

**REPUBLIC OF SOUTH AFRICA**

**DRAFT CARBON TAX BILL**

*(As introduced in the National Assembly (proposed section 77))*

*(The English text is the official text of the Bill)*

**(MINISTER OF FINANCE)**

**[B – 2017]**

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**BILL**

**To provide for the imposition of a tax on the carbon dioxide (CO<sub>2</sub>) equivalent of greenhouse gas emissions; and to provide for matters connected therewith.**

**PREAMBLE**

**SINCE** the causality of the increasing of anthropogenic greenhouse gas emissions in the atmosphere and the global climate change has been scientifically confirmed;

**AND SINCE** it has consequently become necessary to manage the inevitable climate change impact through interventions that build and sustain South Africa's social, economic and environmental resilience and emergency response capacity;

**AND SINCE** it has also become necessary to make a contribution to the global effort to stabilise greenhouse gas concentrations in the atmosphere at a level that avoids dangerous anthropogenic interference with the climate system within a timeframe that enables economic, social and environmental development to proceed in a sustainable manner;

**AND SINCE** the costs of remedying pollution, environmental degradation and consequent adverse health effects and of preventing, controlling or minimising

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further pollution, environmental damage or adverse health effects must be paid for by those responsible for harming the environment (the polluter pays principle);

**AND SINCE** government is desirous to utilise a package of measures in an effort to address the challenges posed by climate change;

**AND SINCE** this package of measures will be achieved by the deployment of a range of economic instruments to support the system of desired emissions reduction outcomes, including the appropriate pricing of carbon and economic incentives, as well as the use of emissions offsets;

**AND SINCE** government believes that imposing a tax on greenhouse gas emissions and concomitant measures such as providing tax incentives for rewarding the efficient use of energy will provide appropriate price signals to help nudge the economy towards a more sustainable growth path.

**BE IT THEREFORE ENACTED** by the Parliament of the Republic of South Africa, as follows:—

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*Part I*

***Definitions and general provisions relating to imposition of carbon tax***

**Definitions**

1. In this Act, unless the context otherwise indicates—

"**allowance**" means any amount allowed to be taken into account in terms of Part II, subject to section 14, for the purposes of determining the amount of carbon tax payable;

"**carbon budget**" means a limit on total Greenhouse Gas emissions from a specific company, within a specific period of time;

"**carbon tax**" means a tax on the carbon dioxide (CO<sub>2</sub>) equivalent of greenhouse gas emissions imposed in terms of section 2;

"**carbon dioxide (CO<sub>2</sub>) equivalent**" means the concentration of carbon dioxide that would cause the same amount of radiative forcing (the difference of sunlight absorbed by the Earth and energy radiated back to space) as a given mixture of carbon dioxide and other greenhouse gases;

"**combustion**" means the exothermic reaction of a fuel with oxygen;

"**Commissioner**" means the Commissioner for the South African Revenue Service;

"**emissions**" means the release of greenhouse gases or their precursors and aerosols into the atmosphere over a specified area and period of time;

**"emission factor"** means the average emission rate of a given greenhouse gas for a given source, relative to the activity data of a source stream assuming complete oxidation for combustion and complete conversion for all other chemical reactions;

**"emissions intensity"** means an indicator of the result of the measurement of the quantity of greenhouse gas emissions in relation to an activity;

**"emissions intensity benchmark"** means the result of the measurement in respect of an activity that creates greenhouse gas emissions—

- (a) expressed as a predetermined value of the quantity of specified greenhouse gas emissions;
- (b) in relation to an activity that is differentiated from other activities by means of a product, a type of fuel or a technology; and
- (c) compared against the quantity of greenhouse gas emissions, in relation to an identical activity undertaken by another person;

**"fugitive emissions"** means emissions that occur from the release of greenhouse gases during the extraction, processing and delivery of fossil fuels;

**"greenhouse gas"** means gaseous constituents of the atmosphere, both natural and anthropogenic, that absorb and re-emit infrared radiation, and includes carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF<sub>6</sub>);

**"industrial process"** means a manufacturing process that chemically or physically transforms materials;

**"Minister"** means the Minister of Finance;

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“**person**” includes a partnership and a trust;

“**process emissions**” means greenhouse gas emissions other than combustion emissions occurring as a result of intentional or unintentional reactions between substances or their transformation, including the chemical or electrolytic reduction of metal ores, the thermal decomposition of substances, and the formation of substances for use as product or feedstock;

“**product use**” means greenhouse gases used in products and product applications;

“**Republic**” means the Republic of South Africa;

“**taxpayer**” means a person liable for the carbon tax in terms of section 3;

“**tax period**” means a period in respect of which tax is payable as prescribed under section 16.

### **Imposition of carbon tax**

2. There must be levied and collected for the benefit of the National Revenue Fund, a tax to be known as the carbon tax.

### **Persons subject to tax**

3. A person is—

- (a) a taxpayer for the purposes of this Act; and
- (b) liable to pay an amount of carbon tax calculated as contemplated in section 6 in respect of a tax period as specified in section 16,



if that person conducts an activity as set out in Annexure 1 to the Notice issued by the Minister responsible for environmental affairs in respect of the declaration of greenhouse gases as priority air pollutants under section 29(1) read with section 57(1) of the National Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004).

### **Tax base**

4. (1) The carbon tax must be levied in respect of the sum of the greenhouse gas emissions of a taxpayer in respect of a tax period expressed as the carbon dioxide equivalent of those greenhouse gas emissions resulting from—

(a) fossil fuels combustion in respect of that tax period that is a number constituted by the sum of the respective numbers determined for each type of fossil fuel in respect of which a greenhouse gas is emitted in respect of that tax period which respective numbers must be determined in accordance with the formula:

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

in which formula—

- (i) "E" represents the number to be determined;
- (ii) "A" represents the mass of any one type of the fossil fuel expressed in tonne that is the source of the greenhouse gas emission, other than any fuel utilised for the purposes of international aviation and maritime transport;

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- (iii) "**B**" represents the greenhouse gas emission factor in carbon dioxide equivalent per tonne that must be determined by matching the type of fossil fuel of which the mass is determined in terms of symbol "A", listed in the column "fuel type" of Table 1 of Schedule 1 with the number in the corresponding line of the column "GHG emission factor (CO<sub>2</sub>e) per tonne";
- (b) fugitive emissions in respect of commodity, fuel or technology that is a number constituted by the sum of the respective numbers determined for each type of commodity, fuel or technology in respect of which the greenhouse gas is emitted in respect of a tax period which respective numbers must be determined in accordance with the formula:

$$F = (N \times Q)$$

in which formula—

- (i) "**F**" represents the number to be determined;
- (ii) "**N**" represents the mass expressed in tonne in the case of solid fuels or the volume of each type of fuel expressed in cubic metres in the case of fuels other than solid fuels, in respect of the greenhouse gas emission; and
- (iii) "**Q**" represents the greenhouse gas emission factor in carbon dioxide equivalent expressed in tonne or cubic metres that must be determined by matching the type of fuel in respect of the greenhouse gas emissions listed in the column "source category activity" in Table 2 of Schedule 1 with the number in the corresponding line of the column "GHG emission factor "; and

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- (c) industrial process and product use in respect of a tax period that is a number constituted by the sum of the respective numbers determined for each type of commodity, fuel or technology in respect of which the greenhouse gas is emitted in respect of that tax period which respective numbers must be determined in accordance with the formula:

$$P = (G \times H)$$

in which formula—

- (i) "**P**" represents the amount to be determined;
  - (ii) "**G**" represents the mass of each raw material used or product produced expressed in tonne in respect of which the greenhouse gas is emitted in respect of that tax period; and
  - (iii) "**H**" represents the greenhouse gas emission factor in carbon dioxide emissions equivalent per tonne for each raw material used or product produced that must be determined by matching the raw material used or product produced listed in the column "source category activity/ raw material/ product" in Table 3 of Schedule 1 with the number in the corresponding line of the column "GHG emission factor (CO<sub>2</sub>e) per tonne" of that table.
- (2) If there are no emission factors available for the purposes of the calculation of greenhouse gas emissions as contemplated in subsection (1), a reporting methodology as approved by the Department of Environmental Affairs must be applied for the purposes of determining those emission factors.

## Rate of tax

5. The rate of the carbon tax must be an amount of R120 per tonne carbon dioxide equivalent of the greenhouse gas emissions of a taxpayer.

## Calculation of amount of tax payable

6. (1) Subject to subsection (2), the amount of tax payable by a taxpayer in respect of a tax period must be calculated in accordance with the formula:

$$X = \{(E - D - S) \times (1 - C) \times R\} + \{P \times (1 - J) \times R\} + \{F \times (1 - K) \times R\}$$

in which formula—

- (a) "X" represents the amount to be determined;
- (b) "E" represents the number in respect of the total fossil fuel combustion related greenhouse gas emissions of the taxpayer in respect of that tax period expressed as a carbon dioxide equivalent determined in terms of section 4(1)(a);
- (c) "D" represents the number in respect of the petrol and diesel related greenhouse gas emissions of that taxpayer in respect of that tax period expressed as a carbon dioxide equivalent, determined in terms of section 4(1)(a);
- (d) "S" represents the number in respect of greenhouse gas emissions, expressed in terms of carbon dioxide equivalent that were sequestered in

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respect of that tax period as verified and certified by the Department of Environmental Affairs;

- (e) "**C**" represents the sum of percentages of allowances determined in terms of sections 7, 10, 11, 12, and 13 in respect of that tax period subject to section 14;
- (f) "**R**" represents the rate of tax prescribed under section 5;
- (g) "**P**" represents the number in respect of the total industrial process and product use related greenhouse gas emissions of the taxpayer in respect of that tax period expressed as a carbon dioxide equivalent determined in terms of section 4(1)(c);
- (h) "**J**" represents the sum of the percentages of the allowances determined in terms of sections 8, 10, 11, 12 and 13 in respect of that tax period, subject to section 14;
- (i) "**F**" represents the number in respect of the total fugitive greenhouse gas emissions of the taxpayer in respect of that tax period expressed as a carbon dioxide equivalent determined in terms of section 4(1)(b); and
- (j) "**K**" represents the sum of the percentages of the allowances determined in terms of sections 7, 9, 10, 11, 12 and 13 in respect of that tax period, subject to section 14:

Provided that where the number in respect of the determination of the expression "**(E - D - S)**" in the formula is less than zero, that number must be deemed to be zero.

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(2) The amount of tax payable by a taxpayer in respect of the generation of electricity from fossil fuels in respect of a tax period must be calculated in accordance with the formula:

$$X = A - B$$

in which formula—

- (a) "X" represents the amount to be determined;
- (b) "A" represents the amount of tax payable in respect of a tax period determined in terms of subsection (1); and
- (c) "B" represents the renewable energy premium in respect of a tax period constituted by an amount expressed in Rand of the revenue received or accrued in respect of the electricity tariff or price allowed as a recovery of cost by the Independent Power Producers as determined in terms of the Multi Year Price Determination Methodology published by the National Energy Regulator of South Africa established by section 3 of the National Energy Regulator Act, 2004 (Act No. 40 of 2004).

(3) For the purposes of this section "**sequesterate**" means the process of increasing the carbon content of a carbon reservoir other than the atmosphere.

**PART II**

**Allowances**

**Allowance for fossil fuel combustion**

7. A taxpayer that conducts an activity that is listed in Schedule 2 in the column "Sector" may receive an allowance of 60 per cent of the total percentage of greenhouse gas emissions in respect of a tax period in respect of that activity.

**Allowance for industrial process emissions.**

8. (1) A taxpayer that conducts an activity in respect of industrial process emissions that is listed in Schedule 2 in the column "Sector" may receive an allowance in respect of those emissions, determined in terms of subsection (2).

(2) The percentage of the allowance referred to in subsection (1) must be calculated by matching the line in which the activity is contained in the column "Sector" with the corresponding line in the column "Basic tax-free allowance for process emissions %" in Schedule 2 of the total percentage of greenhouse gas emissions in respect of a tax period in respect of that activity.

**Allowance in respect of fugitive emissions**

9. (1) A taxpayer that conducts an activity that is listed in Schedule 2 in the column "Sector" may receive an allowance in respect of fugitive emissions in a percentage determined in terms of subsection (2).

(2) The allowance referred to in subsection (1) must be determined by matching the line in which the activity is contained in the column "Sector" with the corresponding line in the column "Fugitive emissions allowance %" in Schedule 2 in respect of the total percentage of greenhouse gas emissions in respect of the tax period in respect of that activity.

**Trade exposure allowance**

10. A taxpayer that is liable for the carbon tax in respect of greenhouse gas emissions in respect of the export of goods out of the Republic may receive an allowance in respect of a tax period in respect of those greenhouse gas emissions which is the lower of—

(a) an amount that must be determined in accordance with the formula:

$$X = A \times B$$

in which formula—

(i) "X" represents the amount to be determined;

(ii) "A" represents the number 0.4;

(iii) "B"—

(aa) represents a number that bears to the number 100 the same ratio as the revenue received from goods that are exported bears to the total revenue received from all similar goods that are sold by that taxpayer; and

(bb) must be deemed to be nil if the number determined in terms of subparagraph (aa) is lower than the number five;

or

(b) 10 per cent of the total greenhouse gas emissions.



## Performance allowance

11. (1) A taxpayer that has implemented additional measures to reduce the greenhouse gas emissions of that taxpayer in respect of a tax period may receive an allowance in respect of that tax period not exceeding five per cent of the total greenhouse gas emissions of that taxpayer during that tax period determined in accordance with the formula:

$$Z = (A / B - C) \times D$$

in which formula—

- (a) “Z” represents the percentage to be determined;
- (b) “A” represents—
  - (i) the sector or sub-sector greenhouse gas emissions intensity benchmark as prescribed by the Minister; or
  - (ii) where no value is prescribed as required by subparagraph (i), the number zero;
- (c) “B” represents the measured and verified greenhouse gas emissions intensity of a taxpayer in respect of a tax period;
- (d) “C” represents the number one; and
- (e) “D” represents the number 100.

(2) For the purposes of this section “**additional measures**” include voluntary action taken to reduce greenhouse gas emissions in respect of a tax period.

## Carbon budget allowance

12. A taxpayer that conducts an activity that is listed in Schedule 2 in the column "Sector", and participates in the carbon budget system during or before the tax period, may receive an additional allowance of 5 per cent of the total percentage of greenhouse gas emissions in respect of a tax period.

### **Offset allowance**

13. (1) Subject to subsection (2), a taxpayer may reduce the amount in respect of the carbon tax for which the taxpayer is liable in respect of a tax period by utilising carbon offsets as prescribed by the Minister.

(2) The reduction of the liability for the carbon tax allowed in terms of subsection (1) may not exceed so much of the percentage of the total greenhouse gas emissions of a taxpayer in respect of a tax period as is determined by matching the line in the column "Sector" with the percentage in the corresponding line of the column "Offsets allowance %" in Schedule 2.

## ***PART III***

### ***Limitation of allowances***

#### **Limitation of sum of allowances**

14. A taxpayer may only receive the sum of the allowances contemplated in Part II in respect of a tax period to the extent that the sum of those allowances does not exceed 95 per cent of the total greenhouse gas emissions of that taxpayer

in respect of that tax period as determined in terms of the column "Maximum total allowances %" in Schedule 2.

#### ***PART IV***

#### ***Administration, tax period and payment of tax***

##### **Administration**

**15.** (1) The Commissioner must administer the provisions of this Act as if the carbon tax were an environmental levy as contemplated in section 54A of the Customs and Excise Act, 1964 (Act No. 91 of 1964), that must be collected and paid in terms of the provisions of that Act.

(2) For the purposes of subsection (1), administrative actions, requirements and procedures for purposes of submission and verification of accounts, collection and payment of the carbon tax as an environmental levy or the performance of any duty, power or obligation or the exercise of any right in terms of this Act are, to the extent not regulated in this Act, regulated by the Customs and Excise Act, 1964.

##### **Tax period**

**16.** (1) A taxpayer must pay the carbon tax for every tax period.

(2) A tax period in relation to a taxpayer is—

(a) the period commencing on 1 January 2017 and ending on 31 December 2017;  
and

- (b) subsequent to the period contemplated in paragraph (a), the period commencing on 1 January of each year and ending on 31 December of that year.

### **Payment of tax**

17. (1) A taxpayer must submit six-monthly environmental levy accounts and payments as prescribed by rule in terms of the Customs and Excise Act, 1964, for every tax period commencing on 1 January and ending on 30 June and the period commencing on 1 July and ending on 31 December of that year.

(2) A taxpayer must effect any required adjustments to environmental levy accounts and payments for a tax period in the subsequent environmental levy account and payment of the period commencing on 1 January and ending on 30 June in the following tax period.

## ***Part V***

### ***Impermissible arrangements***

#### **Impermissible tax avoidance arrangements**

18. (1) If the Commissioner is satisfied that an arrangement—
- (a) has been entered into or carried out in a manner that has the effect of providing a tax benefit to a person; and
- (b) having regard to the substance of the arrangement—

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- (i) was entered into or carried out by any means or in a manner which would not normally be employed for purposes other than the obtaining of a tax benefit;
- (ii) has created rights or obligations which would not normally be created between persons dealing at arm's length; and
- (iii) was entered into or carried out solely or mainly for the purpose of obtaining a tax benefit,

the Commissioner may determine the liability for tax imposed under this Act and the amount thereof as if the arrangement had not been entered into or carried out, or in such manner as in the circumstances of the case the Commissioner deems appropriate for the prevention or diminution of that tax benefit.

(2) For the purposes of this section—

**"dealing at arm's length"** means a transaction in the open market in which two or more independent persons acting in good faith, without regard to the liability for tax, would freely and without conflict of interest agree to transact in the ordinary course of business;

**"arrangement"** includes any transaction, operation, scheme or understanding, whether enforceable or not, including all steps and transactions by which it is carried into effect; and

**"tax benefit"** includes—

- (a) any reduction in the liability of any person to pay any tax or other amount imposed by this Act;
- (b) any increase in the entitlement of any person to an allowance allowed in terms of this Act; and

- (c) any other avoidance or postponement of liability for the payment of any tax or other amount imposed by this Act.

## ***PART VI***

### ***Miscellaneous***

#### **Reporting**

**19.** The Commissioner must annually submit to the Minister a report, in the form and manner that the Minister may prescribe, within six months from the end of every tax period, advising the Minister of—

- (a) the greenhouse gas emissions reported; and
  - (b) the amount of carbon tax collected,
- in respect of that tax period.

#### **Regulations**

**20.** The Minister must make regulations in respect of—

- (a) the sector or sub-sector greenhouse gas emissions intensity benchmark for the purposes of symbol “**A**” in section 11(1); and
- (b) carbon offsets contemplated in section 13.

#### **Amendment of laws**

**21.** The Customs and Excise Act, 1964, is hereby amended to the extent set out in Schedule 3.

**Short title and commencement**

**22.** This Act is called the Carbon Tax Act, 2017, and comes into operation on 1 January 2017.

## SCHEDULE 1

Table 1

## Energy Combustion Emission Factors

## STATIONARY SOURCE CATEGORY

<b>FUEL TYPE</b>	<b>GHG EMISSION FACTOR (CO<sub>2</sub>e) PER TONNE</b>
ANTHRACITE	2.6371
AVIATION GASOLINE	2.4095
BIODIESEL	1.9183
BIOGASOLINE	1.9183
BITUMEN	3.2541
BLAST FURNACE GAS	0.6423
BROWN COAL BRIQUETTES	2.0279
CHARCOAL	3.3593
COAL TAR	2.2727
COKE OVEN COKE AND LIGNITE COKE	3.0306
COKE OVEN GAS	1.7203
COKING COAL	2.0915
CRUDE OIL	3.2214
DIESEL	2.8326
ETHANE	2.8607
GAS COKE	1.8520
GAS WORKS GAS	1.7203
INDUSTRIAL WASTES	
JET GASOLINE	2.4095
JET KEROSENE	2.4609
LANDFILL GAS	2.7545
LIGNITE	1.2075
LIQUEFIED PETROLEUM GASES	1.6862
LUBRICANTS	2.9566
MUNICIPAL WASTES (BIOMASS FRACTION)	1.1817
MUNICIPAL WASTES (NON BIOMASS FRACTION)	0.9357
NAPHTHA	3.2906
NATURAL GAS	2.3023
NATURAL GAS LIQUIDS	2.6423
OIL SHALE AND TAR SANDS	0.9565
ORIMULSION	2.1243
OTHER BIOGAS	2.7545
OTHER BITUMINOUS COAL	1.8253
OTHER KEROSENE	2.6694
OTHER LIQUID BIOFUELS	2.1878



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<b>FUEL TYPE</b>	<b>GHG EMISSION FACTOR (CO<sub>2</sub>e) PER TONNE</b>
OTHER PETROLEUM PRODUCTS	2.9566
OTHER PRIMARY SOLID BIOMASS	1.1817
OXYGEN STEEL FURNACE GAS	1.2853
PARAFFIN WAXES	2.9566
PATENT FUEL	2.0279
PEAT	1.0391
PETROL	2.3785
PETROLEUM COKE	3.1768
REFINERY FEEDSTOCK	3.1625
REFINERY GAS	2.8538
RESIDUAL FUEL OIL	3.2301
SHALE OIL	2.8021
SLUDGE GAS	2.7545
SUB-BITUMINOUS COAL	1.8541
SULPHITE LYES (BLACK LIQUOR)	1.1323
WASTE OILS	3.0220
WHITE SPIRIT AND SBP	2.9566
WOOD/WOOD WASTE	1.7764

**NON-STATIONARY / MOBILE SOURCE CATEGORY**

<b>FUEL TYPE</b>	<b>GHG EMISSION FACTOR (CO<sub>2</sub>e) PER TONNE</b>
AVIATION GASOLINE	2.3977
COMPRESSED NATURAL GAS	N/A
DIESEL	2.8706
DIESEL –OFFROAD	3.1497
DIESEL-RAIL	3.1494
JET KEROSENE	2.4732
KEROSENE	2.6694
LIQUEFIED NATURAL GASES	N/A
LIQUEFIED PETROLEUM GASES	1.7244
LUBRICANTS	2.9566
NATURAL GAS	2.4233
OTHER KEROSENE	2.6694
OTHER PETROLEUM PRODUCTS	2.9566
PARAFFIN WAXES	2.9566
PETROL-LOW MILEAGE LDV	2.4305
PETROL-OXIDATION CATALYST	2.4707
PETROL-UNCONTROLLED	2.4284
REFINERY GAS	2.8538
RESIDUAL FUEL OIL – WATER	3.2512
SUB-BITUMINOUS COAL – RAIL	1.8545

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<b>FUEL TYPE</b>	<b>GHG EMISSION FACTOR (CO<sub>2</sub>e) PER TONNE</b>
WHITE SPIRIT & SBP	2.9566

**Table 2  
Fugitive Emission Factors**

<b>SOURCE CATEGORY ACTIVITY</b>	<b>GHG EMISSION FACTOR (CO<sub>2</sub>e) PER TONNE</b>
<b>SOLID FUELS (M<sup>3</sup> /TONNE)</b>	
UNDERGROUND COAL MINING	0.1187
UNDERGROUND POST-MINING (HANDLING & TRANSPORT)	0.0277
SURFACE COAL MINING	0.0000
SURFACE POST-MINING (STORAGE AND TRANSPORT)	0.0000
<b>OIL AND NATURAL GAS (Gg/ 10<sup>3</sup>M<sup>3</sup> TOTAL OIL PRODUCTION)</b>	<b>CO<sub>2</sub>e (TONNE /M<sup>3</sup>)</b>
<b>FLARING AND VENTING</b>	
WELL DRILLING	0.8590
WELL TESTING	10.1931
WELL SERVICING	2.5319
<b>GAS PRODUCTION (Gg/ 10<sup>6</sup>M<sup>3</sup> TOTAL OIL PRODUCTION)</b>	
	8.7540
FUGITIVES	To
	52.9820
FLARING	1.2237
<b>GAS PROCESSING (Gg/ 10<sup>6</sup>M<sup>3</sup> RAW GAS FEED)</b>	
	11.1900
SWEET GAS PLANTS-FUGITIVES	To
	24.0100
SWEET GAS PLANTS-FLARING	1.8350
SOUR GAS PLANTS-FUGITIVES	2.2389
SOUR GAS PLANTS-FLARING	3.6712
SOUR GAS PLANTS -RAW CO <sub>2</sub> VENTING	63.0000
DEEP CUT EXTRACTION-FUGITIVES	0.2546
DEEP CUT EXTRACTION-FLARING	0.1152
	3.4620
DEFAULT-FUGITIVES	To
	24.0100
DEFAULT-FLARING	3.0558
DEFAULT- RAW CO <sub>2</sub> VENTING	40.0000
<b>GAS TRANSMISSION&amp;STORAGE (Gg/ 10<sup>6</sup>M<sup>3</sup> MARKETABLE GAS)</b>	
	1.5189
TRANSMISSION – FUGITIVES	To
	11.0409

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SOURCE CATEGORY ACTIVITY	GHG EMISSION FACTOR
TRANSMISSION – VENTING	1.0151
	To
	7.3631
STORAGE	0.5751
<b>GAS DISTRIBUTION (Gg/ 10<sup>6</sup>M<sup>3</sup> OF UTILITY SALES)</b>	
ALL	25.3510
<b>NATURAL GAS LIQUIDS TRANSPORT (Gg/ 10<sup>3</sup>M<sup>3</sup> CONDENSATE AND PENTANES PLUS)</b>	
CONDENSATE	2.5372
LIQUEFIED PETROLEUM GAS (Gg/ 10 <sup>3</sup> M <sup>3</sup> LPG)	0.4307
LIQUEFIED NATURAL GAS (Gg/ 10 <sup>6</sup> M <sup>3</sup> MARKETABLE GAS)	N/A
<b>OIL PRODUCTION (Gg/ 10<sup>3</sup>M<sup>3</sup> CONVENTIONAL OIL PRODUCTION)</b>	
CONVENTIONAL OIL-FUGITIVES (ONSHORE)	0.0346
	To
	83.0600
CONVENTIONAL OIL-FUGITIVES(OFFSHORE)	0.0136
CONVENTIONAL OIL-VENTING	16.6550
CONVENTIONAL OIL-FLARING	41.7644
<b>OIL PRODUCTION (Gg/ 10<sup>3</sup>M<sup>3</sup> HEAVY OIL PRODUCTION)</b>	
HEAVY OIL/COLD BITUMEN – FUGITIVES	182.2400
HEAVY OIL/COLD BITUMEN – VENTING	396.3000
HEAVY OIL/COLD BITUMEN – FLARING	25.3562
<b>OIL PRODUCTION (Gg/ 10<sup>3</sup>M<sup>3</sup> THERMAL BITUMEN PRODUCTION)</b>	
THERMAL OIL PRODUCTION - FUGITIVES	4.1690
THERMAL OIL PRODUCTION – VENTING	80.7200
THERMAL OIL PRODUCTION – FLARING	27.4390
<b>OIL PRODUCTION (Gg/ 10<sup>3</sup>M<sup>3</sup> SYNTHETIC CRUDE PRODUCTION FROM OILSANDS)</b>	
SYNTHETIC CRUDE (FROM OILSANDS)	52.9000
SYNTHETIC CRUDE (OIL SHALE)	
<b>OIL PRODUCTION (Gg/ 10<sup>3</sup>M<sup>3</sup> TOTAL OIL PRODUCTION)</b>	
DEFAULT TOTAL – FUGITIVES	50.8800
DEFAULT TOTAL – VENTING	201.9000
DEFAULT TOTAL – FLARING	34.6428
<b>OIL UPGRADING (Gg/ 10<sup>3</sup>M<sup>3</sup> OIL UPGRADED)</b>	
ALL	
<b>OIL TRANSPORT (Gg/ 10<sup>3</sup>M<sup>3</sup> OIL TRANSPORTED BY PIPELINE)</b>	
PIPELINES	0.1247

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<b>SOURCE CATEGORY ACTIVITY</b>	<b>GHG EMISSION FACTOR</b>
<b><i>OIL TRANSPORT (Gg/ 10<sup>3</sup>M<sup>3</sup> OIL TRANSPORTED BY TANKER TRUCK)</i></b>	
TANKER TRUCKS AND RAIL CARS - VENTING	0.5773
<b><i>OIL TRANSPORT (Gg/ 10<sup>3</sup>M<sup>3</sup> OIL TRANSPORTED BY TANKER SHIPS)</i></b>	
LOADING OFF-SHORE PRODUCTION ON TANKER SHIPS – VENTING	N/A
<b><i>OIL REFINING (Gg/ 10<sup>3</sup>M<sup>3</sup> OIL REFINED)</i></b>	
	0.0598
ALL	To
	0.9430

Table 3

## Industrial Process and Product Use (IPPU) Emission Factors

SOURCE CATEGORY ACTIVITY / RAW MATERIAL / PRODUCT	GHG EMISSION FACTOR (CO <sub>2</sub> e) PER TONNE
<b><i>CEMENT PRODUCTION (PER TONNE OF CLINKER)</i></b>	
CEMENT	0.5200
<b><i>LIME PRODUCTION (PER TONNE OF LIME)</i></b>	
QUICKLIME/HIGH CALCIUM LIME	0.7500
DOLOMITIC LIME	0.7700
HYDRATED LIME	0.5900
<b><i>GLASS PRODUCTION (PER TONNE GLASS)</i></b>	
GLASS PRODUCTION	0.2000
<b><i>CERAMICS (PER TONNE CARBONATE)</i></b>	
CALCITE/ARAGONITE (CaCO <sub>3</sub> )	0.4397
MAGNESITE (MgCO <sub>3</sub> )	0.5220
DOLOMITE (CaMg(CO <sub>3</sub> ) <sub>2</sub> )	0.4773
SIDERITE (FeCO <sub>3</sub> )	0.3799
	0.4082
	To
ANKERITE (Ca(Fe,Mg,Mn)(CO <sub>3</sub> ) <sub>2</sub> ))	0.4757
RHODOCHROSITE (MnCO <sub>3</sub> )	0.3829
SODIUM CARBONATE/SODA ASH (Na <sub>2</sub> CO <sub>3</sub> )	0.4149
<b><i>OTHER USES OF SODA ASH (PER TONNE CARBONATE)</i></b>	
CALCITE/ARAGONITE (CaCO <sub>3</sub> )	0.4397
MAGNESITE (MgCO <sub>3</sub> )	0.5220
DOLOMITE (CaMg(CO <sub>3</sub> ) <sub>2</sub> )	0.4773
SIDERITE (FeCO <sub>3</sub> )	0.3799
	0.4082
	To
ANKERITE (Ca(Fe,Mg,Mn)(CO <sub>3</sub> ) <sub>2</sub> ))	0.4757
RHODOCHROSITE (MnCO <sub>3</sub> )	0.3829
SODIUM CARBONATE/SODA ASH (Na <sub>2</sub> CO <sub>3</sub> )	0.4149
<b><i>NON METALLURGICAL MAGNESIA PRODUCTION (PER TONNE CARBONATE)</i></b>	
CALCITE/ARAGONITE (CaCO <sub>3</sub> )	0.4397
MAGNESITE (MgCO <sub>3</sub> )	0.5220
DOLOMITE (CaMg(CO <sub>3</sub> ) <sub>2</sub> )	0.4773
SIDERITE (FeCO <sub>3</sub> )	0.3799
	0.4082
	To
ANKERITE (Ca(Fe,Mg,Mn)(CO <sub>3</sub> ) <sub>2</sub> ))	

## DRAFT

SOURCE CATEGORY ACTIVITY / RAW MATERIAL / PRODUCT	GHG EMISSION FACTOR (CO <sub>2</sub> e) PER TONNE
	0.4757
RHODOCHROSITE (MnCO <sub>3</sub> )	0.3829
SODIUM CARBONATE/SODA ASH (NA <sub>2</sub> CO <sub>3</sub> )	0.4149
<b>OTHER (PER TONNE CARBONATE)</b>	
CALCITE/ARAGONITE (CACO <sub>3</sub> )	0.4397
MAGNESITE (MGCO <sub>3</sub> )	0.5220
DOLOMITE (CaMg(CO <sub>3</sub> ) <sub>2</sub> )	0.4773
SIDERITE (FeCO <sub>3</sub> )	0.3799
	0.4082
	To
ANKERITE (Ca(Fe,Mg,Mn)(CO <sub>3</sub> ) <sub>2</sub> ))	0.4757
RHODOCHROSITE (MnCO <sub>3</sub> )	0.3829
SODIUM CARBONATE/SODA ASH (NA <sub>2</sub> CO <sub>3</sub> )	0.4149
<b>AMMONIA PRODUCTION (PER TONNE NH<sub>3</sub>)</b>	
MODERN PLANTS-CONVENTIONAL REFORMING (NATURAL GAS)	1.6940
EXCESS AIR REFORMING (NATURAL GAS)	1.6660
AUTOTHERMAL REFORMING (NATURAL GAS)	1.6940
PARTIAL OXIDATION	2.7720
AVERAGE VALUE NATURAL GAS (MIXTURE OF MODERN & OLD)	2.1040
AVERAGE VALUE (PARTIAL OXIDATION)	3.2730
<b>NITRIC ACID PRODUCTION (PER TONNE NITRIC ACID)</b>	
PLANTS WITH NSCR (ALL PROCESSES)	0.5920
PLANTS WITH PROCESS (INTEGRATED OR TAILGAS NO <sub>2</sub> DESTRUCTION)	0.7400
ATMOSPHERIC PRESSURE PLANTS (LOW PRESSURE PLANTS)	1.4800
MEDIUM PRESSURE COMBUSTION PLANTS (MEDIUM PRESSURE)	2.0720
HIGH PRESSURE PLANTS (HIGH PRESSURE)	2.6640
<b>ADIPIC ACID PRODUCTION (PER TONNE ADIPIC ACID UNCONTROLLED)</b>	
NITRIC ACID OXIDATION (ADIPIC ACID)	88.8000
<b>CAPROLACTAM, GLYOXAL AND GLYOXYLIC ACID PRODUCTION (PER TONNE PRODUCED)</b>	
CAPROLACTAM PRODUCTION (RASCHIG)	2.6640
GLYOXAL PRODUCTION	0.0296
GLYOXYLIC ACID PRODUCTION	0.0059
<b>CARBIDE PRODUCTION (PER TONNE RAW MATERIAL USED)</b>	
SILICON CARBIDE PRODUCTION	2.5346
PETROLEUM COKE USE	1.7000
<b>CARBIDE PRODUCTION (PER TONNE CARBIDE PRODUCED)</b>	
SILICON CARBIDE PRODUCTION (CARBIDE PRODUCED)	2.8868
PETROLEUM COKE USE	1.0900

## DRAFT

<b>SOURCE CATEGORY ACTIVITY / RAW MATERIAL / PRODUCT</b>	<b>GHG EMISSION FACTOR (CO<sub>2</sub>e) PER TONNE</b>
USE OF PRODUCT	1.1000
<b><i>TITANIUM DIOXIDE PRODUCTION (PER TONNE PRODUCT)</i></b>	
TITANIUM SLAG	
SYNTHETIC RUTILE	1.4300
RUTILE TITANIUM DIOXIDE (CHLORIDE ROUTE)	1.3400
<b><i>SODA ASH PRODUCTION (PER TONNE OF SODA ASH OR TRONA)</i></b>	
NATURAL SODA ASH OUTPUT	0.1380
NATURAL SODA ASH (TRONA USED)	0.0970
<b>PETROCHEMICAL AND CARBON BLACK PRODUCTION</b>	
<b><i>METHANOL PRODUCTION (PER TONNE METHANOL PRODUCED)</i></b>	
CONVENTIONAL STEAM REFORMING WITHOUT PRIMARY REFORMER (NATURAL GAS FEEDSTOCK)	0.7229
CONVENTIONAL STEAM REFORMING WITH PRIMARY REFORMER (NATURAL GAS FEEDSTOCK)	0.5499
CONVENTIONAL STEAM REFORMING LURGI CONVENTIONAL PROCESS (NATURAL GAS FEEDSTOCK)	0.4379
CONVENTIONAL STEAM REFORMING LURGI CONVENTIONAL PROCESS (NATURAL GAS+CO <sub>2</sub> FEEDSTOCK)	0.3199
CONVENTIONAL STEAM REFORMING LURGI LOW PRESSURE PROCESS (NATURAL GAS FEEDSTOCK)	0.3199
CONVENTIONAL STEAM REFORMING LURGI COMBINED PROCESS (NATURAL GAS FEEDSTOCK)	0.4489
CONVENTIONAL STEAM REFORMING LURGI MEGA METHANOL PROCESS (NATURAL GAS FEEDSTOCK)	0.3629
PARTIAL OXIDATION PROCESS (OIL FEEDSTOCK)	1.4289
PARTIAL OXIDATION PROCESS (COAL FEEDSTOCK)	5.3379
PARTIAL OXIDATION PROCESS (LIGNITE FEEDSTOCK)	5.0729
CONVENTIONAL STEAM REFORMING WITH INTEGRATED AMMONIA PRODUCTION (NATURAL GAS FEEDSTOCK)	1.0729
<b><i>STEAM CRACKING ETHYLENE PRODUCTION (PER TONNE ETHYLENE PRODUCED)</i></b>	
ETHYLENE (TOTAL PROCESS & ENERGY FEEDSTOCK USE) – NAPHTHA	1.7990
ETHYLENE (TOTAL PROCESS & ENERGY FEEDSTOCK USE) - GAS OIL	2.3590
ETHYLENE (TOTAL PROCESS & ENERGY FEEDSTOCK USE) – ETHANE	1.0880
ETHYLENE (TOTAL PROCESS & ENERGY FEEDSTOCK USE) – PROPANE	1.1090
ETHYLENE (TOTAL PROCESS & ENERGY FEEDSTOCK USE) – BUTANE	1.1390
ETHYLENE (TOTAL PROCESS & ENERGY FEEDSTOCK USE) – OTHER	1.7990
ETHYLENE ( PROCESS FEEDSTOCK USE) - NAPHTHA	1.7990
ETHYLENE ( PROCESS FEEDSTOCK USE) - GAS OIL	2.2390
ETHYLENE ( PROCESS FEEDSTOCK USE) - ETHANE	0.8980
ETHYLENE ( PROCESS FEEDSTOCK USE) - PROPANE	1.1090
ETHYLENE ( PROCESS FEEDSTOCK USE) - BUTANE	1.1390



## DRAFT

<b>SOURCE CATEGORY ACTIVITY / RAW MATERIAL / PRODUCT</b>	<b>GHG EMISSION FACTOR (CO<sub>2</sub>e) PER TONNE</b>
ETHYLENE ( PROCESS FEEDSTOCK USE) -OTHER	1.7990
ETHYLENE ( SUPPLEMENTAL FUEL-ENERGY FEEDSTOCK) USE - GAS OIL	0.1890
ETHYLENE ( SUPPLEMENTAL FUEL-ENERGY FEEDSTOCK) USE – ETHANE	0.3280
<b><i>ETHYLENE DICHLORIDE AND VINYL CHLORIDE MONOMER (PER TONNE EDC PRODUCED OR TONNE VCM PRODUCT PRODUCED)</i></b>	
DIRECT CHORINATION PROCESS (EDC)	0.1915
OXYCHLORINATION PROCESS (EDC)	0.2025
BALANCED PROCESS (DEFAULT) – EDC	0.1965
<b><i>ETHYLENE DICHLORIDE AND VINYL CHLORIDE MONOMER (PER TONNE VCM PRODUCED OR TONNE VCM PRODUCT PRODUCED)</i></b>	
DIRECT CHORINATION-PROCESS (VCM)	0.2865
OXYCHLORINATION PROCESS (VCM)	0.3025
BALANCED PROCESS (DEFAULT) –VCM	0.2945
<b><i>ETHYLENE OXIDE (PER TONNE ETHYLENE OXIDE PRODUCED)</i></b>	
AIR PROCESS (DEFAULT) - CATALYST DEFAULT (70)	0.9042
AIR PROCESS (DEFAULT) - CATALYST (75)	0.7042
AIR PROCESS (DEFAULT) - CATALYST (80)	0.5412
OXYGEN PROCESS (DEFAULT) - CATALYST DEFAULT (75)	0.7042
OXYGEN PROCESS - CATALYST (80)	0.5412
OXYGEN PROCESS - CATALYST (85)	0.3912
<b><i>ACRYLONITRILE (PER TONNE ACRYLONITRILE PRODUCED)</i></b>	
DIRECT AMMOXIDATION WITH SECONDARY PRODUCTS BURNED FOR ENERGY RECOVERY OR FLARED (DEFAULT)	1.0041
DIRECT AMMOXIDATION WITH ACETONITRILE BURNED FOR ENERGY RECOVERY OR FLARED	0.8341
DIRECT AMMOXIDATION WITH ACETONITRILE & HYDROGEN CYANIDE RECOVERED AS PRODUCT	0.7941
<b><i>CARBON BLACK PRODUCTION (PER TONNE CARBON BLACK PRODUCED)</i></b>	
FURNACE BLACK PROCESS (DEFAULT)	2.6214
THERMAL BLACK PROCESS	5.2514
ACETYLENE BLACK PROCESS	0.7814
<b><i>IRON AND STEEL PRODUCTION (PER TONNE PRODUCT PRODUCED)</i></b>	
SINTER PRODUCTION	0.3416
COKE OVEN	0.5623
PIG IRON PRODUCTION	1.3500
DIRECT REDUCED IRON (DRI) PRODUCTION	1.5250
PELLET PRODUCTION	0.0300
BASIC OXYGEN FURNACE	1.4600
ELECTRIC ARC FURNACE	1.1000
OPEN HEARTH FURNACE	1.7200
GLOBAL AVERAGE	1.0600
<b><i>FERROALLOYS PRODUCTION (PER TONNE PRODUCTION)</i></b>	

## DRAFT

<b>SOURCE CATEGORY ACTIVITY / RAW MATERIAL / PRODUCT</b>	<b>GHG EMISSION FACTOR (CO<sub>2</sub>e) PER TONNE</b>
FERROSILICON (45%) SI	2.5000
FERROSILICON (65%) SI	3.6230
FERROSILICON (75%) SI	4.0230
FERROSILICON (90%) SI	4.8253
FERROMANGANESE (7% C)	1.3000
FERROMANGANESE (1% C)	1.5000
SILICOMANGANESE	1.4000
SILICON METAL	5.0276
FERROCHROMIUM (STAND ALONE)	1.3000
FERROCHROMIUM (WITH SINTER PLANT)	1.6000
<b><i>ALUMINIUM PRODUCTION (PER TONNE ALUMINIUM PRODUCED)</i></b>	
PREBAKE	1.6000
SODERBERG	1.7000
CWPB	2.7560
SWPB	13.8800
VSS	5.0360
HSS	2.6370
<b><i>MAGNESIUM PRODUCTION (PER TONNE MAGNESIUM PRODUCED)</i></b>	
DOLOMITE	27.3300
MAGNESITE	25.0300
<b><i>LEAD PRODUCTION (PER TONNE PRODUCT)</i></b>	
IMPERIAL SMELT FURNACE (ISF) PRODUCTION	0.5900
DIRECT SMELTING PRODUCTION	0.2500
TREATMENT OF SECONDARY RAW MATERIALS	0.2000
DEFAULT EF	0.5200
<b><i>ZINC PRODUCTION (PER TONNE PRODUCT)</i></b>	
WAEZL KILN	3.6600
PYROMETALLURGICAL	0.4300
DEFAULT EF	1.7200

## SCHEDULE 2

Sector	Basic tax-free allowance for fossil fuel combustion emissions %	Basic tax-free allowance for process emissions %	Fugitive emissions allowance %	Trade exposure allowance %	Z-factor allowance %	Carbon budget allowance %	Offsets allowance %	Maximum total allowances %
<b>Fuel combustion</b>								
<b>Energy Industries</b>								
Main activity electricity and heat production	60	0	0	0	0	5	10	75
Petroleum refining	60	0	0	10	5	5	10	90
Manufacture of solid fuels & other energy industries	60	0	0	10	5	5	10	90
Manufacturing industries and Construction	60	0	0	10	5	5	10	90
Iron and steel	60	0	0	10	5	5	10	90
Non-ferrous metals energy	60	0	0	10	5	5	10	90
Chemicals	60	0	0	10	5	5	10	90
Pulp, paper and print	60	0	0	10	5	5	10	90
Food processing ; beverage; tobacco	60	0	0	10	5	5	10	90
Non-metallic minerals	60	0	0	10	5	5	10	90
Transport Equipment	60	0	0	10	5	5	10	90
Machinery	60	0	0	10	5	5	10	90
Mining (excluding fuels) and quarrying	60	0	0	10	5	5	10	90
Wood and wood products	60	0	0	10	5	5	10	90
Construction	60	0	0	10	5	5	10	90
Textiles and leather	60	0	0	10	5	5	10	90
Non-	60	0	0	10	5	5	10	90

Sector	Basic tax-free allowance for fossil fuel combustion emissions %	Basic tax-free allowance for process emissions %	Fugitive emissions allowance %	Trade exposure allowance %	Z-factor allowance %	Carbon budget allowance %	Offsets allowance %	Maximum total allowances %
specified industry								
<b>Transport</b>								
Civil aviation	60	0	0	10	5	5	10	90
Road transport	60	0	0	10	5	5	10	90
Railways	60	0	0	10	5	5	10	90
Water-borne navigation	60	0	0	10	5	5	10	90
Other transport	60	0	0	10	5	5	10	90
Other Sectors								
Commercial; institutional	60	0	0	10	5	5	10	90
Residential	100	0	0	0	0	0	0	100
Agriculture; forestry; fishing/Fish farms	60	0	0	10	5	5	10	90
<b>Non-specified</b>								
Stationary	60	0	0	10	5	5	10	90
Mobile	60	0	0	10	5	5	10	90
Multilateral operations	60	0	0	10	5	5	10	90
<b>Fugitive emissions from fuels</b>								
<b>Solid Fuels</b>								
Coal mining and handling	60	0	10	10	5	5	5	95
Oil and natural gas	60	0	10	10	5	5	5	95
<b>Oil</b>								
Venting	60	0	10	10	5	5	5	95
Flaring	60	0	10	10	5	5	5	95
All Other	60	0	10	10	5	5	5	95
Natural Gas	60	0	10	10	5	5	5	95
<b>Other fugitive emissions from Energy Production</b>								
Coal-to-liquids processes	60	0	10	10	5	5	5	95

Sector	Basic tax-free allowance for fossil fuel combustion emissions %	Basic tax-free allowance for process emissions %	Fugitive emissions allowance %	Trade exposure allowance %	Z-factor allowance %	Carbon budget allowance %	Offsets allowance %	Maximum total allowances %
Gas-to-liquids processes	60	0	10	10	5	5	5	95
Charcoal Production processes	60	0	10	10	5	5	5	95
Coke production	60	0	10	10	5	5	5	95
<b><u>Industrial processes and product use</u></b>								
<b>Mineral Industry</b>								
Cement production	0	70	0	10	5	5	5	95
Lime Production	0	70	0	10	5	5	5	95
Glass Production	0	70	0	10	5	5	5	95
Other process uses of carbonates	0	60	0	10	5	5	10	90
<b>Chemical industry</b>								
Ammonia production	0	70	0	10	5	5	5	95
Nitric acid production	0	70	0	10	5	5	5	95
Adipic acid production	0	70	0	10	5	5	5	95
Caprolactam, Glyoxal and Glyoxylic acid production	0	70	0	10	5	5	5	95
Carbide production	0	70	0	10	5	5	5	95
Titanium Dioxide production	0	70	0	10	5	5	5	95
Soda ash production	0	70	0	10	5	5	5	95
Petrochemical and Carbon Black production	0	70	0	10	5	5	5	95
Fluorochemical Production	0	70	0	10	5	5	5	95
<b>Metal Industry</b>								
Iron and steel production	0	70	0	10	5	5	5	95

Sector	Basic tax-free allowance for fossil fuel combustion emissions %	Basic tax-free allowance for process emissions %	Fugitive emissions allowance %	Trade exposure allowance %	Z-factor allowance %	Carbon budget allowance %	Offsets allowance %	Maximum total allowances %
Ferroalloys production	0	70	0	10	5	5	5	95
Aluminium production	0	60	0	10	5	5	10	90
Magnesium production	0	60	0	10	5	5	10	90
Lead production	0	60	0	10	5	5	10	90
Zinc production	0	60	0	10	5	5	10	90
Non-energy use of fuels and solvent use	0	60		10	5	5	10	90
Electronics Industry	0	60		10	5	5	10	90
Product uses as substitutes for ozone depleting substances	0	60		10	5	5	10	90
Refrigeration and air conditioning	0	60	0	10	5	5	10	90
Foam blowing agents	0	60	0	10	5	5	10	90
Fire protection	0	60	0	10	5	5	10	90
Aerosols	0	60	0	10	5	5	10	90
Solvents	0	60	0	10	5	5	10	90
Other product manufacture and use	0	60	0	10	5	5	10	90
Electrical equipment	0	60	0	10	5	5	10	90
SF6 and PFCs from other product uses	0	60	0	10	5	5	10	90
N2O from product uses	0	60	0	10	5	5	10	90
<b>Agriculture, forestry and land use</b>								
<b>Livestock</b>								
Enteric fermentation	100	0	0	0	0	0	0	100
Manure	100	0	0	0	0	0	0	100

Sector	Basic tax-free allowance for fossil fuel combustion emissions %	Basic tax-free allowance for process emissions %	Fugitive emissions allowance %	Trade exposure allowance %	Z-factor allowance %	Carbon budget allowance %	Offsets allowance %	Maximum total allowances %
management								
Land								
Forest land	100	0	0	0	0	0	0	100
Cropland	100	0	0	0	0	0	0	100
Grassland	100	0	0	0	0	0	0	100
Wetlands	100	0	0	0	0	0	0	100
Settlements	100	0	0	0	0	0	0	100
Aggregate sources and non-CO <sub>2</sub>								
GHG emissions from biomass burning	100	0	0	0	0	0	0	100
Liming	100	0	0	0	0	0	0	100
Urea Application	100	0	0	0	0	0	0	100
Direct nitrous oxide emissions from managed soils	100	0	0	0	0	0	0	100
Indirect nitrous oxide emissions from managed soils	100	0	0	0	0	0	0	100
Indirect nitrous oxide emissions from manure management	100	0	0	0	0	0	0	100
Harvested wood products	100	0	0	0	0	0	0	100
Waste								
Solid waste disposal on land	100	0	0	0	0	0	0	100
Biological treatment of solid waste	100	0	0	0	0	0	0	100

Sector	Basic tax-free allowance for fossil fuel combustion emissions %	Basic tax-free allowance for process emissions %	Fugitive emissions allowance %	Trade exposure allowance %	Z-factor allowance %	Carbon budget allowance %	Offsets allowance %	Maximum total allowances %
Incineration and Open burning of waste	100	0	0	0	0	0	0	100
Wastewater treatment and discharge	100	0	0	0	0	0	0	100
<b>Additional Categories</b>								
Other**	60	0	0	10	10	5	10	95

\*\* This category covers any entity that perceives that it does not fall under any of the categories listed above.



**SCHEDULE 3***(Section 21)***GENERAL EXPLANATORY NOTE:**

[        ]            Words in bold type in square brackets indicate omissions from existing enactments.

\_\_\_\_\_            Words underlined with a solid line indicate insertions in existing enactments.

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**Amendment of section 1 of Act 91 of 1964, as amended by section 1 of Act 95 of 1965, section 1 of Act 57 of 1966, section 1 of Act 105 of 1969, section 1 of Act 98 of 1970, section 1 of Act 71 of 1975, section 1 of Act 112 of 1977, section 1 of Act 110 of 1979, sections 1 and 15 of Act 98 of 1980, section 1 of Act 89 of 1984, section 1 of Act 84 of 1987, section 32 of Act 60 of 1989, section 51 of Act 68 of 1989, section 1 of Act 59 of 1990, section 1 of Act 19 of 1994, section 34 of Act 34 of 1997, section 57 of Act 30 of 1998, section 46 of Act 53 of 1999, section 58 of Act 30 of 2000, section 60 of Act 59 of 2000, section 113 of Act 60 of 2001, section 131 of Act 45 of 2003, section 66 of Act 32 of 2004, section 85 of Act 31 of 2005, section 7 of Act 21 of 2006, section 10 of Act 9 of 2007, section 4 of Act 36 of 2007, section 22 of Act 61 of 2008 and section 1 of Act 32 of 2014**

1.        Section 1 of the Customs and Excise Act, 1964, is hereby amended by the insertion in subsection (1) after the definition of “bulk goods terminal operator” of the following definition:

**“Carbon Tax Act’ means an Act of Parliament that makes provision for a carbon tax;”**.

**Amendment of section 54A of Act 91 of 1964, as inserted by section 139 of Act 45 of 2003 and renumbered by section 32 of Act 16 of 2004**

2. The following section is hereby substituted for section Section 54A of the Customs and Excise Act, 1964:

**“Imposition of environmental levy**

**54A.** A levy known as the environmental levy shall be—

- (a) leviable on such imported goods and goods manufactured in the Republic as may be specified in any item of Part 3 of Schedule No.1; and
- (b) collected and paid in respect of carbon tax imposed in terms of the Carbon Tax Act.”.

**Insertion of section 54AA in Act 91 of 1964**

3. The following section is hereby inserted in the Customs and Excise Act, 1964, after section 54A:

**“Provisions relating to carbon tax**

**54AA.** (1) For the purposes of the administration and collection of carbon tax revenues as contemplated in section 54A—

- (a) (i) any reference to the Carbon Tax Act in this Act must be regarded as including the Tables and Schedules to that Act and any regulation made in terms of that Act;
- (ii) in this Act, unless the context indicates otherwise, a word or term to which a meaning has been assigned in the Carbon Tax Act has the meaning so assigned;
- (b) a ‘taxpayer’ as defined in section 1 of the Carbon Tax Act is not required to license premises as contemplated in section 54E of this Act, but must register as may be prescribed by rule;
- (c) the allowances and limitation of allowances prescribed in the Carbon Tax Act must be administered as rebates, refunds or drawbacks, as may be applicable, in terms of this Act; and

(d) any administrative actions, requirements and procedures for purposes of submission and verification of accounts, collection and payment of carbon tax as an environmental levy or the performance of any duty, power or obligation or the exercise of any right must, to the extent not prescribed in the Carbon Tax Act, be prescribed by the Commissioner by rule.”.