SUMMARY

DRAFT TRADE EXPOSURE AND GHG EMISSIONS INTENSITY BENCHMARK REGULATIONS

DECEMBER 2019

Following an extensive stakeholder consultation process on the carbon tax over a period of nine years, the President signed into law the Carbon Tax Act No. 15 of 2019 in May 2019 which came into effect on 1 June 2019. The carbon tax gives effect to the polluter pays principle and internalises the costs of greenhouse gas (ghg) emissions from energy combustion, fugitive and industrial processes. The Act gives effect to the design features of the carbon tax as outlined below including a special trade exposure allowance to address potential industry competitiveness concerns and a performance allowance:

- Basic tax free allowance of 60 per cent for all activities
- 10 per cent allowance for process emissions
- 10 per cent allowance for fugitive emissions
- **Up to a maximum allowance of 10 per cent for trade exposed activities**
- **A performance allowance up to a maximum of 5 per cent for activities that perform better than an agreed emissions intensity benchmark**
- 5 per cent tax free allowance for companies that participate in the carbon budget
- Carbon offset allowance of 5 to 10 per cent
- Maximum tax free allowance of up to 95 per cent for the first phase of the carbon tax up to 2022

DRAFT REGULATIONS FOR THE TRADE EXPOSURE ALLOWANCE IN TERMS OF SECTION 10 OF THE CARBON TAX ACT

Background

The 2013 Carbon Tax Policy paper proposed a trade exposure allowance determined at a company level based on a formula which took into account the value of imports and exports. Following stakeholder consultations on the 2015 and 2017 versions of the Draft Carbon Tax Bill, the design of the allowance was changed from a company to a sector-based trade exposure allowance. Stakeholders were of the view that a sector based allowance is more

equitable and simpler to administer than the initial company based approach. In collaboration with Business Unity South Africa (BUSA), the allowance was restructured from a company to a sector based allowance, based on an initial proposal from the National Treasury.

Section 10 of the Carbon Tax Act sets out the methodology for calculating the trade intensity of a sector which will be used to determine the level of the trade exposure allowance that a sector or subsector will qualify for as determined by the Minister of Finance by Regulation. The draft Trade Exposure Allowance Regulations sets out the qualifying sectors and subsectors and their respective trade exposure allowances, and defines an alternative approach to determine the allowance for taxpayers who of the view that the sector based allowance does not accurately reflect the level of the allowance that they should qualify for.

Methodological approach to determine the allowance

Trade intensity is used as a proxy for trade exposure and is determined at a sector or subsector level based on the World Customs Organisation - Harmonised System Convention (HS Code)[1] classification and available national data for the corresponding production per sector.

Trade data on imports and exports were extracted from either the South African Revenue Service (SARS) and Department of Trade and Industry (DTI) website.[2] The corresponding nominal three-year average production data were calculated using the Stats SA Mining and Manufacturing data at the SIC 3-digit code level. To ensure compatibility between the HS product data and the production data available at SIC 3 level, the HS data was converted to be aligned with SIC 3 data using the UN concordances. In instances where production data was not available, the closest proxy for production data that is, Gross Valued Added data as published by StatsSA, was used.

The trade intensity of a particular sector / subsector is based on the sum of the value of imports and exports divided by production of that sector or subsector, as outlined below. The trade intensity is calculated using the latest three-year average of the value of imports, exports and production for the sector or subsector.

Trade Intensity = (X+ M) / P

Where: X = Exports
               M = Imports
               P = Production

The tax-free allowance will be structured as graduated relief with sectors qualifying for the allowance depending on the magnitude of their deemed trade exposure. The trade exposure allowance is determined according to the trade intensity category and three categories of trade intensity are defined, that is low, medium and high where:

---

[1] World Customs Organisation: Harmonised System Convention
[2] http://www.sars.gov.za (SARS) http://www.thedti.gov.za (DTI)

Table 1 below summarises the different trade intensity categories and the level of trade exposure allowance which a sector or sub-sector may qualify for.

Table 1: Trade exposure allowance for each trade intensity category

Trade intensity category	Trade Exposure (TE)	Level of Allowance
Low	TE < 10 %	0.00 %
Medium	TE ≥ 10 % to < 30 %	Between 3 and 9.9 % (Trade exposure *(0.33))
	10 %	3.30
	15 %	4.95
	20 %	6.60
	25 %	8.25
High	TE ≥ 30 %	Maximum of 10.00 %

For the medium trade intensity category, trade intensity will be multiplied by 0.33 in order to determine the associated trade exposure allowance for sectors in this band. An intensity threshold of 30 per cent will ensure that sectors with a trade intensity of 30 per cent and more will automatically qualify for the full maximum 10 per cent allowance (high trade intensity). Those with a trade intensity of less than 30 but equal or greater than 10 per cent will receive a progressive allowance of between 3 and 9 per cent (medium trade intensity). Sectors with a trade intensity of less than 10 per cent will not qualify for the allowance (low trade intensity). The trade exposure allowance is capped at a maximum of 10 per cent for sectors with a trade intensity greater than 30 per cent.

Key features of the regulations

1. Section 2. Allowance in respect of trade exposure in respect of carbon tax liability (List of sectors and subsectors and level of allowances)

This section provides for a list of sectors and the level of the trade exposure allowance that each sector qualifies for as specified in Annexure A of the regulations. Annexure A provides a column of the SIC codes for each sector or subsector and the corresponding Intergovernmental Panel on Climate Change IPCC Code for the different sectors.

2. Section 3. Trade Exposure in relation to more than one sector

The carbon tax payable by a firm will be determined by a sum of the GHG emissions for each category, less the allowances for each emissions category (combustion, fugitive or industrial process). For companies with activities in different sectors with varying SIC code categories but within the same emissions category, and that potentially face different trade intensity risk levels simultaneously, a weighted average of the different tax-free allowance levels will be calculated.

The final level of the trade exposure allowance that the company is eligible for will be determined in line with the proportion of production of specific final goods to total production of the sectors under which the products are categorised. The weighted average is calculated by multiplying each trade exposure value in a set by its weight of sector production, then

adding up the products. The weighted average trade exposure allowance will be calculated according to the formula below:

WA TE (entity) = (TE sector A * Percentage P sector A) + (TE sector B * Percentage P sector B)

Where

WA TE = weighted average trade exposure allowance
TE sector A = percentage trade exposure allowance sector A
P sector A = sector A proportion of total production of the sector
TE Sector B = percentage trade exposure allowance sector B
P Sector B = sector B proportion of total production of a sector

The proportion of total production for relevant sectors is then calculated according to the formula below:

Percentage P sector = (P sector / Sum of P sectors) * 100

Where

P sector = total production of the sector
Sum of P sectors = sum of total production of sectors
The production data for each sector is obtained from the following StatsSA publications that can be found on the StatsSA website:
- Manufacturing: Production and Sales data
- Mining: Production and Sales data

The publications are in the format of excel spreadsheets. An illustrative example is provided below.

Box 2: Example of Weighted Average Trade Exposure Allowance Calculation

The emissions of company 1 C will be categorised as process emissions from the metal industry under the IPCC code 2C. Company 1C operates a metals factory and produces a range of products across the value chain including steel pipes, metal tanks and metal containers. The products fall into different SIC Code sector categories and therefore could potentially face different trade intensity risk levels and different trade exposure allowances but are within the same emissions category of process emissions.

Company 1C produces:

    i)   Steel Pipes (SIC Code 351)

    ii)   Metal Tanks (SIC Code 354)

    iii)   Metal Containers (SIC Code 355)

Products under SIC Code 351 qualify for a 10 per cent trade exposure allowance; products under SIC Code 354 qualify for a 7.53 per cent trade exposure allowance and those that fall in the SIC 335 category qualify for a 10 per cent trade exposure allowance.

Using Stats SA Production Data, the average production value for the Sectors for the period 2016-2018 are as follows:

- Steel Pipes (SIC Code 351) – R127 522 369 333

- Metal Tanks (SIC Code 354) – R33 963 445 333

- Metal Containers (SIC Code 355) – R74 179 823 333

Based on the total amount of production of R235 665 638 000 for the different product categories, the trade exposure allocation will be calculated as follows:

Weighted average trade exposure allowance =
(trade exposure allowance for SIC Code 351 * proportion of total production)
+
(trade exposure allowance for SIC Code 354 * proportion of total production)
+
(trade exposure allowance for SIC Code 355 * proportion of total production)

$TE_{weighted}$ = (10% * 54.11%) + (7.53%% * 14.41%) + (10%* 31.48%)

     = **9.64403%**

Company 1C has a weighted average trade exposure allowance of **9.64 per cent.**

3. Section 4. Alternative method for calculating trade exposure allowance

During consultations on the design of the trade exposure allowance, some stakeholders were of the view that for those taxpayers considered to be "borderline", an alternative qualitative approach should be considered for determining the level of allowance that the company will qualify for. Borderline could, for example, mean sectors with trade intensities ranging from 9 to 9.9 per cent, would not qualify for any allowance. Those with intensities in the region of 29 to 29.9 per cent, would qualify for a partial allowance rather than the full 10 per cent allowance.

Taking into account stakeholder comments, for companies considered to be borderline and on request from taxpayers, an alternative quantitative approach rather than qualitative approach (considered to be inherently subjective in nature) is proposed for calculating the level of the trade exposure allowance. This will be based on company specific data for the latest 3 years and the trade exposure allowance will be calculated using the calculation of trade intensity as defined in the Act. The level of the allowance will be determined using trade intensity classification categories and the respective allowances as per the sector based allowance.

This will be based on company specific data for the latest 3 years and the trade exposure allowance will be calculated according to the formula specified in the Carbon Tax Act and outlined below:

$$\text{Trade Intensity} = (X + M) / \text{Sales}$$

Where:
X = monetary value of Exports
M = monetary value of Imports
S = Sales

This would be similar to the initial trade exposure allowance design where the allowance would be determined at a company level using company level data for the above variables. The approach to determine the level of the trade exposure allowance for the company is specified in Section 3.4. Company sales would serve as a proxy for production. Company level data will be readily available and will provide a reasonably accurate estimation of the level of allowance that a company will qualify for.

4. Structure of Regulations

The draft Regulations for the trade exposure allowance is structured as follows:

Section 1 Definitions
Section 2 Allowance in respect of trade exposure in respect of the carbon tax liability
Section 3 Trade exposure in relation to more than one sector
Section 4 Alternative method for calculating the trade exposure allowance
Section 5 Short title and commencement

DRAFT REGULATIONS – EMISSIONS INTENSITY BENCHMARKS FOR THE PURPOSE OF SECTION 11 OF THE CARBON TAX ACT

Background

In addition to the basic tax free allowances, firms can also qualify for an incentive based performance allowance where companies that perform better than an agreed sector or sub-sector emissions intensity benchmark can qualify for up to a maximum 5 per cent tax-free allowance which can be used to reduce their respective tax liability.

Section 11 of the Carbon Tax Act, No. 15 of 2019 sets out the formula to be used by taxpayers to determine the level of allowance that they would qualify for. This takes into account the actual emission intensity of the firm for the tax period (B) relative to an approved emission intensity benchmark (factor A).

$$Z = (A/B – C) \times D$$

where:

Z is the percentage to be determined and must not be less than zero
A is the agreed measured and verified sector or sub-sector greenhouse gas emissions intensity benchmark (including both direct and indirect emissions) as prescribed by the Minister or zero if no value is prescribed
B is the measured and verified sector or sub-sector greenhouse gas emissions intensity benchmark (including both direct and indirect emissions) of a firm in the tax period
C is the number one; and
D is the number 100.

Section 19 (a) of the act provides for the development of regulations to specify emission intensity benchmarks, factor A, for sector or subsectors. This **Draft Regulations on the Greenhouse Gas Emission Intensity Benchmarks** outlines the emissions intensity benchmarks for sectors and subsectors

Emissions Intensity Benchmark for Carbon Tax Study (World Bank)

The Emissions Intensity Benchmarks for the South African Carbon Tax study of the National Treasury set out the methodological approaches that could be used to develop benchmarks for key sectors, outlined the key principles and criteria to guide the establishment of benchmarks, and specified possible benchmarks for key industrial processes and sectors taking into account the availability of data and international best practice.

This report considered the different benchmarks approaches as described below:

- **Product benchmarks** which are defined as emissions per unit of sector output and cover the majority of sector emissions such that the sector is treated in a uniform way.
- **Fall back approaches** means approaches that can be applied more generically across sectors and used when product benchmarking is not feasible. Fall back approaches make use of energy benchmarking (benchmarking the emissions

intensity of consumed energy) for emissions from the combustion of fuels. This includes:

- o Fuel benchmarks which is when emissions from the combustion of fuels in direct firing applications where no measurable heat is produced (e.g. furnaces and kilns) or the emissions that arise as a result of the fuel consumed, and can be derived for a single reference fuel or for an assumed fuel mix;
- o Heat benchmark which is the efficiency with which heat is produced and supplied for final consumption, where efficiency can be defined in terms of energy efficiency or emission intensity; and
- o Process emissions benchmark which is a fall back approach for process emissions that may not be covered by the product, fuel or heat benchmarks.

The study recommended the "one–product, one–benchmark principle" for the development of benchmarks. This approach is robust and less subjective as it does not differentiate benchmarks by technology, fuel mix, size, age, climatic circumstances or raw material quality, only by type of product.

To the extent that product benchmarks are not possible to develop, the above fall back approaches are recommended. The study however noted that there may be significantly high administrative and compliance costs associated with fall-back approaches.

Summary of benchmark proposals

Emissions intensity benchmark proposals were developed by industry associations for the

- liquid fuels
- gas and coal to liquid fuels
- mining
- cement
- iron and steel
- paper and pulp
- ferroalloys
- titanium slag
- chemicals (nitric acid)
- sugar
- clay brick

The main technical comments provided to sectors focused on:

- the appropriateness of the benchmark methodologies selected;
- description of the production process and emissions profile of a sector to determine the scope of the benchmark; and
- the need to assess the benchmarks against the criteria provided in the 2014 Emissions Intensity Benchmarks for the South African Carbon Tax study of the National Treasury.

Reports submitted by industry provided detailed descriptions of the sector production processes, emissions profile, benchmark methodology and values, and an assessment of the benchmark approaches adopted against the criteria specified in the National Treasury study.

The proposed benchmarks across the different sectors cover product benchmarks and fall-back alternative approaches adapted for local circumstances. Of the 14 benchmark proposals submitted, 7 were product benchmarks and the remaining half were based on fall back approaches. The main reasons for the use of fall-back approaches related to the technical configuration of plants, multiple products being produced, and ageing facilities where product benchmarks developed internationally may not be applicable.

The setting of benchmarks was mainly based on the average emissions performance of a sector ensuring alignment with the benchmark approach adopted in many developing countries. There were some proposals for the performance allowance of a company to be based on the weighted average of the performance allowance determined at a site / facility level and for company level benchmarks. This is noted, however the implementation of the allowance at a facility level would create significant practical and administrative challenges and company level benchmarks would undermine the policy intention of the performance allowance which is aimed at encouraging firms to reduce their overall intensity relative to their peers in a sector. For the first phase of the carbon tax, the proposed benchmark approach will provide an incentive on the margin for firms within sectors to lower their GHG intensity.

Structure of regulation

Section 1: Definitions

This section provides for definitions as per the Carbon Tax Act.

Section 2: Greenhouse gas emissions intensity benchmark

This section provides for the sector GHG emission intensity benchmark values as set out in Annexure A of the regulations to be used by taxpayers to calculate the performance allowance.

Section 3: Greenhouse gas emissions intensity determination

This section confirms the benchmark approach that must be used by taxpayers to determine their GHG emission intensity (factor B in the performance allowance formula) for a tax period.

Section 4: Short title and commencement

This section specifies the effective date for these regulations from 1 June 2019.