tCO_2e/TJ

Table 8
Refining petroleum (Marsden Point Refinery)

Intermediate crude oil product	Emissions factor	Unit
Refinery fuel gas	2.848	tCO_2e/t
Refinery fuel oil	3.115	tCO_2e/t
Refinery asphalt	3.179	tCO_2e/t

Intermediate crude oil product	Emissions factor	Unit
Refinery flare gas	2.921	tCO_2e/t
Other intermediate crude oil products	3.179	tCO_2e/t

Table 8A
Use of specified liquid hydrocarbons

	Class	Emissions factor	Unit
EF_{M+N}	Aggregate CH_4 and N_2O	0.011	tCO_2e/TJ
OF_{SLH}	Oxidation factor	0.995	n/a

Table 9
Chemical ratios

Symbol	Emissions source	Emissions factor	Unit
EF_C	Carbon	3.6641	tCO_2e/t
EF_{CAO}	Calcium oxide	0.7848	tCO_2e/t
EF_{MGO}	Magnesium oxide	1.0919	tCO_2e/t
EF_{SOA}	Soda ash (Na_2CO_3)	0.4152	tCO_2e/t
EF_{LST}	Uncalcined limestone ($CaCO_3$)	0.4397	tCO_2e/t
EF_{DOL}	Uncalcined dolomite ($CaMg(CO_3)_2$)	0.4773	tCO_2e/t

Table 10
Mining or purchasing natural gas

Class	Emissions factor	Unit
Kapuni	53.40	tCO_2e/TJ
Kapuni LTS	85.89	tCO_2e/TJ
Kowhai	53.55	tCO_2e/TJ
Kupe	53.27	tCO_2e/TJ
McKee	53.05	tCO_2e/TJ
Maari	53.48	tCO_2e/TJ
Mangahewa	53.82	tCO_2e/TJ
Maui	52.55	tCO_2e/TJ
Ngatoro–Kaimiro	54.59	tCO_2e/TJ
Pohokura	54.69	tCO_2e/TJ
Rimū/Kauri	52.00	tCO_2e/TJ
Turangi	55.02	tCO_2e/TJ
National average	53.87	tCO_2e/TJ

Schedule 2 table 1: amended, on 12 December 2013 (applying on and from 1 January 2013), by regulation 11(2) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2013 (SR 2013/381).

Schedule 2 table 2: amended, on 12 December 2013 (applying on and from 1 January 2013), by regulation 11(3) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2013 (SR 2013/381).

Schedule 2 table 3 Part A: amended, on 12 December 2013 (applying on and from 1 January 2013), by regulation 11(4) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2013 (SR 2013/381).

Schedule 2 table 3 Part B: amended, on 12 December 2013 (applying on and from 1 January 2013), by regulation 11(4) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2013 (SR 2013/381).

Schedule 2 table 5: amended, on 12 December 2013 (applying on and from 1 January 2013), by regulation 11(5) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2013 (SR 2013/381).

Schedule 2 table 6 Part A: amended, on 4 March 2015 (applying from 31 December 2014), by regulation 6(1) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2014 (LI 2014/365).

Schedule 2 table 6 Part A: amended, on 4 March 2015 (applying from 31 December 2014), by regulation 6(2) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2014 (LI 2014/365).

Schedule 2 table 6 Part A: amended, on 4 March 2015 (applying from 31 December 2014), by regulation 6(3) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2014 (LI 2014/365).

Schedule 2 table 6 Part A: amended, on 4 March 2015 (applying from 31 December 2014), by regulation 6(4) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2014 (LI 2014/365).

Schedule 2 table 6 Part A: amended, on 4 March 2015 (applying from 31 December 2014), by regulation 6(5) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2014 (LI 2014/365).

Schedule 2 table 6 Part A: amended, on 4 March 2015 (applying from 31 December 2014), by regulation 6(6) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2014 (LI 2014/365).

Schedule 2 table 6 Part A: amended, on 12 December 2013 (applying on and from 1 January 2013), by regulation 11(6) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2013 (SR 2013/381).

Schedule 2 table 6 Part A: amended (with effect on 1 January 2010), on 25 September 2010, by regulation 16(1) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2010 (SR 2010/340).

Schedule 2 table 6 Part A: amended (with effect on 1 January 2010), on 25 September 2010, by regulation 16(2) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2010 (SR 2010/340).

Schedule 2 table 7: replaced (with effect on 1 January 2010), on 25 September 2010, by regulation 16(3) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2010 (SR 2010/340).

Schedule 2 table 8A: inserted, on 12 December 2013 (applying on and from 1 January 2013), by regulation 11(7) of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2013 (SR 2013/381).

Schedule 2 table 10: replaced, on 1 January 2017, by regulation 4 of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2016 (LI 2016/215).

Schedule 2A
Figures for synthetic greenhouse gases

rr 4, 44D, 44F, 44J, 44L, 44N, 44Q, 44R

Schedule 2A: inserted, on 1 January 2011, by regulation 18 of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2010 (SR 2010/340).

Table 1
Figures for synthetic greenhouse gases

Gas	Chemical formula	GWP figure
Hydrofluorocarbons		
HFC-23	CHF_3	14 800
HFC-32	CH_2F_2	675
HFC-41	CH_3F	92
HFC-125	CHF_2CF_3	3 500
HFC-134	CHF_2CHF_2	1 100
HFC-134a	CH_2FCF_3	1 430
HFC-143	CH_2FCHF_2	353
HFC-143a	CH_3CF_3	4 470
HFC-152	CH_2FCH_2F	53
HFC-152a	CH_3CHF_2	124
HFC-161	CH_3CH_2F	12
HFC-227ea	CF_3CHFCF_3	3 220
HFC-236cb	$CH_2FCF_2CF_3$	1 340
HFC-236ea	CHF_2CHFCF_3	1 370
HFC-236fa	$CF_3CH_2CF_3$	9 810
HFC-245ca	$CH_2FCF_2CHF_2$	693
HFC-245fa	$CHF_2CH_2CF_3$	1 030
HFC-365mfc	$CH_3CF_2CH_2CF_3$	794
HFC-43-10mee	$CF_3CHFCHFCF_2CF_3$	1 640
Perfluorocarbons		
PFC-14 (perfluoromethane)	CF_4	7 390
PFC-116 (perfluoroethane)	C_2F_6	12 200
PFC-218 (perfluoropropane)	C_3F_8	8 830
PFC-318 (perfluorocyclobutane)	c-C_4F_8	10 300
PFC-3-1-10 (perfluorobutane)	C_4F_{10}	8 860
PFC-4-1-12 (perfluoropentane)	C_5F_{12}	9 160
PFC-5-1-14 (perfluorohexane)	C_6F_{14}	9 300
PFC-9-1-18	$C_{10}F_{18}$	7 500
Sulphur hexafluoride	SF_6	22 800

Schedule 2A table 1: replaced, on 1 April 2013, by regulation 5 of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2012 (SR 2012/401).

Table 2
GWP figures for classes of hydrofluorocarbons or perfluorocarbons

Class	Type of hydrofluorocarbon						Type of per-fluorocarbon	Other gas	GWP figure for class
	HFC-23	HFC-32	HFC-125	HFC-134a	HFC-143a	HFC-152a	PFC-218		
GWP	*14 800*	*675*	*3 500*	*1 430*	*4 470*	*124*	*8 830*	*0*	
R23	100%								14 800
R134a				100%					1 430
R403B: 5% R290, 56% R22, 39% R218							39%	61%	3 440
R404A: 44% R125, 52% R143a, 4% R134a			44%	4%	52%				3 920
R407C: 23% R32, 25% R125, 52% R134a		23%	25%	52%					1 770
R408A: 7% R125, 46% R143a, 47% R22			7%		46%			47%	2 300
R410A: 50% R32, 50% R125		50%	50%						2 090
R413A: 9% R218, 88% R134a, 3% R600a				88%			9%	3%	2 050
R416A: 59% R134a, 39.5% R124, 1.5% R600				59%				41%	840
R417A: 46.6% R125, 50% R134a, 3.4% R600			46.6%	50%				3.4%	2 350
R422A: 85.1% R125, 11.5% R134a, 3.4% R600a			85.1%	11.5%				3.4%	3 140
R507A: 50% R125, 50% R143a			50%		50%				3 980

Schedule 2A table 2: replaced, on 1 April 2013, by regulation 5 of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2012 (SR 2012/401).

Table 3
Default charges for categories of motor vehicles

[Revoked]

Schedule 2A table 3: revoked, on 1 January 2013, by section 103 of the Climate Change Response (Emissions Trading and Other Matters) Amendment Act 2012 (2012 No 89).

Schedule 3
Storage adjustments for activities of purchasing natural gas

r 50(7)

Schedule 3: inserted (with effect on 1 January 2010), on 25 September 2010, by regulation 17 of the Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2010 (SR 2010/340).

1 Interpretation

In this schedule, unless the context otherwise requires,—

base date means the later of the following dates:

(a) 1 July 2010; or

(b) the date from which a participant's current registration takes effect under section 57 of the Act

base gas—

(a) means natural gas (net of any extractions) injected into a facility, by or on behalf of the person, before the base date; but

(b) does not include any natural gas in the facility that has not been mined.

2 Calculating S

(1) For the purposes of regulation 50(7), S must be calculated in accordance with this clause.

(2) In a year when—

(a) there are no extractions from a gas storage facility; or

(b) cumulative extractions from the gas storage facility by or on behalf of the person are less than or equal to base gas (that is, $\Sigma H \leq B$), then—

$$S = G$$

(3) In the first year that the cumulative extractions from the gas storage facility by or on behalf of the person are greater than base gas (that is, $\Sigma H > B$) then—

$$S = G - (\Sigma H - B)$$

(4) In any subsequent year, after the year in which subclause (3) applies, then—

$$S = G - H$$

(5) In the final emissions return before removal of the person from the register under section 58 or 59 of the Act, then—

$$S = -1 \times \Sigma(SY)$$

(6) In this clause—

B is the total number of terajoules of base gas

G is the total number of terajoules of opt-in natural gas injected by or on behalf of the person in the year into the gas storage facility as collected under regulation 49(3)(a)

H is the total number of terajoules of opt-in natural gas extracted by or on behalf of the person in the year from a gas storage facility, as recorded under regulation 49(3)(b)

SY is the figure for S used by the person to claim a storage adjustment for each year since the base date

ΣH is the sum of H from the base date.

Michael Webster,
for Clerk of the Executive Council.

Issued under the authority of the Legislation Act 2012.
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Reprints notes

1 General

This is a reprint of the Climate Change (Stationary Energy and Industrial Processes) Regulations 2009 that incorporates all the amendments to those regulations as at the date of the last amendment to them.

2 Legal status

Reprints are presumed to correctly state, as at the date of the reprint, the law enacted by the principal enactment and by any amendments to that enactment. Section 18 of the Legislation Act 2012 provides that this reprint, published in electronic form, has the status of an official version under section 17 of that Act. A printed version of the reprint produced directly from this official electronic version also has official status.

3 Editorial and format changes

Editorial and format changes to reprints are made using the powers under sections 24 to 26 of the Legislation Act 2012. See also http://www.pco.parliament.govt.nz/editorial-conventions/.

4 Amendments incorporated in this reprint

Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2016 (LI 2016/215)

Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2015 (LI 2015/218)

Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2014 (LI 2014/365)

Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2013 (SR 2013/381)

Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2012 (SR 2012/401)

Climate Change Response (Emissions Trading and Other Matters) Amendment Act 2012 (2012 No 89): section 103

Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2011 (SR 2011/364)

Environmental Protection Authority Act 2011 (2011 No 14): section 53(2)

Climate Change (Stationary Energy and Industrial Processes) Amendment Regulations 2010 (SR 2010/340)

Climate Change Response (Moderated Emissions Trading) Amendment Act 2009 (2009 No 57): section 88(2)

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