Introduction and Policy Context

- 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 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 CO2-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 Act 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.
South Africa’s Climate Change Response Governance Framework - (DEA)

National Development Plan - 2030
Medium Term Strategic Framework (5 year cycles)

National Climate Change Response Policy

ADAPTATION
- Long term adaptation scenarios
- Provincial vulnerability assessments
- Sector and Provincial Strategies

National Mitigation System
(carbon budgeting, carbon tax, mandatory reporting and planning)

Climate Change Response Flagships: catalyse and scale-up implementation, and address constraints
Financing

National Adaptation Strategy
(Roadmap for climate resilience & Facilitating integrated sectoral, Provincial and Local responses)
Carbon Tax Consultation Process - timeline

- LTMS (2007)
- Carbon Tax Discussion Paper (80 comments) (Dec 2010)
- NCCR- WP (2011)
- Carbon Tax Policy Paper (115 comments) (May 2013)
- Carbon Offsets Paper (77 comments) (April 2014)
- Draft Carbon Tax Bill (91 comments) & Draft Regulations on Carbon Offset (65 comments) (2015-16)
- Revised Carbon Tax Bill published Dec 2017 (59 comments)
- Submission & Tabling in Parliament 2018 – 2019
- Carbon Tax Act No 15 of 2019 (Gazetted on 23 May 2019)
The policies reflected in the 2018 Carbon Tax Bill is a refinement of the 2013 Carbon Tax Policy Paper, the initial 2015 Draft Carbon Tax Bill and 2017 Bill. 2018 bill incorporates public comments received on these earlier documents.

- Informal briefing of the Joint Committee (SCoF and PCoE) – 13 February 2018
- Public Hearings on the Bill – 14 March 2018
- National Treasury Response to Public Comments Hearings – 7 June 2018
- Carbon Tax Bill Workshop – 27 November 2018
- Carbon Tax Bill Meeting – 4 December 2018
  - Report on NEDLAC Carbon Tax Bill Task Team (July to November 2018)
- Carbon Tax Bill meeting – 5 December 2018
- Carbon Tax Bill Finalisation and Voting, SCoF – 5 February 2019
- Customs and Excise Amendment Bill meeting – 12 February 2019
- National Assembly – 19 February 2019
- Briefing of the Select Committee on Finance – 6 March 2019
- Public Hearings by SeCoF – 12 March 2019
- Carbon Tax Bill Finalisation and Voting, SeCoF – 19 March 2019
- SeCoF voting and passing of the bill – 28 March 2019
Enhancing public acceptance of tax - Revenue Recycling Measures and Phasing in of the Carbon Tax

• The design of the carbon tax aims to 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 the 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.

– Phased approach to the introduction of the tax at relatively low rate. The first phase for the carbon tax commenced on 1 June 2019 and will end on 31 December 2022.

– Any significant changes to the tax design beyond the initial phase will be subject to stakeholder consultation, Parliamentary oversight and approval.
OPTIONS FOR REVENUE USE

How the revenues are used could be an important issue where revenue-raising potentials are significant. There are essentially four different uses (although not necessarily mutually exclusive) to which the revenues could be put:

– Revenues accrue to the fiscus and are allocated to priority spending needs through the normal budgetary process;
– Revenues accrue to the fiscus and are used as part of a tax-shifting exercise to reduce the marginal tax rates of other distortionary taxes such as taxes on labour;
– Revenues are earmarked or ring-fenced for spending on specific environmental programmes (explicit / hard earmarking); and/or
– Revenues accrue to the fiscus but there is some form of agreement that spending on environmental programmes will be increased through on-budget channels (implicit / soft earmarking).
Environmental Tax Reforms: Potential for achieving the double dividend and tax shifting

- Taxes on labour (personal income taxes) are necessary to raise revenue for public spending programmes.
- Argued that if additional revenues can be generated through environmentally-related taxes, taxes on labour and the associated distortions this brings with it can be reduced.
- This concept of taxing bads (such as environmental pollution) and reducing taxes on goods (e.g. labour) has been termed the double-dividend hypothesis.
  - asserts that a win-win situation could be achieved in that not only is an improvement in environmental quality secured (the first dividend), but gains in economic efficiency and employment could also be realised (the second dividend).
  - Tax shifting can effectively minimise the overall tax burden on affected sectors and still create required behavioural incentives.
- For developing economies this might be a challenge as lower income households / earners may be exempted from income taxes
Revenue recycling measures

• Revenue recycling
• Revenue neutrality
• Earmarking of revenue
• Environmental Funds

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– For many stakeholders, there is a link between revenues from environmentally-related taxes and spending on the environment.
– In general, “full” earmarking is not in line with sound fiscal management practices – introduces rigidities into the budget process
– Need to consider different incentive / revenue use options {revenue recycling such as “soft” earmarking (on budget allocations) or reducing (or not increasing) payroll taxes}. 
The carbon tax 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
Carbon tax modelling

• The results for the focus scenario are presented where tax free allowances of 60 percent, rate of tax of R120CO2e and increased by 10 percent per year and waste and agriculture are exempt. Allowances also reduced by 10 percentage points per year from 2025

• Revenue recycling measures includes output based rebate for all production, VAT reduction and subsidies for renewables

• Results show that the carbon tax will have a significant impact on reducing emissions by 13 and 14.5% by 2025 and 26 and 33% by 2035 compared to business as usual

• Impact on GDP will be relatively modest in the region of 0.05 and 0.15 percentage points and is reduced substantially with broad based recycling measures.
  – Recycling through channelling revenues back to sectors will have least impact on GDP. Narrow based recycling most costly

• Note: model does not model all allowances such as the offset and performance allowance, and the costs of climate change and its impacts and cobenefits such as reduced air pollution are not factored in the modelling – likely to overstate the impacts of the carbon tax
Revenue Recycling

• Revenue recycling mechanisms for structural adjustment:
  – **tax shifting**: reducing or not increasing other taxes (electricity levy credit)
  – a range of environmental **tax incentives**, including Energy efficiency savings tax allowance
  – **“soft” earmarking** (on budget allocations): enhanced free basic energy / electricity programme, improved public transport, Carbon Capture and Storage rebate
SOUTH AFRICA’S CARBON TAX DESIGN FEATURES:
Rate, Tax-free Allowances and Recycling Measures

**Revenue**

- Carbon tax at R120 per ton of CO$_2$e
- 60% basic tax-free threshold
- Max of 10% tax-free allowance for trade exposure
- 10% tax-free allowance for process and fugitive emissions
- Up to 5% performance allowance
- 5% tax-free allowance for complying with carbon budgets information requirements
- 5% or 10% allowance for Carbon Offsets – to reduce the carbon tax liability

**Revenue Recycling**

- Tax-free allowances of 60-95% – effective tax rate of R6 - R48 t/CO$_2$e
- No impact on electricity prices in the first phase
- Energy Efficiency Savings tax incentive
- Credit against Eskom’s carbon tax liability for the renewable energy premium built into the electricity tariffs
- Credit for the electricity levy
- Support for the installation of solar water geysers
- Enhanced free basic electricity / energy for low income households
- Improved public passenger transport & support for shift of freight from road to rail
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 has been extended to 31st Dec 2022. 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 2018 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.
## Section 12 L: Energy efficiency savings tax incentive claimed (up to Dec 2018)

<table>
<thead>
<tr>
<th>Activity</th>
<th>kWh Saved</th>
<th>kWh Saved (% of total)</th>
<th>Incentive Value (Rand)</th>
<th>Incentive Value (% of total)</th>
<th>Technology</th>
</tr>
</thead>
</table>
| Manufacturing     | 5 810 837 922| 97.92%                 | 2 615 058 673          | 97.84%                       | • Whole Plant Optimisation  
• Operational Energy Efficiency  
• Energy Efficiency Project  
• Lighting Retrofit |
| Mining            | 122 609 380  | 2.07%                  | 56 911 727             | 2.13%                        | • Operational Energy Efficiency  
• Energy Efficiency Project  
• Lighting and HVAC          |
| Commercial Building | 987 671     | 0.02%                  | 938 287                | 0.04%                        | • Lighting and HVAC          |
| Total kWh saved   | 5 934 434 973| 100.00%                | 2 672 908 688          | 100.00%                      |                                                                             |
|                   | 5 934 MWh    |                        | ~R2,7 billion          |                              |                                                                             |
### Energy Efficiency Savings Tax Incentive: Applications per sector to date

List of approved projects / certificates (up to December 2018):

<table>
<thead>
<tr>
<th>Project</th>
<th>Activity</th>
<th>kWh Saved</th>
<th>Technology</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Manufacturing</td>
<td>15 940 704</td>
<td>Whole Plant Optimisation</td>
</tr>
<tr>
<td>2</td>
<td>Manufacturing</td>
<td>5 094 504 657</td>
<td>Operational Energy Efficiency</td>
</tr>
<tr>
<td>3</td>
<td>Manufacturing</td>
<td>3 573 590</td>
<td>Energy Efficiency Project</td>
</tr>
<tr>
<td>4</td>
<td>Mining</td>
<td>35 224 669</td>
<td>Operational Energy Efficiency</td>
</tr>
<tr>
<td>5</td>
<td>Mining</td>
<td>83 909 700</td>
<td>Energy Efficiency Project</td>
</tr>
<tr>
<td>6</td>
<td>Manufacturing</td>
<td>122 567</td>
<td>Lighting Retrofit</td>
</tr>
<tr>
<td>7</td>
<td>Manufacturing</td>
<td>59 254 015</td>
<td>Energy Efficiency Project</td>
</tr>
<tr>
<td>8</td>
<td>Manufacturing</td>
<td>9 638 183</td>
<td>Whole Plant Optimisation</td>
</tr>
<tr>
<td>9</td>
<td>Commercial Building</td>
<td>175 302</td>
<td>Lighting and HVAC</td>
</tr>
<tr>
<td>10</td>
<td>Commercial Building</td>
<td>100 675</td>
<td>Lighting and HVAC</td>
</tr>
<tr>
<td>11</td>
<td>Commercial Building</td>
<td>124 254</td>
<td>Lighting and HVAC</td>
</tr>
<tr>
<td>12</td>
<td>Commercial Building</td>
<td>(99 475)</td>
<td>Lighting and HVAC</td>
</tr>
<tr>
<td>13</td>
<td>Commercial Building</td>
<td>681 766</td>
<td>Lighting and HVAC</td>
</tr>
<tr>
<td>14</td>
<td>Commercial Building</td>
<td>128 680</td>
<td>Lighting and HVAC</td>
</tr>
<tr>
<td>15</td>
<td>Commercial Building</td>
<td>(123 531)</td>
<td>Lighting and HVAC</td>
</tr>
<tr>
<td>16</td>
<td>Manufacturing</td>
<td>61 406 520</td>
<td>Whole Plant Optimisation</td>
</tr>
<tr>
<td>17</td>
<td>Manufacturing</td>
<td>93 757 774</td>
<td>Whole Plant Optimisation</td>
</tr>
<tr>
<td>18</td>
<td>Manufacturing</td>
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<td>Whole Plant Optimisation</td>
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<tr>
<td>19</td>
<td>Manufacturing</td>
<td>96 876 426</td>
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<td>20</td>
<td>Manufacturing</td>
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<td>21</td>
<td>Mining</td>
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<td>Energy Efficiency Project</td>
</tr>
<tr>
<td>22</td>
<td>Mining</td>
<td>1 457 024</td>
<td>Energy Efficiency Project</td>
</tr>
<tr>
<td>23</td>
<td>Manufacturing</td>
<td>363 217</td>
<td>Lighting Retrofit</td>
</tr>
</tbody>
</table>

**Total kWh saved**: 5 934 434 973

**Estimated cost to fiscus (Rand)**: 2 672 908 688
Environmental tax revenues in SA – fuel and electricity levy dominate
Electricity generation levy credit

• 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 is provided in the first phase and possible phasing-down and restructuring of the current electricity levy could be considered
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 – Renewable Energy IPP Programme.

- Analysis shows above measures will protect vulnerable sectors like mining and iron and steel.
• **Financing National Climate Change Response Policy** and long term funding framework for climate change:
  – Mainstream climate change response into the fiscal and budgetary process and so integrate the climate change response programmes at national, provincial and local government and at development finance institutions and state-owned entities.

• **Near Term Priority Flagship Programmes for:**
  – Climate Change Response Public Works
  – Water Conservation and Demand Management
  – Renewable Energy
  – Energy Efficiency and Demand Side Management
  – Transport
  – Waste Management
  – Carbon Capture and Storage
  – Adaptation Research
Climate transition funding and finance
Bridging the financing gap between carbon intensive and low carbon, environmentally cleaner technologies

- **Environmentally – related taxes** that internalise externalities and also provides a revenue source.
- **Financial support for provision of public goods** - critical infrastructure in the energy, transport, water sectors (high upfront capital costs)
- **Tax incentives and subsidies to encourage research and development** of low carbon, environmentally cleaner technologies and promoting cleaner production practices
- **Environmental financing policies to derisk projects** – guarantees, concessional loans
- **Public private partnerships** for pilot demonstration plants and facilities
- **Accessing carbon market finance** – CDM and new market mechanisms
- **International funding** – Green Climate Fund, other environmentally related funding accessible through the Global Environment Facility, Strategic Climate Change Fund, Bilateral and multilateral funding

**Multiple Barriers, Multiple Stakeholders, Multiple Instruments!**
THANK YOU.

<table>
<thead>
<tr>
<th>Name of grant ('000s)</th>
<th>2008/09</th>
<th>2009/10</th>
<th>2010/11</th>
<th>2011/12</th>
<th>2012/13</th>
<th>2013/14</th>
<th>Total Allocation 08/09 - 13/14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy Efficiency and Demand Management Grant</td>
<td></td>
<td></td>
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<td>Expanded Public Works Programme Integrated Grant</td>
<td>175 000</td>
<td>220 000</td>
<td>280 000</td>
<td>200 000</td>
<td>180 722</td>
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<tr>
<td>Integrated National Electrification Programme Grant</td>
<td>201 751</td>
<td>621 259</td>
<td>679 583</td>
<td>662 135</td>
<td>610 674</td>
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<td>2 775 402</td>
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<tr>
<td>Integrated City Development Grant</td>
<td>587 252</td>
<td>921 409</td>
<td>1 020 105</td>
<td>1 096 612</td>
<td>1 151 443</td>
<td>1 634 772</td>
<td>6 411 593</td>
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<tr>
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<tr>
<td>Municipal Disaster Recovery Grant</td>
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<tr>
<td>Municipal Drought Relief Grant</td>
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<td>73 183</td>
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<td>230 096</td>
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<td>320 357</td>
<td>450 000</td>
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<td></td>
<td>824 057</td>
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<td>Municipal Water Infrastructure Grant</td>
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<td>591 404</td>
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<td>Rural Households Infrastructure Grant</td>
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<td>Rural Roads Assets Management Systems Grant</td>
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<td>Urban Settlement Development Grant</td>
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<td>2 967 005</td>
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<td>Water Services Operating Subsidy Grant</td>
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<td>862 641</td>
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<td>542 345</td>
<td>562 434</td>
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<td>20 228 489</td>
<td>26 600 276</td>
<td>29 756 660</td>
<td>33 572 174</td>
<td></td>
</tr>
</tbody>
</table>

Note: The table provides a summary of high-level grant allocations to municipalities from 2008/09 to 2013/14.