South Africa's progress with the development and implementation of the proposed carbon tax

World Bank Group & PMR: Zurich

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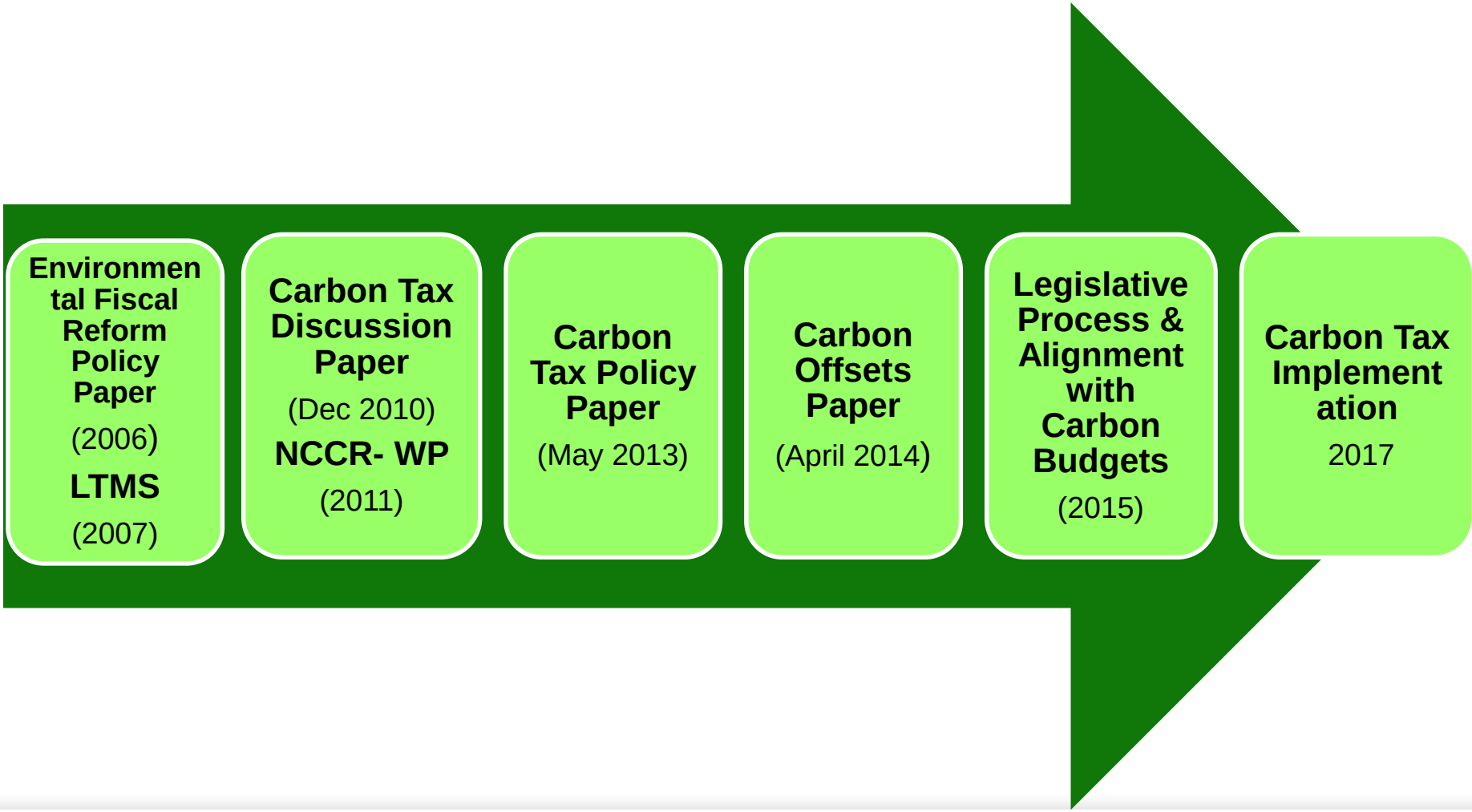
national treasury

Department:
National Treasury
REPUBLIC OF SOUTH AFRICA

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 …

Carbon Tax Policy Proposal – timeline



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".

- "… it is possible to both reduce greenhouse gas emissions from electricity production and still grow the minerals and mineral processing sectors".

South Africa's response to its economic & social challenges and to climate change

- South Africa voluntary committed (at COP 15 in 2009) to curb GHG emissions by 34% by 2020 and 42% by 2025 below the BAU trajectory with emissions peaking in 2020 - 2025, stabilising in 2025 - 2035 and declining in absolute terms from around 2035, subject to support from developed countries in the areas of climate finance, capacity building & technology transfers

- **South Africa's Intended Nationally Determined Contribution (INDC) – September 2015:**
  - South Africa's mitigation component of its INDC moves from a "deviation from business-as-usual" form of commitment and takes the form of a peak, plateau and decline GHG emissions trajectory range.
  - **South Africa's emissions by 2025 and 2030 will be in a range between 398 and 614 Mt CO2-eq, as defined in national policy.**
  - The INDC reflects SA's full mitigation potential as assessed in 2014.
  - **The policy instruments under development include a carbon tax, desired emission reduction outcomes (DEROs) for sectors, company-level carbon budgets, as well as regulatory standards and controls for specifically identified GHG pollutants emitters (p.6).**

Addressing both climate change and socio economic development

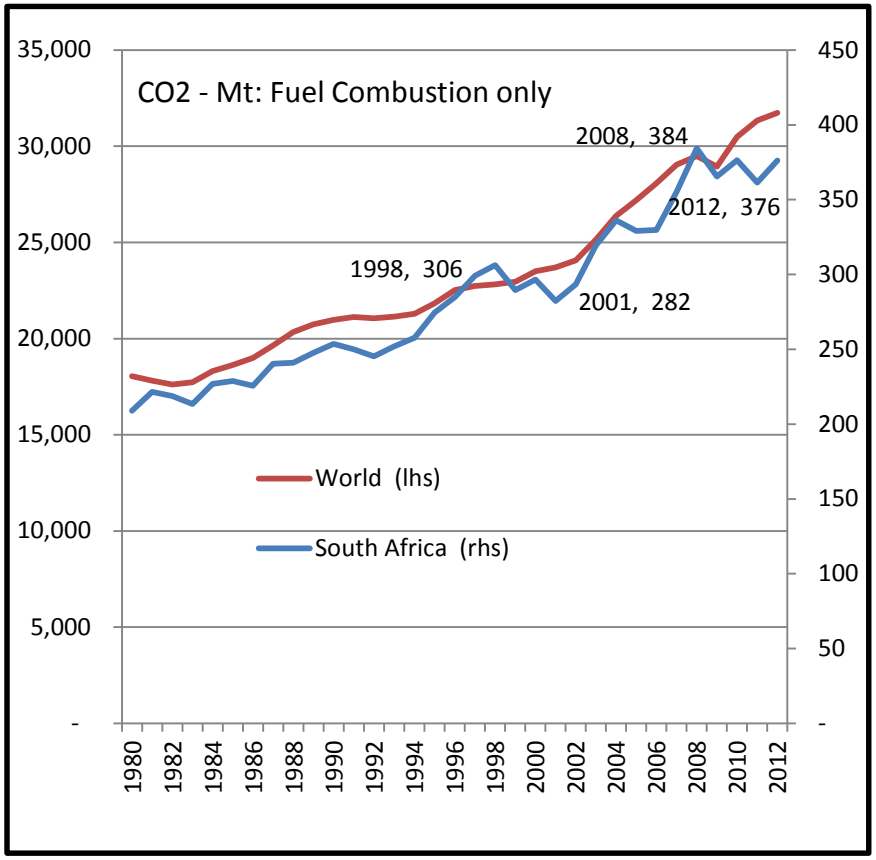
- The INDC is put forward within the context of equitable access to sustainable development and will take **fully into account that equity, economic and social development and poverty eradication are the first and overriding priorities** (p.7).
- The PPD trajectory range is an ambitious and fair effort **in the context of national circumstances, and priorities to eliminate poverty and inequality, promote inclusive economic growth and reduce unemployment.** It presents a trajectory that is consistent with a just transition to a low carbon and climate-resilient future (p. 8).
- Generally, **South Africa needs time for development, which is necessary to eliminate poverty, reduce inequality, increase employment and promote inclusive economic growth** (p. 11).

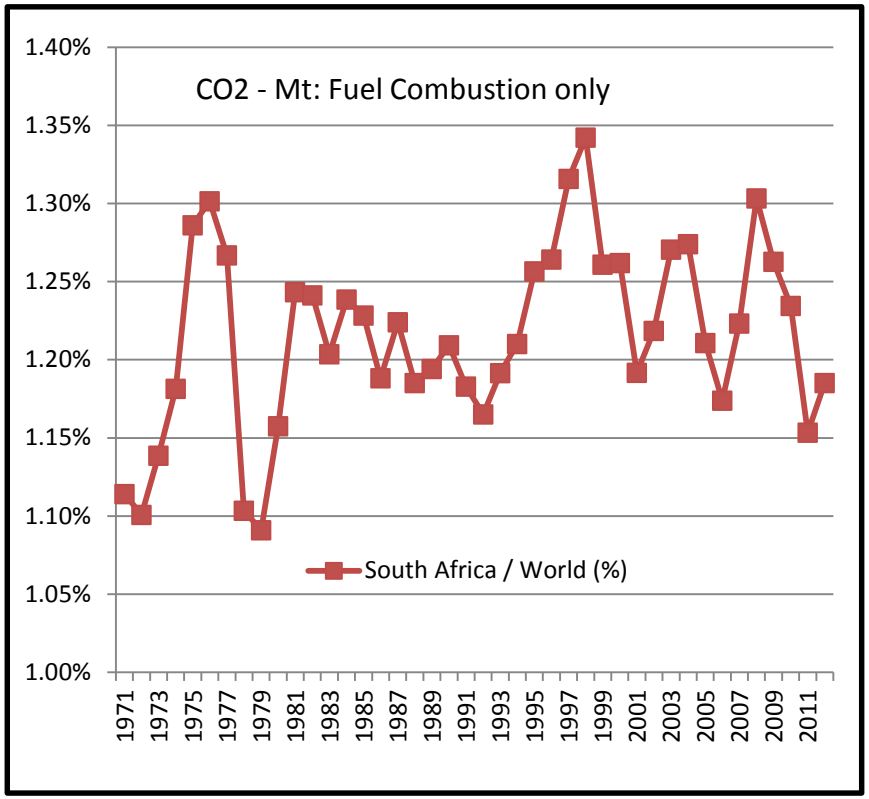
- How do be balance the need for higher levels of growth and the energy & carbon intensive nature of our economy with our desire and commitment to help reduce GHG emissions?
- "the choices – the trade offs – we are told we must make between financial success and environmental success, between doing well and doing good, are just plain false (Confessions of a Radical Industrialist, Ray Anderson (with Robin White, 2009) (page xv – xvi)".

IEA: Estimated GHG { CO_2e } emissions: Sectoral Approach – Fuel combustion only

Mt of CO2: CO2 Sectoral Approach					
	Country	2010		2008	
1 B	People's Republic of China	23.84%	1	22.07%	1
2	United States	17.73%	2	18.95%	2
3 B	India	5.37%	3	4.88%	4
4 B	Russian Federation	5.22%	4	5.40%	3
5	Japan	3.78%	5	3.91%	5
6	Germany	2.52%	6	2.71%	6
7	South Korea	1.86%	7	1.70%	9
8	Canada	1.77%	8	1.87%	7
9	Islamic Republic of Iran	1.68%	9	1.69%	10
10	United Kingdom	1.60%	10	1.74%	8
11	Saudi Arabia	1.47%	11	1.31%	13
12	Mexico	1.38%	12	1.37%	12
13	Indonesia	1.36%	13	1.24%	17
14	Italy	1.32%	14	1.48%	11
15 B	Brazil	1.28%	15	1.23%	18
16	Australia	1.27%	16	1.31%	14
17	France	1.18%	17	1.26%	16
18 B	South Africa	1.15%	18	1.31%	15
19	Poland	1.01%	19	1.01%	21
20	Chinese Taipei	0.89%	20	0.89%	22
21	Spain	0.89%	21	1.08%	19
22	Ukraine	0.88%	22	1.05%	20
23	Turkey	0.88%	23	0.89%	23

Estimated CO_2e – Mt: Fuel Combustion only – (IEA, 2014) (1998 to 2001 = -8%) (2008 to 2012 = - 2%)





GHG Emissions – INDC estimates, 2015

			Mt CO2 eq.	
2030		**World GHG emission: INDC**	55,000	40,000
		South Africa		
		398 Mt CO2 eq.	0.72%	1.00%
		614 Mt CO2 eq.	1.12%	1.54%
South Africa		**% of World GHG Emissions: Fuel Combustion Only**		
1971 to 2012		1.10% to 1.35%		
2008		1.31%		
2012		1.19%		

GHG Inventory, 2010 – Estimates, DEA

2010: GHG Inventory (Estimates) -- Categories	Emissions - CO2 Eq (Gg)	Emissions - CO2 Eq (Gg)	Total Emissions - CO2 Eq (Gg)	Percentage Contribution
1 - Energy			428 368	82.66%
A - Fuel Combustion Activities			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 - Fugitive emissions			25 551	4.93%
2 - Industrial Processes and Product Use			44 351	8.56%
2.A - Mineral Industry		4 793		
Cement production	*4 187*			
Lime production	*502*			
Glass Production	*104*			
2.B - Chemical Industry		1 011		
2.C - Metal Industry		37 513		
Iron and Steel Production	*24 147*			
Ferroalloys Production	*11 809*			
Aluminium production	*1 468*			
3 - Agriculture, Forestry, and Other Land Use			(25 714)	(4.96%)
4 - Waste			19 806	3.82%
Total National Emissions and Removals			518 239	100.00%
International Bunkers			2 572	

South Africa – GHG, 2012/13: CDP, 2013

	2013 CDP	SA Scope 1	SA Scope 1
	Million of metric tons	**Mton CO2 eqv**	**%**
1	Sasol Limited	59.88	12%
2	Arcelor Mittal South Africa Ltd	11.32	2%
3	Pretoria Portland Cement Co Ltd	4.44	
4	BHP Billiton	2.95	
5	Sappi	2.62	
6	Anglo American	1.95	
7	Gold Fields Ltd	0.79	
8	Mondi Plc	0.73	
9	Anglo American Platinum	0.52	
10	AngloGold Ashanti	0.10	
	Sub Total (Top 10 companies - JSE)	**85**	**16%**
	Sub Total (other 90 companies - JSE)	7	1%
	Eskom	228	44%
	Transport	51	10%
	Other	149	29%
	Total - South Africa	**520**	**100%**

Overview of the proposed carbon tax policy package

Revenue

- Carbon tax at R120 per ton of CO_2e
- 60% basic tax free allowance
- 5% tax free allowance for companies participating in the carbon budget process
- 10% tax free allowance for trade exposure
- 10% tax free allowance for process emissions
- 5 or 10% allowance for Carbon Offsets

- Tax free allowance of between **60% and 95%.**

This implies an effective carbon tax rate **of between R6 and R48 t/CO_2e**

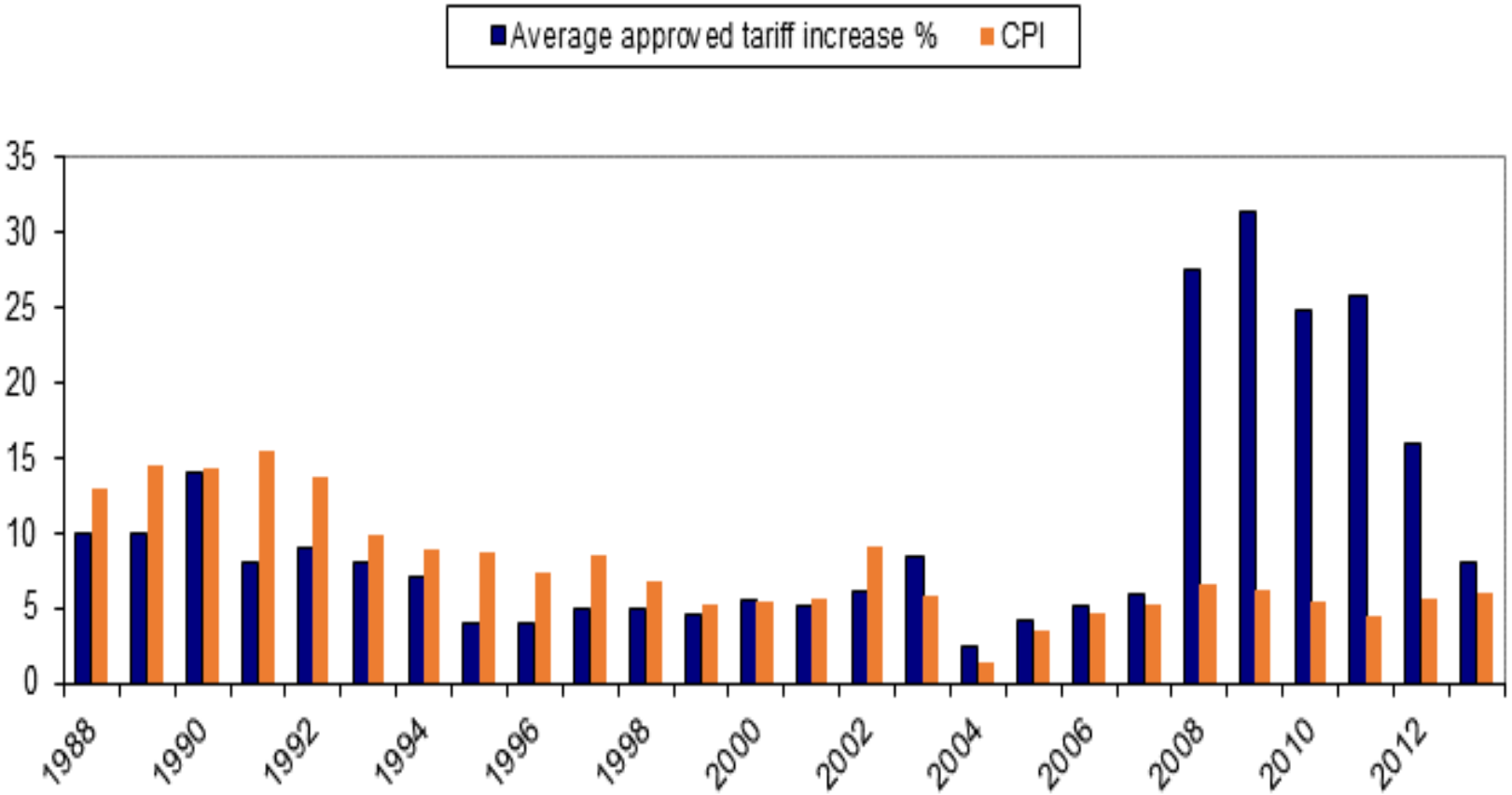
Revenue Recycling

- Energy Efficiency Savings tax incentive
- Phasing down of the current electricity levy of 3.5 c/kWh
- Credit against Eskom's carbon tax liability for the renewable energy premium built into the electricity tariffs
- Enhanced free basic electricity / energy for low income households
- Improved public passenger transport

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 energy efficiency 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 (up to 2020) 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.
- The initial impact of the carbon tax on economic growth and electricity prices will be modest – it will lay the basis and send a signal to encourage investments in green technologies and production techniques.

Electricity price increases

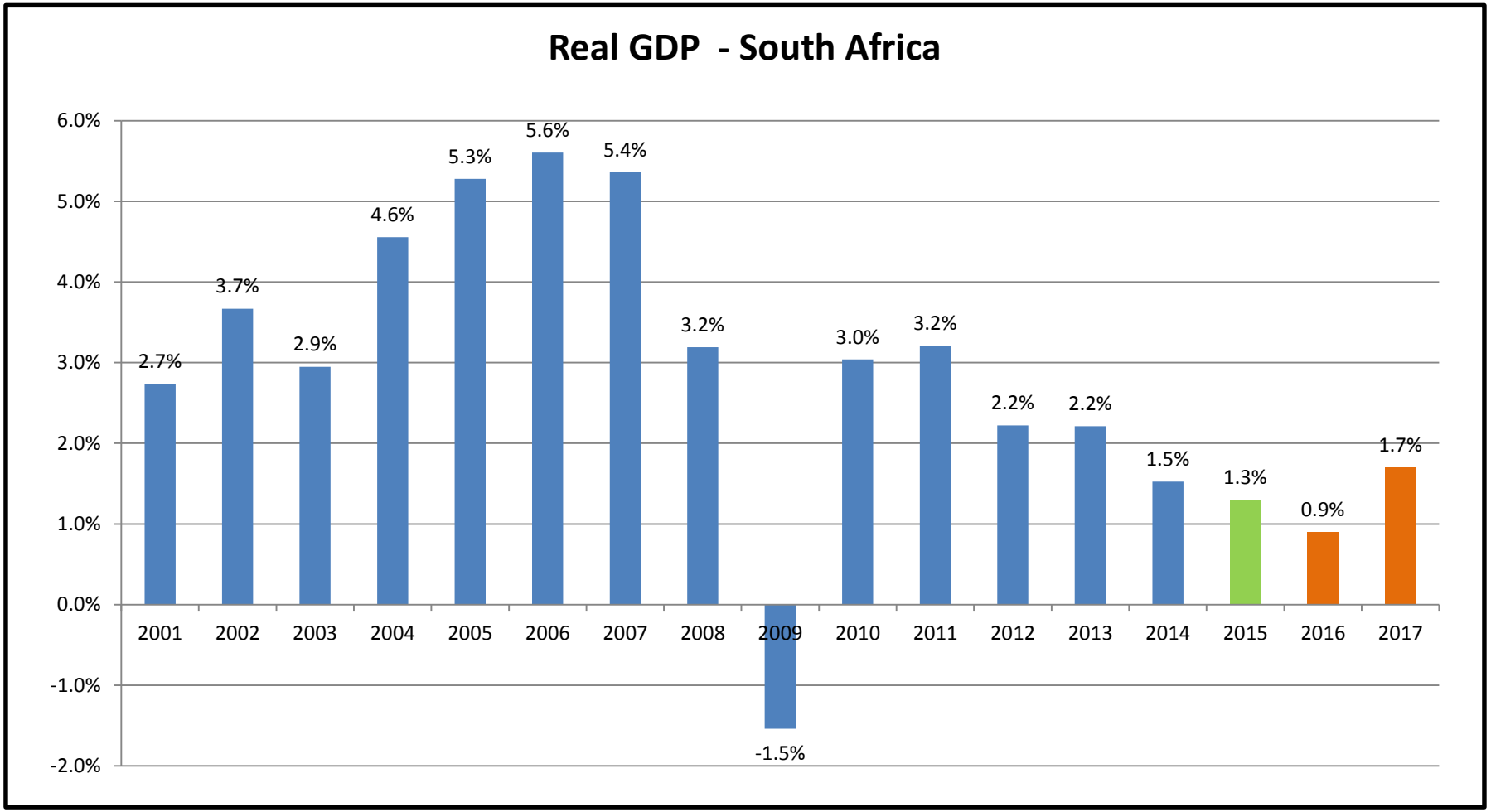


Carbon Tax Bill:
2 November 2015, Media Statement

- The tax has been designed to ensure that its overall impact (when taking into account revenue recycling measures) will, in the initial phase, be revenue neutral, and also neutral on the price of electricity. **Hence, taking into account the current state of the mining and other distressed sectors, the combined effect of the rates/exemptions in the carbon tax and the reduction in electricity levy will be designed to ensure that such sectors are not adversely affected when the tax is implemented.** The tax and revenue recycling measures are also designed to be revenue neutral from a macroeconomic perspective, but will not necessarily be neutral for (scope one) companies with significant emissions.

- The tax-free percentage thresholds will remain fixed during the first phase, until 2020. The percentage tax-free thresholds might be reduced thereafter or may be replaced with absolute emission thresholds. Both the tax-free percentage thresholds and their subsequent replacement with absolute emission thresholds will be aligned with the proposed carbon budgets.

Real GDP growth (1)



South Africa: Employment

Quarterly Labour Force Survey: December 2015							YoY Change	YoY Change
			Dec-14		Dec-15		Number	%
1	Working -age population (15 - 64 years)	2 + 9	35,644,000		36,272,000		628,000	1.8%
2	Labour force	4+ 6	20,229,000		21,211,000		982,000	4.9%
3	Labour force - participation rate	2 / 1		56.8%		58.5%		
4	Employment		15,320,000		16,018,000		698,000	4.6%
5	Absorption rate	4 / 1		43.0%		44.2%		
6	Unemployment - official	2 - 4	4,909,000		5,193,000		284,000	5.8%
7	Unemployment rate - official	6 / 2		24.3%		24.5%		
8	Unemployment - broad		7,312,000		7,471,000		159,000	2.2%
9	Not Economically Active	1 - 2	15,415,000		15,061,000		(354,000)	-2.3%
10	Discouraged workers	8 - 6	2,403,000		2,279,000		(124,000)	-5.2%

Comments (1) – 2010 paper

- "Business is of the opinion that South Africa does not need to take a global lead on this issue; rather the focus should be on job creation and development".
- "In Denmark and the UK for example, an exemption regime exists under which companies or industry sectors can make voluntary commitments to reduce emissions in exchange for a tax exemption. This is a much more appropriate approach for a developing country, like South Africa, which will not have a legally binding reduction target".
- "More research is required, taking into account international standards and benchmarking the effect that the proposed carbon tax will have on doing business in South Africa compared to doing business in other developing countries" (p.7).
- "The carbon tax proposals follow the same policy formulation process that has now been discredited in South Africa by starting with international benchmarks which are entirely first world based, ignoring the developing world context and then cherry picking lessons and policy implications for South Africa. The carbon tax proposal is not based on careful analysis of the local context but rather a combination of inappropriate international examples taken out of context"(p.3/4).

Comments (2) – 2010 paper

- "It is crucial that there is policy coherence between government's industrialization, growth, job creation, energy security and beneficiation policies and its policy on addressing climate change".
- "The critical question is what to do about global warming, which will at the same time enable South Africa to realise its developmental, economic, energy security, beneficiation and job creation objectives? It would be unwise for South Africa to rush into a ***front-runner*** position of making firm carbon reduction commitments if a global agreement has not been reached and the major emitters of GHGs continue growing emissions unabated (the carbon leakage problem)".
- "An effective response to climate change is not just about the policy content of the response, but the realistic sequencing of the introduction of measures to address climate change".

Consultations - Comments on 2013 Carbon Tax Policy paper - high level summary (115 submissions)

- **52.2%** support a carbon tax as a carbon pricing mechanism;
  - **26.1%** gave a yes and **26.1%** a qualified yes (yes-but) and propose that elements of the proposed carbon tax design be tweaked to improve the effectiveness of the tax and reduce potential negative consequences;

- **41.7%** (no-but) acknowledge the need for a carbon price, but either did not propose a specific measure to that end or felt that command and control measures and other instruments should be pursued (e.g. the implicit carbon price in the IRP2010, an emissions trading scheme, etc.) to achieve an effective reduction in GHG emissions;

- **94%** of the submissions (yes, yes-but & no-but groups) acknowledged the need for a carbon price;

- **6%** felt climate change cannot be linked to anthropogenic emissions and hence there was no need for carbon pricing.

2013 - Key issues raised by stakeholders (1)

General comments on the proposed carbon tax:

1. Better alignment of the carbon tax policy with the National Climate Change Response Policy (NCCRP) and other government policies / plans; e.g. IRP-2010, National Development Plan (NDP), IPAP, etc.;
2. Long term certainty – decrease in tax free thresholds and increase tax rate post 2019
3. Need for additional modelling of the economic & social impact of the tax;
4. Take into account current economic conditions - wait for a more robust recovery?
5. International negotiations – timing, etc.
6. Impact on firms
7. Why the need for a carbon tax in South Africa? (Are we trying to lead?, are we following?, should we impose an explicit carbon price / tax?)

2013 - Key issues raised by stakeholders (2)

Specific comments on the carbon tax design features centred on:

1. Energy sector
   - Impact on electricity prices – IRP2010, complete exemption?
   - Liquid fuel – no pass through mechanism - should there be one?
2. Sectoral classification: tax free thresholds & process emissions (sectors?);
3. Emission intensities, benchmarks & the Z-factor;
4. Revenue recycling: relief for low income households & protect competitiveness .
5. Competitiveness – review nature of relief for emission intensive and trade intensive (EITI) sectors;
6. Tax base and administration – Measuring, Reporting & Verification;
7. Deductibility of carbon tax payments for income tax purposes
8. Offsets; why the need for the 5% or 10% limits and for additionality?.

Update on implementation of carbon tax

- The main aim of the carbon tax is to put a price on the environmental and economic damages caused by excessive emissions of greenhouse gases. A secondary aim is to change the behaviour of firms and consumers, encouraging them to use cleaner technology.

- Given the economic outlook, the carbon tax has been designed to ensure that its overall impact will be revenue neutral up to 2020. The draft Carbon Tax Bill was published in November 2015, with 90 comments received to date. The draft bill will be revised, taking into account public comments and further consultation.

Thank You

• Ngiyabonga:	IsiZulu
• Enkosi:	IsiXhosa
• Thank you:	English
• Dankie:	Afrikaans
• Ngiyathokoza:	IsiNdebele
• Ke a leboha:	Sesotho
• Ke a leboga:	Northern Sotho:
• Re a leboga:	Setswana
• Siyabonga:	SiSwati
• Inkomu:	Xitsonga
• Ndo livhuwa / Ro livhuwa:	Tshivenda

Responses categorised – in support or not for a carbon tax - 2013

Commentators' response to carbon pricing was classified as:

- **Yes** – support for the proposed carbon tax as an appropriate carbon pricing instrument;
- **Yes, but** – support the proposed carbon tax as a carbon pricing mechanism but suggest that proposed design features be tweaked to improve its effectiveness and minimises the potential negative consequences;
- **No, but** – support the need for a carbon pricing mechanism but did not propose a specific measure or suggested that other market based instruments should be pursued along with command and control measures to achieve an effective reduction in GHG emissions, e.g. the implicit carbon price in the IRP-2010, an emissions trading scheme, etc. ;
- **No** – argue that climate change cannot be justified on the basis of increases in concentration of anthropogenic emissions hence there is no need for carbon pricing to mitigate this increase in GHG emissions.