

# DRAFT CARBON TAX BILL 2017

Standing Committee on Finance

13 February 2018

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DDG: Tax and Financial Sector Policy

National Treasury



**national treasury**

Department:  
National Treasury  
REPUBLIC OF SOUTH AFRICA

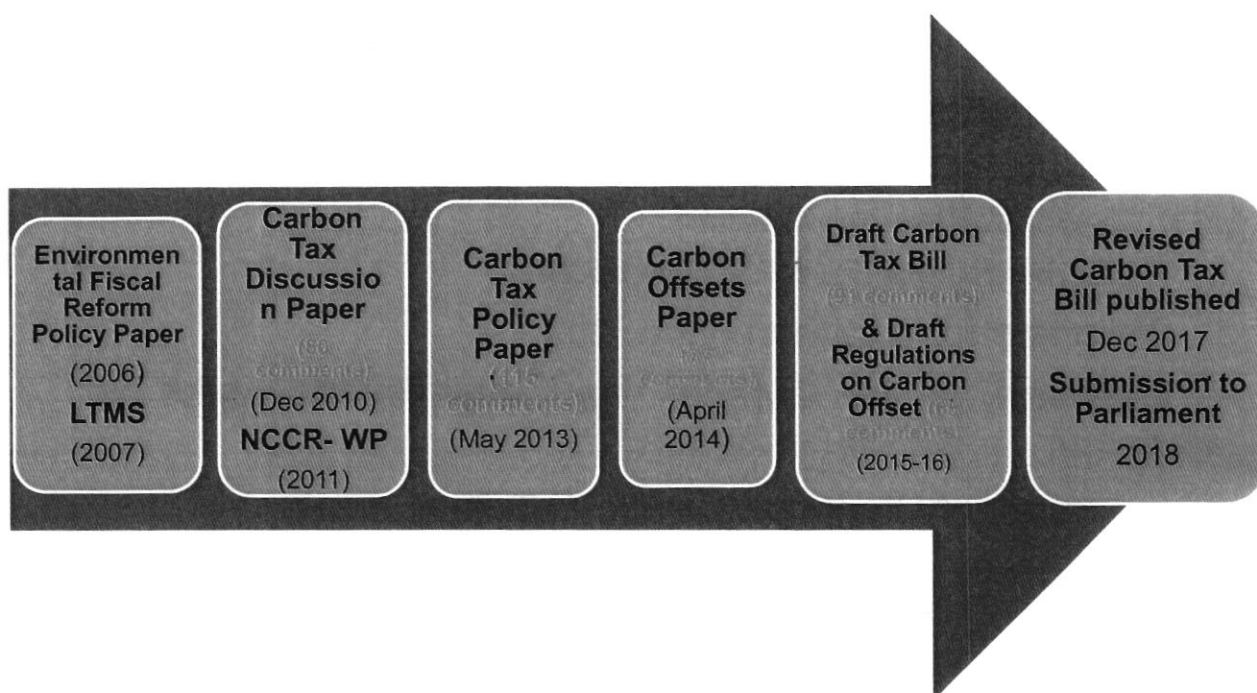
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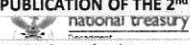
# Background

- A **Discussion Paper on the Carbon Tax** was approved by Cabinet and published for public comments in 2010. The paper was revised to take into account stakeholder comments and the Carbon Tax Policy Paper was published in May 2013.
- An **initial draft Carbon Tax bill was published for public comment in November 2015** following Cabinet approval in Oct 2015. There was extensive consultations on the draft bill during 2016.
- **Cabinet requested that the draft Carbon Tax Bill be re-submitted** to Cabinet for further consideration **after taking into account comments received** from the public consultation on the Bill.
  - 91 written comments were received from a broad range of stakeholders including industry associations, companies, state-owned entities, non-governmental organisations, organised labour, academia, individuals and consultants. Bilateral meetings and workshops were held with key sectors and industry associations in 2016.
- **Cabinet adopted the second Draft Carbon Tax Bill and approved the submission of the draft bill to Parliament on 16 August 2017** noting the carbon tax as an integral part of the system for implementing government policy on climate change.
- **National Treasury published the second Draft Carbon Tax Bill in December 2017** for public comment, introduction in Parliament, and convening of public hearings by Parliament in early 2018.

## Carbon Tax Policy Process - timeline



# Stakeholder Consultations

PUBLICATIONS AND CONSULTATIONS	DATE
PUBLICATION OF THE CARBON TAX DISCUSSION PAPER FOR PUBLIC COMMENT (2010): <i>Reducing Greenhouse Gas Emissions: The Carbon Tax Option</i>	13 December 2010
Carbon Tax Workshop (Midrand) - Stakeholders: Business, NGOs and Government Departments	16 March 2011
PUBLICATION OF THE CARBON TAX POLICY PAPER FOR PUBLIC COMMENT (2013): <i>Reducing Greenhouse Gas Emissions and Facilitating the Transition to a Green Economy</i>	2 May 2013
Carbon Tax Workshop: Cape Town - Business, NGOs & Labour (Numsa); Carbon Tax Workshop: Midrand - Business, NGOs, Labour (Numsa), Government Departments	1 November 2013 29 November 2013
PUBLICATION OF THE CARBON OFFSETS PAPER (2014)	22 May 2014
Carbon Offsets Workshop: Midrand - Business, NGOs, Government Departments	02 October 2014
PUBLICATION OF BENCHMARK REPORT Workshop: Midrand – Business, NGOs, Government Departments	08 May 2015
PUBLICATION OF THE 1 <sup>st</sup> DRAFT CARBON TAX BILL FOR PUBLIC COMMENT (2015)	15 November 2015
Bilateral Consultations on the 1 <sup>st</sup> Draft Carbon Tax Bill with industry	April & May 2016
PUBLICATION OF THE DRAFT REGULATION ON THE CARBON OFFSETS	20 June 2016
Carbon Offsets Workshop: National Treasury – Business, NGOs, Government Departments	25 November 2016
PUBLICATION OF CARBON TAX IMPACTS MODELLING STUDY Workshop: Midrand – Business, NGOs, Government Departments	10 November 2016
PUBLICATION OF THE 2 <sup>nd</sup> DRAFT CARBON TAX BILL FOR PUBLIC COMMENT (2017)	14 December 2017
 BUSA Consultation	2 February 2018

# Cabinet and Economic Cluster

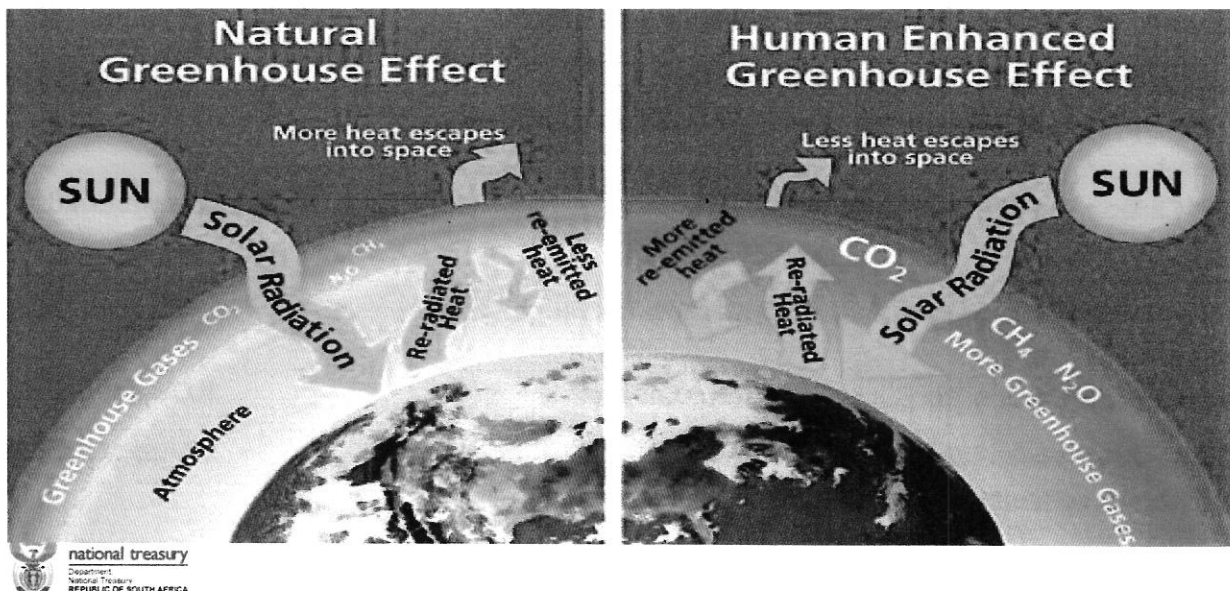
Economic Sector Cluster Consultations	Date
Carbon Tax Discussion Paper	6 October 2010
Carbon Tax Draft Policy Paper Presentation	12 October 2012
Carbon Tax Policy and Draft Carbon Tax Bill Presentation	17 June 2015
Draft Carbon Tax Bill - follow up discussion Cluster approve that the Draft Carbon Tax Bill be submitted to Cabinet	15 July 2015
Draft Carbon Tax Bill submitted to Cabinet	16 September 2015
Cabinet approves publication of Draft Carbon Tax Bill for public consultation	October 2015
Revised Draft Carbon Tax Bill submitted to Cabinet	10 August 2017
Cabinet approves publication of Revised Draft Carbon Tax Bill for stakeholder consultation and tabling in Parliament	16 August 2017

# Introduction and Policy Context

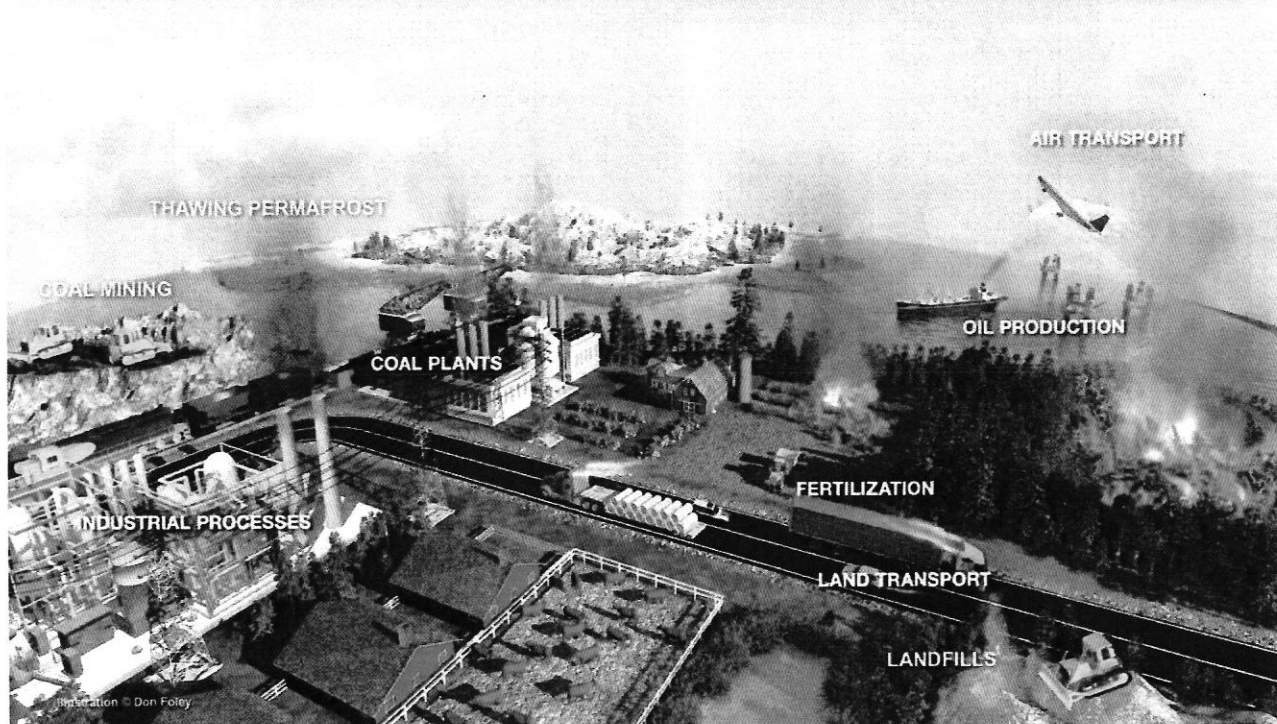
- South Africa voluntarily committed (at COP 15 in 2009) to curb GHG emissions by 34% by 2020 and 42% by 2025 below the BAU trajectory subject to support from developed countries - climate finance, capacity building & technology transfers.
- South Africa **ratified** the Paris Agreement in November 2016 and **endorsed** the submission of its Nationally Determined Contribution (NDC) which requires that **emissions peak in 2020 to 2025, plateau for a ten year period from 2025 to 2035 and declines from 2036 onwards.**
- **South Africa's emissions by 2025 and 2030 will be in a range between 398 and 614 Mt CO<sub>2</sub>-eq, as defined in national policy.**
- **Paris Agreement** will require sizable reductions in energy-related greenhouse gas (GHG) emissions by large emitting countries, including in developing economies. The NDC noted **carbon tax** as an important component of our **mitigation policy** strategy to lower GHG emissions.
- Carbon tax forms an integral part of **climate change** response policy package under the National Climate Change Response Policy (NCCRP) of 2011, and in **National Development Plan (NDP)** as an important cost-effective instrument
- **The Carbon Tax Bill gives effect to the polluter-pays-principle** and helps to ensure that firms and consumers take these costs into account in their **FUTURE** production, consumption and investment decisions. Assists in reducing GHG emissions and ensuring **SA will meet its NDC commitments as part of its ratification of the 2015 Paris Agreement.**

## What is climate change?

Climate change is defined as “a change which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural variability observed over compatible time periods” (UNFCCC, 1994)



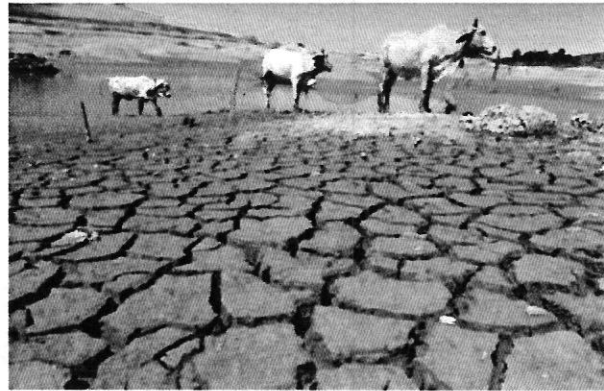
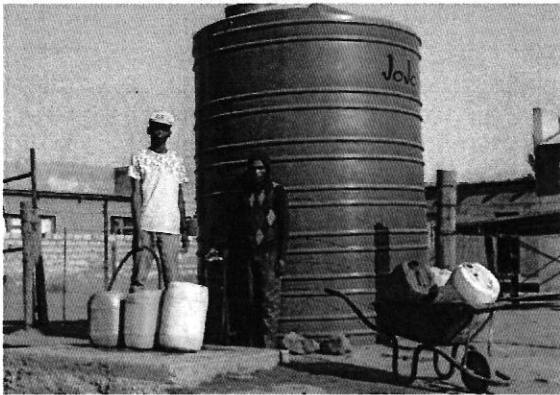
# An Inconvenient Sequel: Truth to Power (Al Gore, 2017): Main sources of Greenhouse Gases



## Climate change – Sobering Facts..

- **Research shows that global temperature increases of 4° — termed "business as usual" by climate scientists, corresponding to current rates of emissions — will lock in almost nine metres of global sea level rise by melting glaciers, ice caps, and polar ice sheets. The expansion of seawater as it warms will compound these effects.**
- **There is consensus in the scientific community that GHGs such as carbon dioxide is responsible for these shifts (IPCC Fifth Assessment report 2014).**
- **The last three years were the hottest on record**, the United Nations weather agency says, citing new global data underscoring the dramatic warming of the planet.
  - Of the 17 hottest years on record globally, 16 have now occurred since 2000...
  - Consolidated data from five leading international weather agencies shows that **"2015, 2016 and 2017 have been confirmed as the three warmest years on record"**, the World Meteorological Organisation (WMO) said.
- **Impacts of this rapid warming range from triggering long-term drought** in places accustomed to higher rainfall (Cape Town, for instance) to threatening mass extinctions, with up to a sixth of all species alive today at risk.

# South Africa's climate reality.....



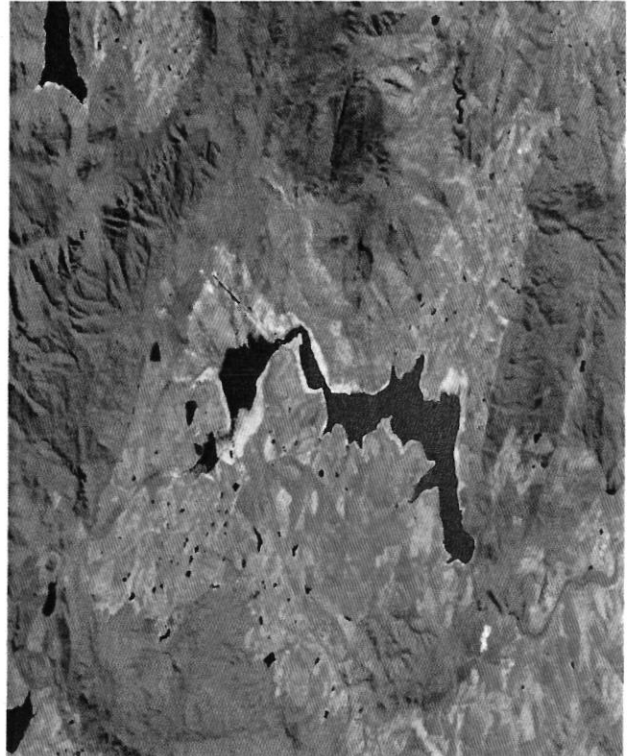
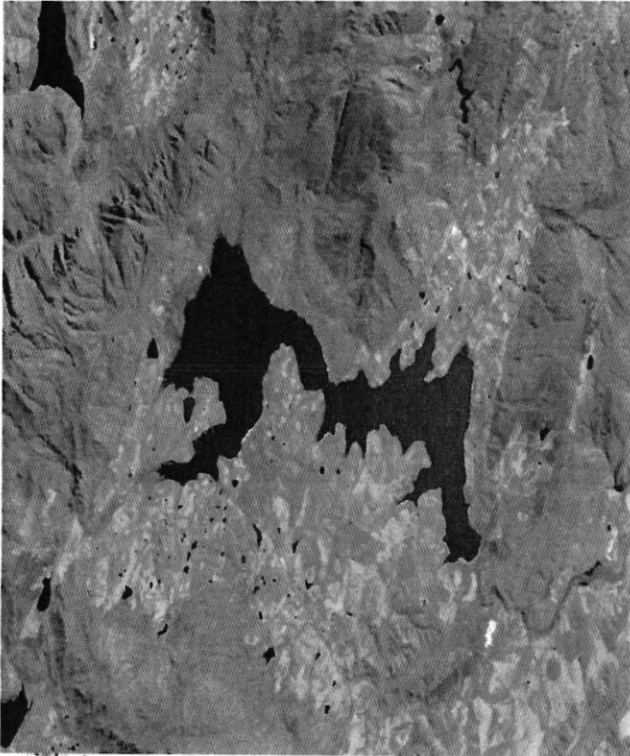
*Clockwise: Limpopo - Elandskraal village (picture by Mpuemelelo Buthelezi); Eastern Cape - KwaDukathole (Image credit: Dispatch Live); Eastern Cape - Ezibeleni township residents (picture by Tembile Sgqolana).*

## Cape Town - Theewaterskloof

- South Africa's Western Cape province has been suffering a drought since 2015, when it received about 60 per cent of its normal rainfall.
- Rain amounts continued to plummet in the two subsequent years.
- These images show **Theewaterskloof**, the province's largest reservoir, **at full capacity in October 2014** and **at 27 per cent of capacity in October 2017**.
- Exposed sediment around the edge of the basin in the later image shows where the water level has declined.

**Source:** <https://climate.nasa.gov/images-of-change?id=629#629-drought-shrinks-theewaterskloof-reservoir-in-south-africa>

# The waterkloof (Oct 2014: Oct 2017, NASA)



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The World Economic Forum says climate change is the number one threat to the global economy – help to answer the question: must we change? YES - Al Gore



Photo © and courtesy Azuri Technologies

Nirhule, South Sudan

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# IEA: Estimated GHG { CO<sub>2</sub>e } emissions: Sectoral Approach – Fuel combustion only

Mt of CO <sub>2</sub> : CO <sub>2</sub> Sectoral Approach					
	Country	2010		2008	
B	People's Republic of China	23.84%	1	22.07%	1
	United States	17.73%	2	18.95%	2
B	India	5.37%	3	4.88%	4
B	Russian Federation	5.22%	4	5.40%	3
	Japan	3.78%	5	3.91%	5
	Germany	2.52%	6	2.71%	6
	South Korea	1.86%	7	1.70%	9
	Canada	1.77%	8	1.87%	7
	Islamic Republic of Iran	1.68%	9	1.69%	10
	United Kingdom	1.60%	10	1.74%	8
	Saudi Arabia	1.47%	11	1.31%	13
	Mexico	1.38%	12	1.37%	12
	Indonesia	1.36%	13	1.24%	17
	Italy	1.32%	14	1.48%	11
B	Brazil	1.28%	15	1.23%	18
	Australia	1.27%	16	1.31%	14
	France	1.18%	17	1.26%	16
B	South Africa	1.15%	18	1.31%	15
	Poland	1.01%	19	1.01%	21
	Chinese Taipei	0.89%	20	0.89%	22
	Spain	0.89%	21	1.08%	19
	Ukraine	0.88%	22	1.05%	20
	Turkey	0.88%	23	0.89%	23

## GHG Inventory, 2010 – Estimates, DEA

2010: GHG Inventory (Estimates) -- Categories	Emissions - CO <sub>2</sub> Eq (Gg)	Emissions - CO <sub>2</sub> Eq (Gg)	Total Emissions - CO <sub>2</sub> Eq (Gg)	Percentage Contribution
<b>1 - Energy</b>			428 368	82.66%
<b>A - Fuel Combustion Activities</b>			402 817	77.73%
1.A.1.A - Electricity		236 798		45.69%
1.A.1.B - Petroleum Refining		2 284		0.44%
1.A.1.C - Manufacture of Liquid Fuels (Synfuel )		28 611		5.52%
1.A.2 - Manufacturing Industries and Construction		41 117		7.93%
1.A.3 - Transport		47 607		
Civil Aviation	3 670			
Road Transport	43 440			8.38%
Rail Transport	497			
1.A.4 - Other Sectors		44 684		8.62%
<b>B - Fugitive emissions</b>			25 551	4.93%
<b>2 - Industrial Processes and Product Use</b>			44 351	8.56%
<b>2.A - Mineral Industry</b>		4 793		
Cement production	4 187			
Lime production	502			
Glass Production	104			
<b>2.B - Chemical Industry</b>		1 011		
<b>2.C - Metal Industry</b>		37 513		
Iron and Steel Production	24 147			
Ferroalloys Production	11 809			
Aluminium production	1 468			
<b>3 - Agriculture, Forestry, and Other Land Use</b>			19 806	3.82%
<b>4 - Waste</b>			8 153	1.55%
<b>Total National Emissions and Removals</b>			515 278	100.00%
<b>International Bunkers</b>			2 572	0.50%

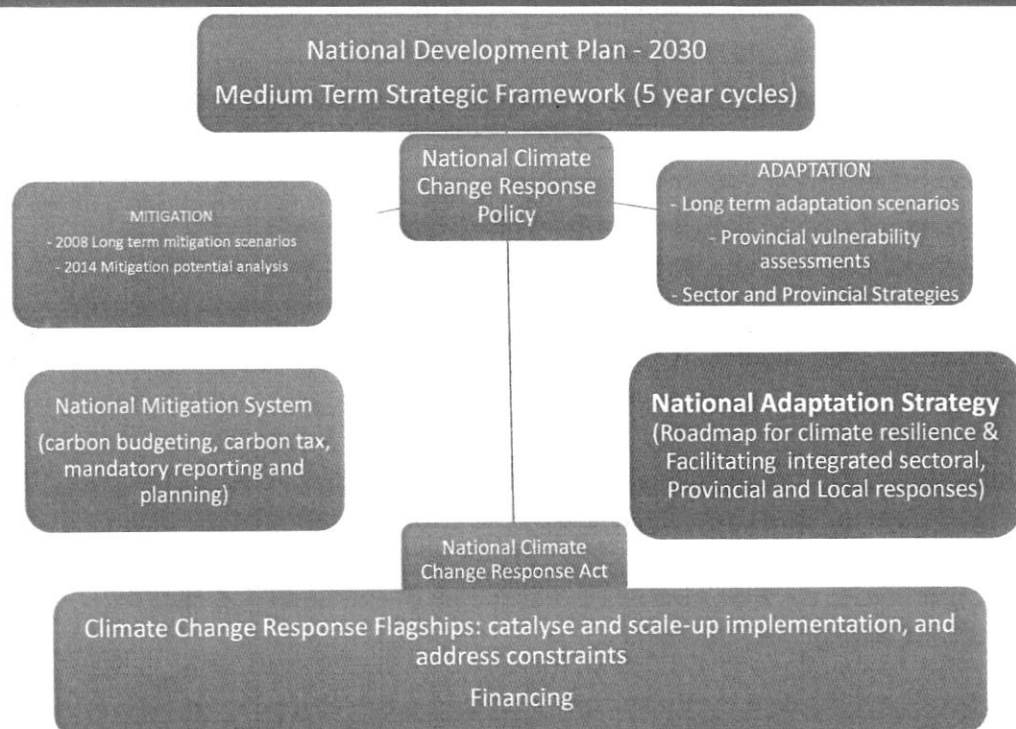
# South Africa's National Climate Change Response White Paper, 2011

- South Africa's response to climate change has two objectives:
  - Effectively manage inevitable climate change impacts through interventions that build and sustain South Africa's social, economic and environmental resilience and emergency response capacity.
  - Make a fair contribution to the global effort to stabilise greenhouse gas (GHG) concentrations in the atmosphere at the 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.
- One of the elements in the **overall approach to mitigation is: 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 possible use of emissions offset or emission reduction trading mechanisms ...

## National Development Plan 2011: on Climate Change

- “Emissions of carbon dioxide and other greenhouse gases are changing the earth's climate, potentially imposing a significant global cost that will fall disproportionately on the poor (p.35)”.
- “.... South Africa can manage the transition to a low-carbon economy at a pace consistent with government's public pledges, without harming jobs or competitiveness (p.51)”.
- **“By 2015 ... carbon-pricing mechanisms have been put in place (with appropriate exemptions). These are supported by a wider suite of mitigation policy instruments that target specific mitigation opportunities (p.214)”.**
- “.... reduce carbon emissions from the electricity industry from 0.9kg per kilowatt-hour to 0.6kg per kilowatt-hour”.

# South Africa's Climate Change Response Governance Framework - (DEA 2017)



## National Treasury Environmental Fiscal Reform Policy Paper (2010): Design considerations for environmentally related taxes

- **Environmental effectiveness** – linked to the **environmental externality** and aim for best design possible;
- **Tax rate & revenue** – **tax rate to be phased-in**, revenue use in terms of government priorities;
- **Competitiveness impacts** – may require phase in approach to allow adequate time for adjustments;
- **Distributional impacts** – compensating measures may need to be considered; and
- **Adjoining policy areas** – is the instrument capable of contributing to other social and economic objectives?
- **Support for the tax** – public support and acceptance is important (e.g. **tax payer morality**);
- **Legal, technical & administrative feasibility:**
  - *Define taxable commodity - tax base; or nature of incentive;*
  - *Setting the tax rate;*
  - *Tax avoidance and evasion;*
  - *Collection costs; and*
  - *Compliance costs.*

# Rationale for a carbon tax / price

- A **carbon tax** is a **means** by which government can intervene by way of a market based instrument **to appropriately take into account the social costs resulting from carbon emissions**.
- A **carbon tax seeks to level the playing field** between carbon intensive (fossil fuel based firms) and low carbon emitting sectors (renewable energy and energy efficient technologies).
- Although this option does not set a fixed quantitative limit to carbon emission over the short term, a carbon tax at an appropriate level and phased in over time to the “correct level” will provide a strong price signal to both producers and consumers to change their behaviour over the medium to long term.
  - “A carbon tax guarantees a maximum cost per unit of pollution in the sectors covered by it. **If a carbon tax underperforms environmentally...the tax can be raised or designed in a way that it will rise automatically in response to emission trends**” (Report of High Level Commission on Carbon Prices, 2017)
- “The introduction of a carbon price will change the relative prices of goods and services, making emission-intensive goods more expensive relative to those that are less emissions intensive. This provides a powerful incentive for consumers and businesses to adjust their behaviour, resulting in a reduction of emissions”.<sup>21</sup>

## Report of High Level Commission on Carbon Prices 2017 (Carbon Pricing Leadership Coalition – World Bank)

- At COP 22 in Morocco in 2016, **Joseph Stiglitz, Nobel Laureate in Economics and Lord Nicolas Stern** agreed to **chair a new High Level Commission on Carbon Pricing**.
- The commission was tasked with identifying and investigating the design of appropriate carbon pricing policies to incentivise climate action and help with delivering on the ambition and goals of the Paris Agreement.
- **Key messages:**
  - **Tackling climate change is an urgent and fundamental challenge. Achieving the Paris Agreement goals** to limit warming to **below 2°C** above pre-industrial levels, and pursue efforts to limit temperature increase to 1,5°C **requires large scale transformation in the structure of economic activity**.....including major changes in economic activity especially power generation, industrial processes, transport and public transportation systems, space heating and cooling systems, land use and behaviour of households. **To succeed...to deliver efficiently and fully realise the benefits of climate policies, care policy design is essential. Climate policies, if well designed and implemented, are consistent with growth, development and poverty reduction.**

## Report of High Level Commission on Carbon Prices 2017 (Carbon Pricing Leadership Coalition – World Bank): Key Messages

- A well designed carbon price is an indispensable part of a strategy for reducing emissions in an efficient way. Carbon prices are intended to incentivize the changes needed in investment, production, and consumption patterns, and to induce the kind of technological progress that can bring down future abatement costs. **Greenhouse gas (GHG) emissions can be priced explicitly through a carbon tax or a cap-and-trade system.** As carbon pricing measures take time to develop, **countries should begin doing so immediately.** Governments can enhance the effectiveness of carbon pricing by establishing an enabling environment, building technical and institutional capacity, and establishing an appropriate regulatory framework.
- Commission concludes that the explicit carbon-price level consistent with achieving the Paris temperature target is at least US\$40–80/tCO<sub>2</sub> by 2020 and US\$50–100/tCO<sub>2</sub> by 2030, provided a supportive policy environment is in place. **A carbon price could have important co-benefits – improvements in air pollution and congestion, health of ecosystems, access to modern energy.** Effectiveness of carbon pricing policies will require that future paths and policies be clear and credible. It will be **important to monitor and regularly review the evolution of emissions**, technological costs, and the pace of technological change and diffusion **so that carbon prices can be adjusted**, particularly upward, if actual prices fail to trigger the required changes.

## International Developments (Source: World Bank States and Trends in Carbon Pricing)

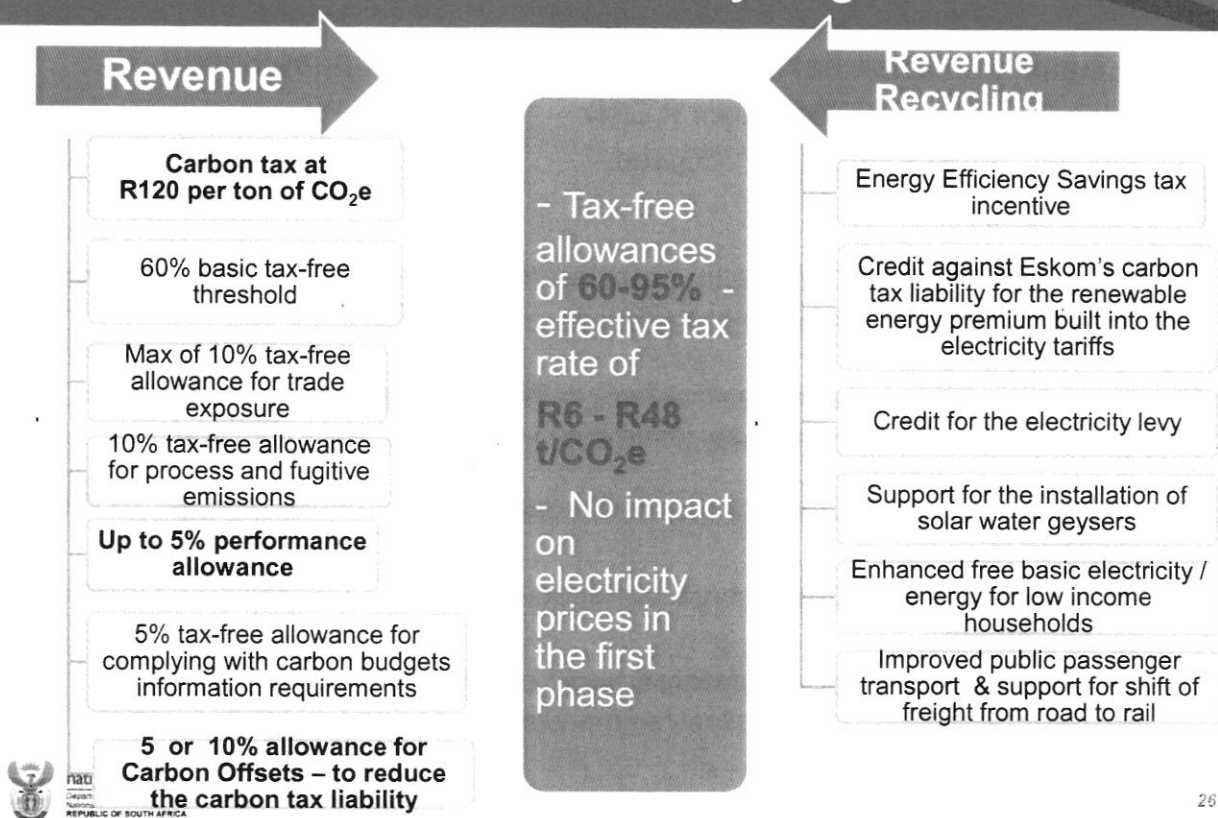
- **China** has introduced seven regional carbon trading pilot schemes.
  - Each pilot covers a large city that is, Beijing, Tianjin, Shanghai, Chongqing and Shenzhen or a province namely, Guangdong, and Hubei.
  - Building on these pilots, **China implemented a national ETS for the power generation sector in Dec 2017.** Phased approach to introducing the scheme – to be expanded to cover other sectors at a later stage.
- A carbon tax was introduced in **Mexico** in 2014 and applies to fossil fuels.
  - It also allows for the use of offsets in the payment (only CDM).
  - The tax rate applied is set at about US\$ 3.5 / tCO<sub>2e</sub> and natural gas is exempted from the carbon tax.
- **India** implements a coal tax effective from 2010, currently US\$ 6/ton coal.
- Implementation of carbon tax in **Chile** at the rate of US\$5 from 2017.
- In 2008, the **Canadian Province of British Columbia** launched its carbon tax at a rate of Can\$10 per tonne of CO<sub>2</sub>. The national government proposed a national carbon tax for those provinces that have not implemented a carbon price in line with specific national criteria (eg. A minimum carbon price).
- **Colombia** implemented a carbon tax in 2017 on transport fuels.
- **Brazil** exploring a carbon price, **Ivory Coast and Morocco** also exploring a carbon tax, **Singapore** is scheduled to implement a carbon tax in 2019.

# Carbon tax policy framework for SA

- **What are we saying?**
  - Emissions above a certain level will be taxed
- **Who will be taxed?**
  - **Electricity generation and fuel combustion**
  - **Industrial processes**
  - **Fugitive emissions**
  - Scope 1, stationary emissions
  - Scope 1, non-stationary – as an add on to the fuel tax
- **Marginal tax rate**
  - R120/tonCO<sub>2e</sub>, effective rate taking into account allowances ranges from R6 to R48
- **Recycling measures**
  - Adjustments to other taxes and providing tax incentives
  - If revenues left over, on budget support for pro poor programmes in energy, transport sectors
- **Phased approach to the introduction of the tax, starting off at a relatively modest rate initially, coupled with generous tax free allowances, and adjusted over time to facilitate a structural transition to a low carbon, climate resilient economy in a cost effective manner..**



## SOUTH AFRICA'S CARBON TAX DESIGN FEATURES: Rate, Tax-free Allowances and Recycling Measures



# Tax-free allowances

	GHG Emissions			
	Combustion	Process	Fugitive	
<b><u>Tax free allowances</u></b>				
Basic	60	60	60	
Process emissions	n/a	10	n/a	
Fugitive emissions	n/a	n/a	10	
Trade exposed	10	10	10	Max = 10
Performance based (Z - factor)	5	5	5	Max = 5
Carbon budget	5	5	5	
Offsets	10	5	5	
<b>Total</b>	<b>90</b>	<b>95</b>	<b>95</b>	

Combustion emissions have a lower overall tax-free threshold due to the fuel switch options available.

# Carbon offsetting under the carbon tax

- In 1<sup>st</sup> phase, permitted carbon credits should be developed under:
  - Clean Development Mechanism (CDM);
  - Verified Carbon Standard (VCS); and
  - Gold Standard (GS).
- Allowance for potential domestic standard to cover project types not well catered for under international standards e.g. AFOLU.
- Specific **eligibility criteria for carbon offset projects** for effective implementation of the offset mechanism in South Africa includes:
  - Project activities must occur **outside the scope of activities subject to the carbon tax**.
  - **Only South African based credits** will be eligible for use within the carbon offset scheme.
  - **Carbon offset projects registered and / or implemented before the introduction of the carbon tax** regime will be accepted subject to certain conditions.

# Revenue Recycling Measures and Phasing in of the Carbon Tax

- **The proposed design of the carbon tax will minimise potential adverse impacts on low-income households and industry competitiveness.**
  - Most of the revenue collected from the carbon tax will be recycled to fund measures to help with transition to a lower carbon economy.
  - The effective recycling of revenues to be collected could mitigate any possible short-term negative impacts on the economy and jobs.
- **The first phase for the carbon tax will be for a period of 4 – 5 years** from the implementation date of the tax. Any significant increases beyond the initial phase will be subject to stakeholder consultation, Parliamentary oversight and approval.
- **The implementation date of the carbon tax will be determined separately by the Minister of Finance in either the 2018 or 2019 Budget.**

## Energy sector & carbon pricing

- **Pricing energy appropriately is important** to ensure that the **external costs of climate change and other environmental damages are reflected in the price of energy** and that the relative prices between carbon intensive and low carbon technologies are correctly reflected.
- **Electricity pricing:** A carbon price / tax will influence future investment decisions and reduce the price-cost differentials between fossil fuel-based electricity and renewable energy.
- **We still have along way to go in fully internalising the negative externalities of GHG emissions. Reducing GHG emissions from electricity will also result in reduced emissions of sulphur dioxide which is harmful to society.**
- **Fuel taxation:**
  - The current regulatory framework for determining the prices of liquid fuels (petrol, diesel, paraffin and gas) does not allow for a pass-through – either in full or in part – of the carbon tax imposed at refinery level. The electricity sector is however able to pass on the carbon tax to final consumers.
  - **Some consideration to be given to the pass through mechanism of the carbon tax in the case of the liquid fuel sector** to ensure that appropriate incentives are maintained for changes in both production and consumption patterns.

## Energy Efficiency Savings Tax Incentive

- The energy-efficiency savings tax incentive (EESTI) was introduced in November 2013 to complement the proposed carbon tax. The EESTI will run until January 2020. Some of the carbon tax revenue will be recycled through the EESTI.
  - **The EESTI allows businesses to claim deductions against their taxable income for energy-efficiency saving measures** – measured in kWh equivalent.
  - **The rate at which the deduction is calculated was increased in 2015 from 45c/ kWh to 95 c/kWh.**
- As at end of 2016 about **5 934 MWh** of potential energy savings was lodged from about 74 registered projects and more than 100 users are registered in the system. Some of the projects come from the most energy intensive users are large in the size of potential energy savings.

## Carbon Tax Modelling Results

- Under the World Bank Partnership for Market Readiness Project, a carbon tax modelling study was completed and the report was published in 2016.
- The results of the carbon tax modelling shows that the carbon tax will have a significant impact in reducing the country's emissions, and that these emissions reductions could be delivered while realising sustained growth in the economy.
- The results of the simulations show that the tax would lead to an **estimated decrease in emissions of 13 to 14.5 per cent by 2025 and 26–33 per cent by 2035** compared with business-as-usual.
- The tax is expected to lead to a marginal reduction in the annual average growth rate of the economy of just **0.05–0.15 percentage points compared to business as usual.**

# The modelling considers a range of scenarios

- We identify one combination as the 'focus' scenario, but all sensitivities are explored

- **Tax scenarios**

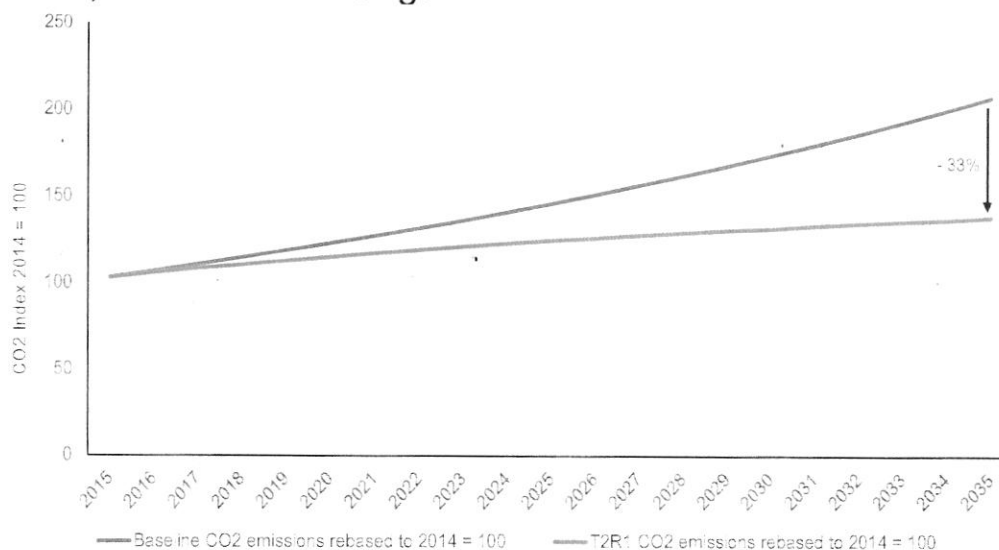
- T1: tax rate increasing by 10 percent per annum over the period 2016–21, and thereafter by the assumed inflation rate (5.5 percent); tax-free thresholds are held constant for the duration of the modeling period 2016–35. Ag and waste exempt
- T2: as T1, but the tax-free allowances are gradually removed at a rate of 10 percentage points per annum from 2021. Ag and waste exempt
- T3: as T1, except for the agricultural sector where the exemption is removed at a rate of 10 percentage points per annum from 2026
- T4: T2+T3, ie tax-free allowances are gradually removed at a rate of 10 percentage points per annum, starting in 2021, for all industries except agriculture, for which phasing out begins in 2026

### Revenue recycling scenarios (all revenues recycled)

- R1: Recycling of tax revenues is applied through an output-based rebate on all production across all sectors
- R2: tax revenue is recycled through a decrease in the VAT rate on all the goods that make up household spending
- R3: a combination of R1 and R2 (split 50:50)
- R4: subsidy on the production of renewable electricity generators (for modeling purposes, directed towards solar PV)
- R5: The tax revenue is used to decrease the VAT rate on agricultural goods, food, transport services, and beverages and tobacco

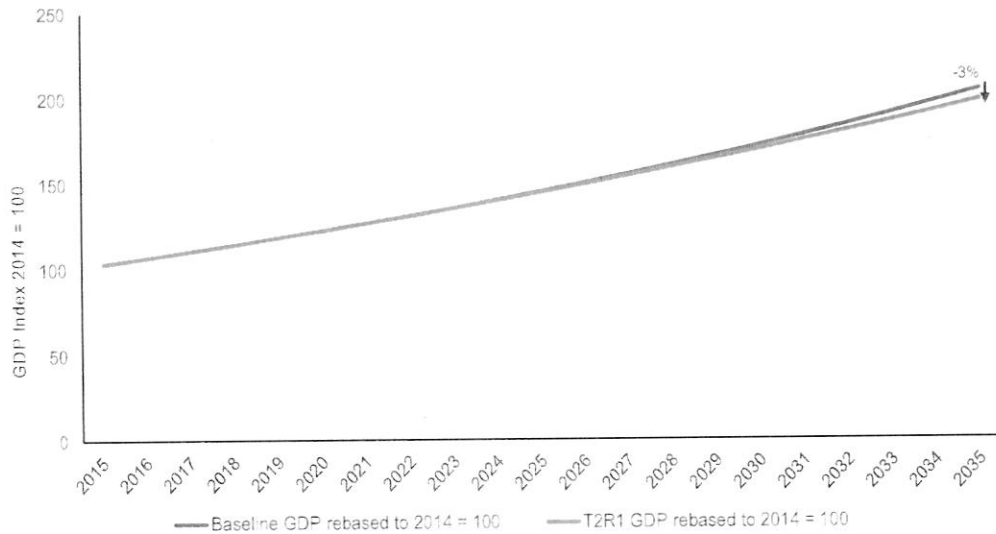
# In the focus scenario, emissions in 2035 are expected to be 33 per cent lower than in the baseline

- The carbon tax can make an important contribution to meeting South Africa's NDC but would not be sufficient by itself, under these settings

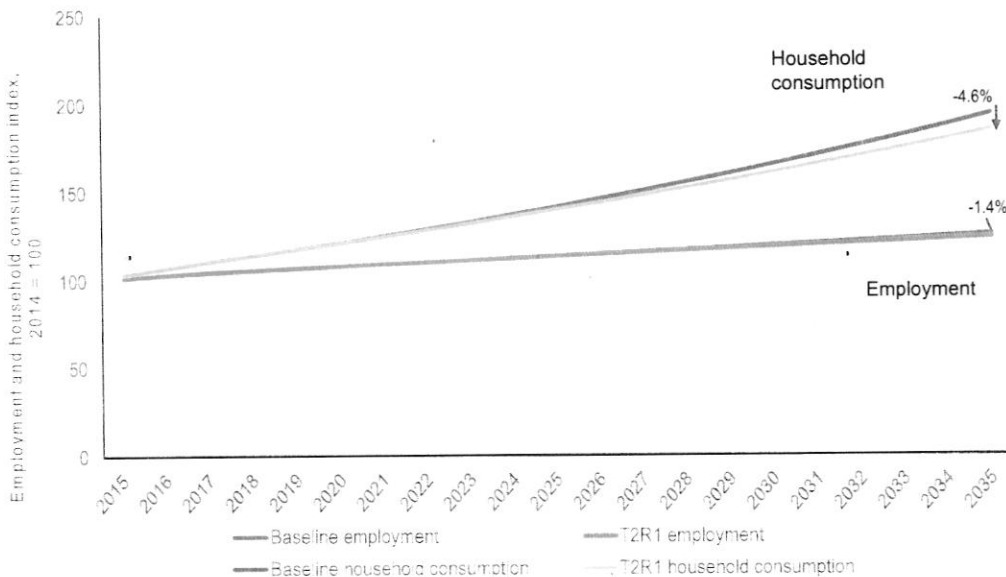


# In the context of the expected growth of the economy, the impact of the tax on GDP is small

- The average annual growth rate of the economy is expected to be 0.15 percentage points lower, leading to GDP in 2035 being 3 per cent lower than in the baseline



# Other macroeconomic aggregates are also only modestly affected



# 2015 Draft Carbon Tax Bill: Main Comments

1. **Electricity pricing and electricity levy**
2. **Tax rates and thresholds – request for certainty for phase 1 and 2 of the carbon tax**
3. **Alignment of the carbon tax policy with the carbon budgeting system of the DEA**
4. **Carbon tax modelling results and the socio-economic impact of the carbon tax**
5. **International competitiveness impacts**
6. **Timing and long-term policy certainty**
7. **GHG Reporting framework and tax administration**

## Responses to comments on 2015 Draft Bill

1. **Electricity pricing and electricity levy:** Carbon tax (taken with electricity levy) will be revenue neutral in the first phase and have no impact on the price of electricity.
  - **credit for electricity generation levy** and for **renewable energy premium** – to the extent that we can reach agreement on the size of this premium.
  - In addition business already benefits from **energy efficiency savings tax incentive**
2. **Tax rates and thresholds** for phase 1 and 2 of the carbon tax: **Section 5 of the bill has been amended to** include the headline, marginal tax rate of R120/tCO<sub>2e</sub>; and specifies the annual increase to the nominal carbon tax rate by a max of inflation plus 2 per cent.
3. **Alignment of the carbon tax policy with the carbon budgeting system of the DEA:** DEA and NT working on **alignment and integration of the carbon tax and carbon budget** instruments for phase 2, and no double penalty.
  - **An integrated review process to assess both instruments will be conducted after implementation of the carbon tax (2021/2022 financial year).**
4. **Carbon tax modelling results** and the socio-economic impact of the carbon tax shows a significant impact in reducing the country's emissions - simulations show that the tax would lead to an **estimated decrease in emissions of 13 to 14.5 per cent by 2025 and 26–33 per cent by 2035** compared with business-as-usual -, without a significant impact on growth (negative of only 0.05-0.15%).
5. **International competitiveness impacts:** Design of trade exposure allowance has been **adjusted from a company to a sector-based trade exposure allowance, and mining and iron and steel will qualify for full 10% allowance.**

## Summary and next steps

- **Policy development and public consultation** with regard to a carbon price / carbon tax in South Africa commenced in 2010
- The Climate Change Response White Paper in 2011 provided the broader policy context for a carbon price / tax as one a suite of measures to address the challenge of climate change and the transition to a low-carbon economy
- The **design of the carbon tax** tries to **address concerns about the impact of higher energy prices on low income households and on the international competitiveness** of South Africa firms (especially the mining & manufacturing sectors).
- The **phased approach to the tax** will provide the flexibility and timeframe for the transition that will be needed.
- **Cabinet adopted the Carbon Tax Bill in August 2017** for introduction in parliament during 2018. The **Draft Carbon Tax bill was published** on the National Treasury website on **14<sup>th</sup> December 2017 for public comments** until 9 March 2018.
- **Implementation date of the carbon tax** will be announced by the Minister of Finance in 2018 or 2019 Budget.

**THANK YOU.**

# Electricity generation levy

- The levy implemented on 1 July 2009 on the production / generation of electricity from non-renewables including coal, petroleum-based fuels, natural gas and nuclear. The objectives were:
  - Complement demand side management efforts
  - As a first step towards developing a carbon tax to achieve long term climate change objectives
- Electricity generated from renewables and qualifying cogeneration are excluded from the levy
- Some revenues from the electricity levy are also used to fund energy savings measures such as the SWH, previously included in the electricity tariff, and the rehabilitation of some of the roads that were damaged due to the large volumes of coal trucks in one of the Provinces.
- **To ensure the effective pricing of carbon and to facilitate the structural change** currently taking place in the **energy sector**, a credit for the electricity generation levy will be provided in the first phase and possible **phasing-down and restructuring of the current electricity levy could be considered**

# Impact on electricity and fuel prices

- The electricity price will increase by an estimated 1 cents / kWh for every R10 per ton carbon tax
- Taking into account all the tax free allowances and before the phasing down of the electricity levy and tax incentives the impact of the carbon tax on electricity prices should be between 2.5 to 5.0%
- However, taking into account all the tax free allowances for the period up to 2020, the energy efficiency savings tax incentive and the phasing down of the electricity levy the net impact of the carbon tax on electricity prices during this period should be close to zero.
- Petrol and diesel prices will increase by an estimated 2.5 cents / litre for every R10 per ton carbon tax. This amounts to only 1% of the fuel prices if we assume a minimum 60% tax free allowance.
- So the initial impact of the carbon tax will be modest – it will lay the basis and send a signal to encourage investments in green technologies and production techniques.

# Impact on electricity prices

	2016/17					Standard Average Electricity Price (c/kWh) (MYDP 3 +)	Carbon Tax as % of Price	Carbon Tax as % of Price
1 Headline carbon tax rate per ton of CO2: Rand	120		Average			87.56	80% TFA	60%
2 Tax free allowance / threshold	60%	70%	80%	90%	95%			
3 Taxable emissions	40%	30%	20%	10%	5%			
4 Effective tax rate per ton of CO2 : Rand	48	36	24	12	6			
5 cents per kWh - Total	5.02	3.77	2.51	1.26	0.63	2.51	90.07	2.8%
6 cents per kWh for every R10 pre ton CO2	1.05	1.05	1.05	1.05	1.05		92.58	5.4%
							94.56	
1 Headline carbon tax rate per ton of CO2: Rand	132							
2 Tax free allowance / threshold	60%	70%	80%	90%	95%			
3 Taxable emissions	40%	30%	20%	10%	5%			
4 Effective tax rate per ton of CO2 : Rand	52.8	39.6	26.4	13.2	6.6			
5 cents per kWh - Total	5.52	4.14	2.76	1.38	0.69	2.76	97.32	2.8%
6 cents per kWh for every R10 pre ton CO2	1.05	1.05	1.05	1.05	1.05		100.09	5.5%
	0.50	0.38	0.25	0.13	0.06			
							102.13	
1 Headline carbon tax rate per ton of CO2: Rand	145.2							
2 Tax free allowance / threshold	60%	70%	80%	90%	95%			
3 Taxable emissions	40%	30%	20%	10%	5%			
4 Effective tax rate per ton of CO2 : Rand	58.08	43.56	29.04	14.52	7.26			
5 cents per kWh - Total	6.07	4.56	3.04	1.52	0.76	3.04	105.16	2.9%
6 cents per kWh for every R10 pre ton CO2	1.05	1.05	1.05	1.05	1.05		108.20	5.6%

# Impact on fuel prices

	CO2 emissions kg / litre	CO2 emissions tons/litre	Cents / per Litre - for R10 per ton of CO2	40% Taxed = 60% Tax Free : cents / l	100% Taxed = 0% Tax Free : cents / l
petrol	2.343659	0.002344	2.30	11.20	28.10
diesel	2.681548	0.002682	2.70	12.90	32.20

Type of Fuel	Total fuel taxes in 2017/18 (c/l)	Assumed carbon tax (at 60% tax free threshold) (c/l)	% of fuel taxes in 2017/18	Assumed carbon tax (at 0% tax free threshold) (c/l)	% of fuel taxes in 2017/18
Petrol	482	11.2	2.32	28.1	5.83
Diesel	467	12.9	2.76	32.2	6.9

# Impact on mining – Electricity pricing and Fugitive emissions allowances

- **Mining activities are energy / electricity intensive.** To cushion the impact of the carbon tax on mining, the introduction of the carbon tax will have **no impact on electricity pricing for the first phase.** A credit for the electricity generation levy and the renewable energy premium built into electricity tariffs will be provided.
- **Fugitive emissions from mining will be covered under the carbon tax eg. Methane emissions from coal mining.** Mining will therefore qualify for the basic tax free allowance (60%), fugitive emissions allowance (10%), trade exposure allowance (10%), offset allowance (5%), carbon budget allowance (5%) and performance allowance (5%). Allowance will be capped at 95 per cent, and only 5 per cent of emissions likely to be taxed.
- **The mining sector already benefits from the energy efficiency savings tax incentive** (estimated value of R123 mill in savings approved for the mining sector)
- Fugitive emissions account for a relatively low 5 percent of total GHG emissions for South Africa according to the 2010 National GHG emissions inventory of DEA.
- Pricing carbon by way of the carbon tax, and complemented by appropriate regulatory measures (eg, carbon budgets) and incentives for research development and technology innovation (150 per cent tax deduction for R&D) will help to ensure that the country meets its commitments under the Paris agreement in a cost effective manner.

## Energy Efficiency Savings Tax Incentive: Applications per sector to date

### List of approved projects / certificates (up to December 2016):

Project	Activity	kWh Saved	Technology
1	Manufacturing	15 940 704	Whole Plant Optimisation
2	Manufacturing	5 094 504 657	Operational Energy Efficiency
3	Manufacturing	3 573 590	Energy Efficiency Project
4	Mining	35 224 669	Operational Energy Efficiency
5	Mining	83 909 700	Energy Efficiency Project
6	Manufacturing	122 567	Lighting Retrofit
7	Manufacturing	59 254 015	Energy Efficiency Project
8	Manufacturing	9 638 183	Whole Plant Optimisation
9	Commercial Building	175 302	Lighting and HVAC
10	Commercial Building	100 675	Lighting and HVAC
11	Commercial Building	124 254	Lighting and HVAC
12	Commercial Building	(99 475)	Lighting and HVAC
13	Commercial Building	681 766	Lighting and HVAC
14	Commercial Building	128 680	Lighting and HVAC
15	Commercial Building	(123 531)	Lighting and HVAC
16	Manufacturing	61 406 520	Whole Plant Optimisation
17	Manufacturing	93 757 774	Whole Plant Optimisation
18	Manufacturing	215 977 808	Whole Plant Optimisation
19	Manufacturing	96 876 426	Whole Plant Optimisation
20	Manufacturing	159 422 461	Whole Plant Optimisation
21	Mining	2 017 987	Energy Efficiency Project
22	Mining	1 457 024	Energy Efficiency Project
23	Manufacturing	363 217	Lighting Retrofit
<b>Total kWh saved</b>		<b>5 934 434 973</b>	
<b>Estimated cost to fiscus (Rand)</b>		<b>2 672 908 688</b>	

## Section 12 L: Energy efficiency savings tax incentive claimed (up to Dec 2016)

Activity	kWh Saved	kWh Saved (% of total)	Incentive Value (Rand)	Incentive Value (% of total)	Technology
Manufacturing	5 810 837 922	97.92%	2 615 058 673	97.84%	<ul style="list-style-type: none"> <li>• Whole Plant Optimisation</li> <li>• Operational Energy Efficiency</li> <li>• Energy Efficiency Project</li> <li>• Lighting Retrofit</li> </ul>
Mining	122 609 380	2.07%	56 911 727	2.13%	<ul style="list-style-type: none"> <li>• Operational Energy Efficiency</li> <li>• Energy Efficiency Project</li> <li>• Lighting and HVAC</li> </ul>
Commercial Building	987 671	0.02%	938 287	0.04%	
<b>Total kWh saved</b>	<b>5 934 434 973</b>	<b>100.00%</b>	<b>2 672 908 688</b>	<b>100.00%</b>	
	<b>5 934 MWh</b>		<b>~R2,7 billion</b>		

## Impact of carbon tax on electricity prices and electricity levy - Neutral impact on electricity price

- During the first phase of the carbon tax, the introduction of the tax will be revenue neutral and have no impact on the price of electricity.
- This concern will be addressed by complementary measures to reduce the current electricity levy to ensure revenue neutrality (zero impact) for the first phase of the carbon tax.
  - This is achieved by providing a **credit for the payments of the electricity generation levy** and a **credit for the renewable energy premium** built into the electricity tariff.
  - In addition business already benefits from the **energy efficiency savings tax incentive**.
- Analysis shows **above measures will protect vulnerable sectors** like mining and iron and steel.

## Competitiveness impacts and trade exposure allowance

- The design of the trade exposure allowance has been **adjusted from a company to a sector-based trade exposure allowance**.
- Initial analysis suggests that sectors such as mining and iron and steel are likely to qualify for the full 10 per cent trade exposure allowance.
- The list of sectors and their trade exposure allowances will be published by way of a Regulation.
- Concerns about the competitiveness implications of the carbon tax should recede over time as more and more jurisdictions begin to phase in carbon pricing. Emerging economies that are already implementing some form of explicit carbon pricing are China, Mexico, Chile and India.

## Tax rates and thresholds

- Request for **clarity on the tax rates and tax free thresholds for phase 1 and phase 2 of the proposed carbon tax**. Stakeholders suggested that the rate of the tax and proposed carbon tax rate trajectory including the rate of increase to the nominal rate of the tax for phase 1 and 2 should be included in the legislation.
- **Section 5 of the bill has been amended to** include the headline, marginal tax rate of R120/tCO<sub>2e</sub>; and specifies the annual increase to the nominal carbon tax rate by up to a maximum of the rate of inflation plus 2 per cent.
- The first phase for the carbon tax will be for a period of 4 – 5 years from the implementation date of the tax.
- **Any adjustments to the carbon tax instrument beyond the first phase will depend on the economic circumstances and emissions mitigation efficiency achieved**. Such increases will be done through the tax process, subject to stakeholder consultation, Parliamentary oversight and approval.

## Alignment with the Carbon Budgets

- An **additional 5 per cent tax free allowance is provided for companies** participating in the carbon budgeting system during the first phase is supported. During first phase companies that wish to voluntarily participate in the carbon budget system can apply to the DEA and will be granted a carbon budget. The bill has been amended to allow for all companies that have been issued with a letter from the DEA approving a carbon budget to qualify for the additional 5 per cent allowance
- **Questions about alignment post 2020 have been raised.** The Department of Environmental Affairs (DEA) and NT have **completed a study** on the most **appropriate alignment and integration of the carbon tax and carbon budget** instruments for phase 2 with the support of the World Bank's Partnership Market Readiness initiative.
  - The mandatory carbon budgets regime will be introduced in a way that is fully-aligned with the carbon tax, and resulting in no double penalty.
  - **An integrated review process to assess both instruments will be conducted after three years of implementation of the carbon tax, to ensure alignment with the carbon budgeting system**, and to prevent a double penalty where both the tax and penalty apply.

## Carbon Offset and performance allowances

- **Carbon Offsets:** The use of carbon offsets by firms to reduce their overall carbon tax liability was broadly supported by stakeholders.
  - The draft Carbon Offset Regulation which sets out the procedure for claiming the offset allowance was developed jointly by the National Treasury, Department of Energy and the Department of Environmental Affairs and published for public comments in June 2016.
  - A revised regulation taking into account stakeholder comments will be published for public consultation later this year.
- **Performance allowance:**
  - Sectors such as petroleum refining, claybrick making, sugar, pulp and paper, ferro-alloys and cement have already initiated processes for developing benchmarks to ensure that these sectors qualify for the performance-based allowance.
  - The performance-based benchmarks will be finalised in consultation with industry and will be published by way of a Regulation as provided for in the draft Carbon Tax Bill.

# Administration of the Tax

- The carbon tax will be implemented by the South African Revenue Service (SARS).
- The DEA will maintain a mandatory GHG inventory database. Regulations for mandatory reporting of GHGs have been published.
- The Department of Energy (DoE)'s reporting on energy use data will also be incorporated into the National Atmospheric Emissions Information System (NAEIS) maintained by DEA.
- SARS will liaise with DEA and will be able to access the GHG inventory and the NAEIS.
- The DoE currently hosts the Designated National Authority (DNA), which will be responsible for administering the carbon offset scheme.