

EXPOSURE DRAFT

EXPOSURE DRAFT (15/12/2023)



National Greenhouse and Energy Reporting (Safeguard Mechanism) Amendment (Production Variables Update) Rules (No. 2) 2023

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

Dated

Chris Bowen **DRAFT ONLY—NOT FOR SIGNATURE**

Minister for Climate Change and Energy

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1 Name

This instrument is the *National Greenhouse and Energy Reporting (Safeguard Mechanism) Amendment (Production Variables Update) Rules (No. 2) 2023*.

2 Commencement

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

Commencement information		
Column 1	Column 2	Column 3
Provisions	Commencement	Date/Details
1. The whole of this instrument	The day after this instrument is registered.	

Note: This table relates only to the provisions of this instrument as originally made.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

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

3 Authority

This instrument is made under section 22XS of the *National Greenhouse and Energy Reporting Act 2007*.

4 Schedules

Each instrument that is specified in a Schedule to this instrument is amended or repealed as set out in the applicable items in the Schedule concerned, and any other item in a Schedule to this instrument has effect according to its terms.

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Schedule 1—Amendments

National Greenhouse and Energy Reporting (Safeguard Mechanism) Rule 2015

1 Subsection 11(1) (definition of *El_B*)

Repeal the definition, substitute:

El_B, in relation to a production variable for the facility for the financial year, is:

- (a) if there is a best practice emissions intensity number for the production variable for the financial year—that number; or
- (b) if there is no best practice emissions intensity number for the production variable for the financial year, and the production variable is a historical production variable for the facility—zero; or
- (c) otherwise—the default emissions intensity number for the production variable for the financial year.

Note: The best practice emissions intensity number of tonnes of reservoir carbon dioxide from new gas fields is zero (see section 35A of Schedule 1).

2 Subsection 12(2)(b)

Omit “a historical financial year”, substitute “the historical financial year”.

3 After section 14

Insert:

14A Additional requirements for emissions intensity determination application specifying primary steel as production variable

- (1) This section applies if an application for an emissions intensity determination under section 14 specifies primary steel as a production variable for the facility.
- (2) Subsections 14(4), (5), (6) and (7) apply as if the application specified the primary iron (steelmaking) production variable and the ferrous feed (steelmaking) production variable as historical production variables for the facility.
- (3) In this Part:
 - (a) the ***primary iron (steelmaking) production variable*** is the production variable that results from the operation of subsection (4); and
 - (b) the ***ferrous feed (steelmaking) production variable*** is the production variable that results from the operation of subsection (5).
- (4) For the definition of ***primary iron (steelmaking) production variable***, assume section 39 of Schedule 1 also applies as if the following modifications were made to that section:
 - (a) after the heading, add “(steelmaking)”;

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- (b) in paragraph (1)(a), omit “primary iron production activity”, substitute “primary steel manufacturing activity”;
 - (c) omit paragraph (1)(b);
 - (d) in subsection (2), omit “export from the facility”, substitute “use by the facility for manufacturing primary steel”;
 - (e) in subsection (3), omit “*primary iron production activity*”, substitute “*primary iron (steelmaking) production activity*”.
- (5) For the definition of *ferrous feed (steelmaking) production variable*, assume section 44 of Schedule 1 also applies as if the following modifications were made to that section:
- (a) omit the heading, substitute “Ferrous feed (steelmaking)”;
 - (b) omit paragraph (1)(a);
 - (c) in paragraph (1)(b), omit “not”.
- Note: Emissions associated with the production of primary iron and continuously cast carbon steel products and ingots of carbon steel would also be relevantly associated with primary steel.
- (6) For subsection (2), assume paragraphs 12(2)(b), 16(2)(b) and 16(3)(d) do not apply in relation to the primary iron (steelmaking) production variable or the ferrous feed (steelmaking) production variable.

4 After section 19

Insert:

19A Emissions intensity determination specifying facility-specific emissions intensity number of primary steel

- (1) This section applies if an emissions intensity determination under section 19 specifies the facility-specific emissions intensity number of primary steel.
- (2) The determination must also specify a facility-specific emissions intensity number of:
 - (a) the primary iron production variable; and
 - (b) the continuously cast carbon steel products and ingots of carbon steel (manufacture of carbon steel products from cold ferrous feed) production variable.
- (3) When making the determination, the Regulator must consider the information required by subsection 14A(2) to be included in the application:
 - (a) in relation to the primary iron (steelmaking) production variable—as if that information was instead in relation to the primary iron production variable; and
 - (b) in relation to the ferrous feed (steelmaking) production variable—as if that information was instead in relation to the continuously cast carbon steel products and ingots of carbon steel (manufacture of carbon steel products from cold ferrous feed) production variable.

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5 Subsection 20(6) (Note)

Repeal the note, substitute:

Note: Subsections 91(2) and 92(2) modify the operation of this provision where the transitional production variable for the facility is run-of-mine coal, reservoir carbon dioxide from existing gas fields, natural gas throughput, or lithium hydroxide.

6 Subsection 30(1) (definition of *NLCH*)

Omit “scope 1 greenhouse gases”, substitute “covered emissions of greenhouse gases”.

7 Subsection 34(1) (definition of *ERC_y*)

Repeal the definition, substitute:

ERC_y is:

- (a) if the table in section 31 does not specify a default emissions reduction contribution number for the previous financial year—1;
- (b) otherwise—the emissions reduction contribution for the facility for the previous financial year.

8 At the end of subsection 56(3)

Add:

- ; (f) if the facility is a trade-exposed baseline-adjusted facility for the financial year—the facility was a trade-exposed baseline-adjusted facility for the previous financial year.

9 At the end of subsection 57(3)

Add:

- ; (e) if the facility is a trade-exposed baseline-adjusted facility for the financial year—the facility was a trade-exposed baseline-adjusted facility for the previous financial year.

10 Paragraph 58B(3)(b)

Repeal the paragraph, substitute:

- (b) no Australian carbon credit units attributable to the avoidance of covered emissions of greenhouse gases from the operation of the facility have been issued under the *Carbon Credits (Carbon Farming Initiative) Act 2011* in respect of an eligible offsets project that reduced covered emissions of greenhouse gases from the operation of the facility during the current financial year or the previous financial year.

11 At the end of section 58B

Add:

- (4) A facility is also an *eligible facility*, for the current financial year, if:
 - (a) the facility was a designated large facility for another financial year (the *last covered financial year*); and

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- (b) the facility has not been a designated large facility for any of the financial years beginning after the last covered financial year; and
- (c) the current financial year is one of the 10 financial years following the earlier of:
 - (i) the last year for which safeguard mechanism credits were not issued to a person in relation to the facility; and
 - (ii) the financial year 3 years after the last covered financial year; and
- (d) the facility was a designated large facility in at least:
 - (i) 3 historical financial years; or
 - (ii) 2 of the financial years in the period of 4 financial years immediately preceding the last covered financial year; and
- (e) subsection (3) applies to the facility for the current financial year; and
- (f) no safeguard mechanism credits have been issued to a person in relation to the facility for the financial year after the last covered financial year.

12 Subsection 91(1)

Repeal the subsection.

13 After Division 6 of Part 6

Add:

Division 7—Application, saving and transitional provisions relating to the *National Greenhouse and Energy Reporting (Safeguard Mechanism) Amendment (Production Variables Update) Rules (No. 2) 2023*

92 Application and transitional provisions

- (1) If a default emissions intensity is being used in relation to a baseline emissions number for the financial year beginning on 1 July 2023, the default emissions intensity is to be determined as the value in force immediately after the commencement of Schedule 1 to the *National Greenhouse and Energy Reporting (Safeguard Mechanism) Amendment (Production Variables Update) Rules (No. 2) 2023*.
- (2) For subsection 20(6), if the transitional production variable for the facility is lithium hydroxide, the facility-specific emissions intensity number is taken to be 3.26 CO₂-e per tonne of lithium hydroxide monohydrate.

14 Subsection 13(2) of Schedule 1

Repeal the subsection, substitute:

- (2) The metric in subsection (1) is applicable to a facility that conducts the activity of producing sodium cyanide through:
 - (a) the chemical transformation of methane, anhydrous ammonia (NH₃) and air to produce hydrogen isocyanine (HCN); and

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- (b) the chemical transformation of that hydrogen isocyanine and caustic soda to produce sodium cyanide (NaCN).

15 At the end of section 17 of Schedule 1

Add:

- (4) The best practice emissions intensity is 0.00592 t CO₂-e per tonne of run-of-mine coal.

16 At the end of section 20 of Schedule 1

Add:

- (5) The best practice emissions intensity is 0.00182 t CO₂-e per tonne of run-of-mine iron ore.

17 At the end of Part 17 of Schedule 1

Add:

Part 17A—Lithium ore

23A Lithium ore

- (1) Tonnes of lithium ore, on a wet basis, that:
 - (a) are produced as part of carrying on the lithium ore mining activity at the facility; and
 - (b) are of saleable quality.
- (2) The metric in subsection (1) is applicable to a facility that undertakes lithium ore mining activity through the physical extraction of lithium bearing minerals.
- (3) The activity in subsection (2) is the *lithium ore mining activity*.
- (4) The default emissions intensity is 0.0151 t CO₂-e per tonne of lithium ore.

18 Paragraph 24(1)(e)

Repeal the paragraph, substitute:

- (e) is not eligible to be the bauxite, manganese ore, iron ore or lithium ore production variable.

19 At the end of section 24 of Schedule 1

Add:

- (5) The best practice emissions intensity is 0.00247 t CO₂-e per tonne of run-of-mine metal ore.

20 At the end of section 26 of Schedule 1

Add:

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- (6) The best practice emissions intensity is 0.0000101 t CO₂-e per gigajoule of products covered by subsection (1) and (2).

21 At the end of section 27 of Schedule 1

Insert:

- (5) The best practice emissions intensity is 0.000320 t CO₂-e per gigajoule of crude oil and condensate.

22 At the end of section 28 of Schedule 1

Insert:

- (6) The best practice emissions intensity is 0.000330 t CO₂-e per gigajoule of crude oil.

23 At the end of section 29 of Schedule 1

Add:

- (4) The best practice emissions intensity is 0.000178 t CO₂-e per gigajoule of processed natural gas.

24 At the end of section 30 of Schedule 1

Add:

- (6) The best practice emissions intensity is 0.000319 t CO₂-e per gigajoule of processed natural gas.

25 At the end of section 31 of Schedule 1

Add:

- (6) The best practice emissions intensity is 0.000801 t CO₂-e per gigajoule of liquefied natural gas.

26 At the end of section 32 of Schedule 1

Add:

- (6) The best practice emissions intensity is 0.000482 t CO₂-e per gigajoule of liquefied natural gas.

27 Subsection 33(3) of Schedule 1

Repeal the subsection, substitute:

- (3) The activity in subsection (2) is the *ethane production activity*.
- (4) The default emissions intensity is 0.00767 t CO₂-e per gigajoule of ethane.
- (5) The best practice emissions intensity is 0.00321 t CO₂-e per gigajoule of ethane.

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28 At the end of section 34 of Schedule 1

Add:

- (5) The best practice emissions intensity is 0.000420 t CO₂-e per gigajoule of liquefied petroleum gas.

29 At the end of section 35 of Schedule 1

Add:

- (4) The best practice emissions intensity is 0.0200 t CO₂-e per tonne of reservoir carbon dioxide.

30 Section 36 of Schedule 1

Repeal the section, substitute:

36 Definitions

- (1) In this Part, the activity of ***manufacture of carbon steel from cold ferrous feed*** is the physical and chemical transformation of cold ferrous feed (such as ferrous scrap, hot briquetted iron, pig iron and flat iron) by heating and melting into liquid steel and the subsequent casting of the liquid steel to produce 1 or more of the following:
 - (a) continuously cast carbon steel products;
 - (b) ingots of carbon steel;
 - (c) hot-rolled carbon steel products, which commenced hot-rolling at a temperature above 800 °C.
- (2) In this Part, the activity of ***hot-rolled long products*** is the hot-rolling of continuously cast carbon steel products (originally produced from a primary steel production activity or manufacture of carbon steel from cold ferrous feed activity) into carbon steel long products that:
 - (a) are in coils or straight lengths; and
 - (b) are generally produced in rod, bar and structural (section) mills; and
 - (c) generally have a cross sectional shape such as I, T, Y, U, V, H, C, L, square, rectangular, round, flat, hexagonal, angle, channel, structural beam profile or rail profile.
- (3) In this Part, the activity of ***hot-rolled flat products*** is the hot-rolling of continuously cast carbon steel products (originally produced from a primary steel production activity or manufacture of carbon steel from cold ferrous feed activity) into carbon steel flat products that:
 - (a) are flat in profile, such as plate and hot rolled coil; and
 - (b) are generally produced in hot strip mills and plate mills; and
 - (c) are generally greater than 600 mm in width; and
 - (d) are generally less than 150 mm in thickness.
- (4) In this Part:

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carbon steel means material that:

- (a) contains by mass more iron (Fe) than any other single element; and
- (b) has a carbon (C) concentration less than 2%.

coke oven coke means the solid product obtained from the carbonisation of coal (principally coking coal) at a high temperature and includes coke breeze and foundry coke.

31 Division 2 of Part 20 of Schedule 1

Repeal the Division, substitute:

Division 2—Coke oven coke

37 Coke oven coke

- (1) Tonnes of coke oven coke on a dry weight basis that:
 - (a) are produced as part of the coke oven coke manufacturing activity at the facility; and
 - (b) are of saleable quality; and
 - (c) are exported from the facility.
- (2) The metric in subsection (1) is applicable to a facility that conducts the activity of carbonisation of coal (principally coking coal) through the coke oven coke manufacturing process.
- (3) The activity in subsection (2) is the *coke oven coke manufacturing activity*.
- (4) The default emissions intensity is 0.466 t CO₂-e per tonne of coke oven coke.

32 Division 3 of Part 20 of Schedule 1

Repeal the Division, substitute:

Division 3—Lime manufacturing

38 Lime (steel manufacturing)

- (1) Tonnes of lime on a dry weight basis that:
 - (a) are produced as part of the lime manufacturing activity at the facility;
 - (b) are of saleable quality; and
 - (c) are exported from the facility.
- (2) The metric in subsection (1) is applicable to a facility that conducts:
 - (a) either:
 - (i) the primary iron production activity; or
 - (ii) the primary steel production activity; and
 - (b) the physical and chemical transformation of either or both limestone or dolomite into lime (including burnt lime, burnt dolomite, or both).

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- (3) The activity in subsection (2) is the *lime manufacturing activity*.
- (4) The default emissions intensity is 0.762 t CO₂-e per tonne of lime.

33 Division 4 of Part 20 of Schedule 1

Repeal the Division, substitute:

Division 4—Primary iron

39 Primary iron

- (1) Tonnes of metallic iron products, calculated in accordance with subsection (4), that:
- (a) are produced as part of carrying on the primary iron production activity at the facility; and
 - (b) are exported from the facility; and
 - (c) are of saleable quality.
- (2) The metric in subsection (1) is applicable to a facility that conducts the activity of the physical and chemical processing of iron containing feeds into a crude iron product suitable for export from the facility.

Examples: Pig iron, hot briquetted iron, direct reduced iron and cast iron are each a crude iron product that may be suitable for export from a facility.

- (3) The activity in subsection (2) is the *primary iron production activity*.
- (4) For subsection (1), tonnes of metallic iron products are given by the following equation:

$$\text{metallic iron products} = Q_p + 0.890 Q_i$$

where:

Q_p is the quantity of metallic iron products, in tonnes, that are not produced using coke oven coke imported into the facility, excluding any gangue within the metallic iron products.

Q_i is the quantity of metallic iron products, in tonnes, that are produced using coke oven coke imported into the facility, excluding any gangue within the metallic iron products.

Note: Q_p may or may not have been produced with coke oven coke.

Example: The facility produces 100,000 tonnes of metallic iron products that meet the conditions specified in subsection 40(1). 10 per cent of the metallic iron products consists of gangue, in the form of a mixture of silica (SiO₂), calcium oxide (CaO), magnesium oxide (MgO) and aluminium oxide (Al₂O₃), corresponding to 10,000 tonnes of gangue in total. 50,000 tonnes of products were produced using a direct reduced iron process that does not use coke oven coke, 45,000 tonnes were produced using coke oven coke produced at the facility, and 5,000 tonnes were produced using coke oven coke imported to the facility.

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As such, Q_p is equal to 85,500, reflecting that 95,000 tonnes of metallic iron products are produced without using coke oven coke imported into the facility, and subtracting 9,500 tonnes of gangue. Q_i is equal to 4,500, reflecting that 5,000 tonnes of metallic iron products are produced using coke oven coke imported into the facility, and subtracting 500 tonnes of gangue. The metric is equal to $85,500 + 0.890 \times 4,500$, or 89,505 tonnes.

- (5) The default emissions intensity is 2.07 t CO₂-e per tonne of metallic iron products.
- (6) The best practice emissions intensity is 1.75 t CO₂-e per tonne of metallic iron products.

34 Division 5 of Part 20 of Schedule 1

Repeal the Division, substitute:

Division 5—Iron ore pellets

40 Iron ore pellets

- (1) Tonnes of iron ore pellets on a dry weight basis that:
 - (a) are produced as part of the iron ore pellets manufacturing activity at the facility; and
 - (b) are exported from the facility; and
 - (c) are of saleable quality.
- (2) The metric in subsection (1) is applicable to a facility that conducts the activity of manufacturing iron ore pellets.
- (3) The activity in subsection (2) is the *iron ore pellets manufacturing activity*.
- (4) The default emissions intensity is 0.0526 t CO₂-e per tonne of iron ore pellets.
- (5) The best practice emissions intensity is 0.0501 t CO₂-e per tonne of iron ore pellets.

35 Division 6 of Part 20 of Schedule 1 (heading)

Repeal the heading, substitute:

Division 6—Continuously cast carbon steel products and ingots of carbon steel from primary steel manufacturing

36 Section 41 of Schedule 1

Repeal the section, substitute:

41 Primary Steel

- (1) Tonnes of continually cast carbon steel products and ingots of carbon steel, calculated in accordance with subsection (4), that:

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- (a) are produced as part of carrying on the primary steel manufacturing activity at the facility; and
 - (b) are of saleable quality.
- (2) The metric in subsection (1) is applicable to a facility that conducts the activity of producing continuously cast carbon steel products and ingots of carbon steel through the physical and chemical transformation of iron feed material into crude carbon steel products and hot-rolled carbon steel products.
- (3) The activity in subsection (2) is the *primary steel manufacturing activity*.
- (4) For subsection (1), tonnes of continually cast carbon steel products and ingots of carbon steel are given by the following equation:

$$\text{Tonnes of continually cast carbon steel products and ingots of carbon steel} = Q_p + 0.900 Q_i$$

where:

Q_p is the quantity of continually cast carbon steel products and ingots of carbon steel that are not produced using coke oven coke imported into the facility.

Q_i is the quantity of continually cast carbon steel products and ingots of carbon steel that are produced using coke oven coke imported into the facility.

Note: Q_p may or may not have been produced with coke oven coke.

Example: The facility produces 100,000 tonnes of continually cast carbon steel products and ingots of carbon steel that meet the conditions specified in subsection 40(1). 50,000 tonnes of products were produced using an electric arc furnace process that does not use coke oven coke, 45,000 tonnes were produced using coke oven coke produced at the facility, and 5,000 tonnes were produced using coke oven coke imported to the facility. The metric is equal to $95,000 + 0.900 \times 5,000$, or 99,500 tonnes.

- (5) The default emissions intensity is 2.05 t CO₂-e per tonne of continually cast carbon steel products and ingots of carbon steel.

37 Division 7 of Part 20 of Schedule 1 (heading)

Repeal the heading, substitute:

Division 7—Hot-rolled long products produced at primary steel manufacturing facilities

38 Paragraph 42(2)(b) of Schedule 1

Omit “the integrated iron and steel manufacturing activity”, substitute “the primary steel manufacturing activity”.

39 Division 8 of Part 20 of Schedule 1 (heading)

Repeal the heading, substitute:

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Division 8—Hot-rolled flat products produced at primary steel manufacturing facilities

40 Paragraph 43(2)(b) of Schedule 1

Omit “the integrated iron and steel manufacturing activity”, substitute “the primary steel manufacturing activity”.

41 Paragraph 44(1)(b) of Schedule 1

Omit “the integrated iron and steel manufacturing activity”, substitute “the primary steel manufacturing activity”.

42 Division 10 of Part 20 of Schedule 1 (heading)

Repeal the heading, substitute:

Division 10—Hot-rolled long products (cold ferrous feed)

43 Subsection 45(2) of Schedule 1

Repeal the subsection, substitute:

- (2) The metric in subsection (1) is applicable to a facility that:
 - (a) conducts the hot-rolled long products activity; and
 - (b) either:
 - (i) conducts the manufacture of carbon steel products from cold ferrous feed activity; or
 - (ii) is a stand-alone hot-rolling mill.

44 Division 11 of Part 20 of Schedule 1 (heading)

Repeal the heading, substitute:

Division 11—Hot-rolled flat products (cold ferrous feed)

45 Subsection 46(2) of Schedule 1

Repeal the subsection, substitute:

- (2) The metric in subsection (1) is applicable to a facility that:
 - (a) conducts the hot-rolled flat products activity; and
 - (b) either:
 - (i) conducts the manufacture of carbon steel products from cold ferrous feed activity; or
 - (ii) is a stand-alone hot-rolling mill.

46 Division 12 of Part 20 of Schedule 1

Repeal the Division.

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47 Subsection 48(1) of Schedule 1

Repeal the subsection, substitute:

- (1) In this Part, the activity of *rail transport* is the use of technology to power rolling stock to transport passengers or freight on a rail system.

48 Subsections 54D(3) and (4) of Schedule 1

Repeal the subsections, substitute:

- (3) The net-tonne-kilometres must be measured consistently with relevant industry practice.
- (4) The default emissions intensity is 0.000078 t CO₂-e per net-tonne-kilometre of bulk freight.
- (5) The best practice emissions intensity is 0.0000395 t CO₂-e per net-tonne-kilometre of bulk freight.

49 At the end of section 57 of Schedule 1

Add:

- (5) The best practice emissions intensity is 0.177 t CO₂-e:
 - (a) if paragraph (1)(b) does not apply—per megawatt hour of electricity generated; and
 - (b) if paragraph (1)(b) applies—per megawatt hour of electricity exported from the facility.

50 Paragraph 63(2)(b) of Schedule 1

Omit “prescribed”.

51 Paragraph 64(3)(c) of Schedule 1

Omit “prescribed”.

52 Section 69 of Schedule 1

Repeal the section, substitute:

69 Refined lead

- (1) Tonnes of refined lead that:
 - (a) have a concentration of lead (pb) equal to or greater than 99.97% by mass; and
 - (b) are produced as part of carrying on the refined lead production activity at the facility; and
 - (c) are of saleable quality.
- (2) The metric in subsection (1) is applicable to a facility that conducts the activity of producing refined lead through the chemical transformation of concentrated

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mineralised lead compounds, with or without additional lead bearing secondary materials, into refined lead (the *refined lead production activity*).

Note: The blasting and sintering processes used in the activity may also treat either or both of concentrated mineralised zinc compounds and zinc bearing secondary materials.

(3) The default emissions intensity is 2.79 t CO₂-e per tonne of refined lead.

53 Subsection 70(3) of Schedule 1

Omit “3.34”, substitute “3.82”.

54 Subsection 76(1) of Schedule 1 (paragraph (b) of the definition of *intermediate nickel products*)

Omit “35%”, substitute “20%”.

55 Subsection 84(4) of Schedule 1

Omit “0.464”, substitute “0.644”.

56 Subsection 86(3) of Schedule 1

Omit “1.96”, substitute “1.79”.

57 Subsection 87(3) of Schedule 1

Omit “0.136”, substitute “0.125”.

58 After section 87 of Schedule 1

Insert:

87A Exported steam related to the ethene production activity

- (1) Gigajoules of steam that:
 - (a) are generated at the facility by heating water; and
 - (b) are transferred or exported to another facility:
 - (i) as part of a commercial arrangement requiring the transfer of steam to the other facility; and
 - (ii) for use at the other facility.
- (2) The metric in subsection (1) is applicable to a facility that conducts the ethene production activity.
- (3) The gigajoules of steam in subsection (1) must be:
 - (a) measured consistently with the NGER (Measurement) Determination, including the principles in section 1.13 and reporting requirements under the NGER Regulations; and
 - (b) calculated as total steam exported for a reporting period; and
 - (c) measured at the point of transfer out of the facility.

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Note: The amount of gigajoules of a mass of steam at a particular temperature and pressure can be calculated by multiplying the specific steam enthalpy corresponding to that temperature and pressure by the mass of that steam.

- (4) The default emissions intensity is 0.0879 t CO₂-e per gigajoule of exported steam.

59 After subsection 96(3) of Schedule 1

Add:

Note: The amount of gigajoules of a mass of steam at a particular temperature and pressure can be calculated by multiplying the specific steam enthalpy corresponding to that temperature and pressure by the mass of that steam.

60 Subsection 97(1) of Schedule 1

Repeal the subsection, substitute:

- (1) Kilolitres of the following substances that are used in carrying on the activity of petroleum refining at the facility in accordance with subsection (2):
- (a) stabilised crude petroleum oil at 15 °C and 1 atmosphere; and
 - (b) condensate at 15 °C and 1 atmosphere; and
 - (c) biogenic oils at 15 °C and 1 atmosphere; and
 - (d) liquid synthetic hydrocarbons at 15 °C and 1 atmosphere; and
 - (e) alcohol feedstocks at 15 °C and 1 atmosphere; and
 - (f) waste or recycled material that has undergone pyrolysis; and
 - (g) eligible petroleum feedstocks at 15 °C and 1 atmosphere; and
 - (h) bio-crude or bio-intermediates produced from thermochemical processes.

61 Subsection 97(2) of Schedule 1

Omit “(1)(a) to (e)”, substitute: “(1)(a) to (h)”.

62 Subsection 97(3) of Schedule 1

Omit “tallow, vegetable oil, eligible petroleum feedstocks or other petroleum feedstocks”, substitute: “biogenic oils, liquid synthetic hydrocarbons, alcohol feedstocks, waste or recycled material that has undergone pyrolysis, eligible petroleum feedstocks or bio-crude or bio-intermediates produced from thermochemical processes”.

63 Paragraph 97(4)(b) of Schedule 1

Omit “stabilised crude petroleum oil, condensate, tallow, vegetable oil and eligible feedstocks”, substitute: “stabilised crude petroleum, condensate, biogenic oils, liquid synthetic hydrocarbons, alcohol feedstocks, waste or recycled material that has undergone pyrolysis, eligible petroleum feedstocks and bio-crude or bio-intermediates produced from thermochemical processes”.

64 Subsection 97(6) of Schedule 1

Repeal the subsection, substitute:

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- (6) The default emissions intensity is:
- (a) if the facility is, for the financial year, in compliance with a requirement, applicable under the *Fuel Quality Standards Act 2000*, for sulfur content of all grades of petrol refined from the substance to be 10 mg/kg— 0.148 t CO₂-e per kilolitre of the substances mentioned in paragraphs (1)(a) to (1)(h);
 - (b) otherwise—0.138 t CO₂-e per kilolitre of the substances.
- (7) For subsection (6), a facility is taken to be in compliance with a requirement for a financial year if:
- (a) the facility complies with the requirement for the duration of the financial year; or
 - (b) the facility begins to comply with the requirement at any time during the financial year, and remains in compliance with the requirement for the remainder of the financial year.

65 Subsection 97(7) of Schedule 1

Renumber as subsection 97(8).

66 Section 98 of Schedule 1

Repeal the section, substitute:

98 Lithium hydroxide

- (1) Tonnes of lithium hydroxide monohydrate (LiOH.H₂O) that:
 - (a) have a concentration of lithium hydroxide monohydrate equal to or greater than 98.9% by weight; and
 - (b) are produced as part of carrying on the lithium hydroxide refining production activity at the facility; and
 - (c) are of saleable quality.
- (2) The metric in subsection (1) is applicable to a facility that conducts the activity of producing lithium hydroxide monohydrate that has a concentration of lithium hydroxide monohydrate equal to or greater than 98.9% by weight (the ***lithium hydroxide refining production activity***).
- (3) The default emissions intensity is 3.26 t CO₂-e per tonne of lithium hydroxide monohydrate.
- (4) The best practice emissions intensity for the production variable is 3.15 t CO₂-e per tonne of lithium hydroxide monohydrate.

67 At the end of Schedule 1

Add:

EXPOSURE DRAFT

Part 48—Hydrogen

99 Gaseous hydrogen

- (1) Tonnes of gaseous hydrogen ($\text{H}_2(\text{g})$) that:
 - (a) are in a gaseous state; and
 - (b) are produced as part of carrying on the gaseous hydrogen production activity at the facility; and
 - (c) are of saleable quality; and
 - (d) are not consumed in carrying on the liquefied hydrogen production activity in section 100 of this Schedule; and
 - (e) have not been counted as part of the liquefied hydrogen production variable in section 100 of this Schedule.
- (2) The metric in subsection (1) is applicable to a facility that conducts the activity of producing gaseous hydrogen through:
 - (a) the physical and chemical transformation of feedstocks that contain hydrogen to produce gaseous hydrogen; or
 - (b) the physical and chemical transformation of water (H_2O) to gaseous hydrogen through electrolysis.
- (3) The activity in subsection (2) is the ***gaseous hydrogen production activity***.
- (4) The best practice emissions intensity is 7.13 t $\text{CO}_2\text{-e}$ per tonne of gaseous hydrogen.

100 Liquefied hydrogen

- (1) Tonnes of liquified hydrogen ($\text{H}_2(\text{l})$) that:
 - (a) are in a liquid state; and
 - (b) are produced as part of carrying on the liquefied hydrogen production activity at the facility; and
 - (c) are produced using gaseous hydrogen that was produced by carrying on the gaseous hydrogen production activity at the facility; and
 - (d) are of saleable quality; and
 - (e) have been loaded onto a pipeline, transport vessel, tanker or other transportation system.
- (2) The metric in subsection (1) is applicable to a facility that conducts the activity of producing liquified hydrogen through the physical transformation of gaseous hydrogen ($\text{H}_2(\text{g})$) into liquefied hydrogen that is in a liquid state on leaving the facility.
- (3) The activity in subsection (2) is the ***liquefied hydrogen production activity***.
- (4) The best practice emissions intensity is 7.13 t $\text{CO}_2\text{-e}$ per tonne of liquefied hydrogen.

EXPOSURE DRAFT

Part 49—Mine rehabilitation

101 Mine rehabilitation

- (1) Total gigajoules of energy input that:
 - (a) are used for the purpose of mine rehabilitation; and
 - (b) have not been counted for another production variable at the facility.
- (2) The metric in subsection (1) is applicable to a facility:
 - (a) that undertakes mine rehabilitation within the facility by conducting any of the following activities (the ***rehabilitation activities***):
 - (i) haulage of material;
 - (ii) shaping and contouring of landforms;
 - (iii) revegetation;
 - (iv) management of tailings and wastewater;
 - (v) associated activities such as dust suppression;
 - (b) where the rehabilitation activities:
 - (i) are in excess of those required for the mine's normal operation; and
 - (ii) are not associated with on-site electricity generation; and
 - (iii) do not fall within the scope of any other production variable in this Schedule.

Examples: Mine rehabilitation of an entire pit.

Mine rehabilitation ramping up as production drops towards mine closure.

Mine rehabilitation at the end of a mine's life following cessation of production.

- (3) The activity in subsection (2) is the ***mine rehabilitation activity***.
- (4) The default emissions intensity is 0.0702 t CO₂-e per gigajoule of energy input to the mine rehabilitation activity.
- (5) The best practice emissions intensity for the production variable is 0.0702 t CO₂-e per gigajoule of energy input to mine rehabilitation activity.
- (6) Without limitation, the quantity of the metric in subsection (1) may be evidenced by:
 - (a) third party contracts; or
 - (b) fuel purchase receipts; or
 - (c) fuel use records from a fuel management system; or
 - (d) evidence of an activity scheduled in an approved mining and rehabilitation plan relating to the mine rehabilitation activity.

Part 50—Biofuels

102 Definitions

EXPOSURE DRAFT

In this Part:

biofuel has the same meaning as in the *National Greenhouse and Energy Reporting Regulations 2008*.

biofuel feedstocks means non-fossilised and biodegradable organic material originating from plants, animals or micro-organisms, including:

- (a) products, by-products, residues and waste from industry (such as the agriculture and forestry industries); and
- (b) non-fossilised and biodegradable organic components of commercial, industrial, construction, demolition, and municipal waste.

Examples: Soybean oil, canola oil, technical corn oil, palm fatty acid distillate, pongamia pinnata, used cooking oil, tall oil, spent bleaching earth oil, brassica carinata, tallow, POME oil and empty fruit bunches are each biofuel feedstocks.

biofuel production activity means the production of a biofuel through the physical and chemical transformation of biofuel feedstocks.

Examples: Gasification, Fischer-Tropsch synthesis, hydrothermal conversions and hydroprocessing are processes involving the production of biofuel through the physical and chemical transformation of biofuel feedstocks.

renewable aviation kerosene has the same meaning as in the *National Greenhouse and Energy Reporting Regulations 2008*.

renewable diesel has the same meaning as in the *National Greenhouse and Energy Reporting Regulations 2008*.

103 Renewable aviation kerosene

- (1) Kilolitres of renewable aviation kerosene that:
 - (a) are produced through the biofuel production activity at the facility; and
 - (b) are of saleable quality.
- (2) The metric in subsection (1) is applicable to a facility that conducts the activity of producing renewable aviation kerosene through a **biofuel production activity**.

104 Renewable diesel

- (1) Kilolitres of renewable diesel that:
 - (a) are produced through the biofuel production activity at the facility; and
 - (c) are of saleable quality.
- (2) The metric in subsection (1) is applicable to a facility that conducts the activity of producing renewable diesel through a **biofuel production activity**.

68 Section 1 of Schedule 2 (table)

Repeal the table, substitute:

EXPOSURE DRAFT

Trade-exposed production variables that are also manufacturing production variables	
Item	Production variable
1	Tonnes of bulk flat glass
2	Tonnes of glass containers
3	Tonnes of aluminium
4	Tonnes of alumina
5	Tonnes of ammonia
6	Tonnes of ammonium nitrate
7	Tonnes of carbamide (urea)
8	Tonnes of monoammonium phosphate
9	Tonnes of diammonium phosphate
10	Tonnes of sodium cyanide
11	Tonnes of synthetic rutile
12	Tonnes of white titanium dioxide pigment
13	Tonnes of coke oven coke
14	Tonnes of lime (steel manufacturing)
15	Tonnes of primary iron
16	Tonnes of iron ore pellets
17	Tonnes of primary steel
18	Tonnes of hot-rolled long products produced at primary steel manufacturing facilities
19	Tonnes of hot-rolled flat products produced at primary steel manufacturing facilities
20	Tonnes of continuously cast carbon steel products and ingots of carbon steel (manufacture of carbon steel products from cold ferrous feed)
21	Tonnes of hot-rolled long products (manufacture of carbon steel products from cold ferrous feed or by a stand-alone hot-rolling mill)
22	Tonnes of hot-rolled flat products (manufacture of carbon steel products from cold ferrous feed or by a stand-alone hot-rolling mill)
23	Tonnes of treated steel flat products
24	Tonnes of clinker not used by facility to make cement
25	Tonnes of cement produced from clinker and supplementary cementitious material
26	Tonnes of lime
27	Tonnes of silicon
28	Tonnes of lead bullion
29	Tonnes of refined lead
30	Tonnes of zinc in fume
31	Tonnes of caustic calcined magnesia
32	Tonnes of copper anode
33	Tonnes of manganese sinter

EXPOSURE DRAFT

Trade-exposed production variables that are also manufacturing production variables	
Item	Production variable
34	Tonnes of ferromanganese alloy
35	Tonnes of silicomanganese alloy
36	Tonnes of primary nickel products from nickel bearing inputs
37	Tonnes of primary nickel products from imported intermediate nickel products
38	Tonnes of intermediate nickel products from nickel bearing inputs
39	Tonnes of tissue paper
40	Tonnes of packaging and industrial paper
41	Tonnes of printing and writing paper
42	Tonnes of newsprint
43	Tonnes of pulp
44	Tonnes of ethene (ethylene)
45	Tonnes of polyethylene
46	Tonnes of wheat protein products (dried gluten)
47	Tonnes of direct wheat starch
48	Tonnes of wheat based dried distillers grain
49	Kilolitres of ethanol—95
50	Kilolitres of ethanol—absolute
51	Kilolitres of beverage grade ethanol
52	Tonnes of raw sugar
53	Kilolitres of petroleum refinery feedstocks
54	Tonnes of lithium hydroxide
55	Tonnes of gaseous hydrogen
56	Tonnes of liquefied hydrogen
57	Kilolitres of renewable aviation kerosene
58	Kilolitres of renewable diesel

69 Section 2 of Schedule 2 (table)

Repeal the table, substitute:

Trade-exposed production variables that are not manufacturing production variables	
Item	Production variable
1	Tonnes of run-of-mine coal
2	Tonnes of iron ore
3	Tonnes of manganese ore
4	Tonnes of bauxite
5	Tonnes of lithium ore

EXPOSURE DRAFT

Trade-exposed production variables that are not manufacturing production variables	
Item	Production variable
6	Tonnes of run-of-mine metal ore
7	Gigajoules of extracted oil and gas
8	Gigajoules of stabilised crude oil or condensate (stabilisation only)
9	Gigajoules of stabilised crude oil (integrated extraction and stabilisation)
10	Gigajoules of processed natural gas (processing only)
11	Gigajoules of processed natural gas (integrated extraction and processing)
12	Gigajoules of liquefied natural gas (from unprocessed natural gas)
13	Gigajoules of liquefied natural gas (from processed natural gas)
14	Gigajoules of ethane
15	Gigajoules of liquefied petroleum gas
