

# The LTMS, Mitigation Policy, Greenhouse Gas Measurement and Carbon Tax

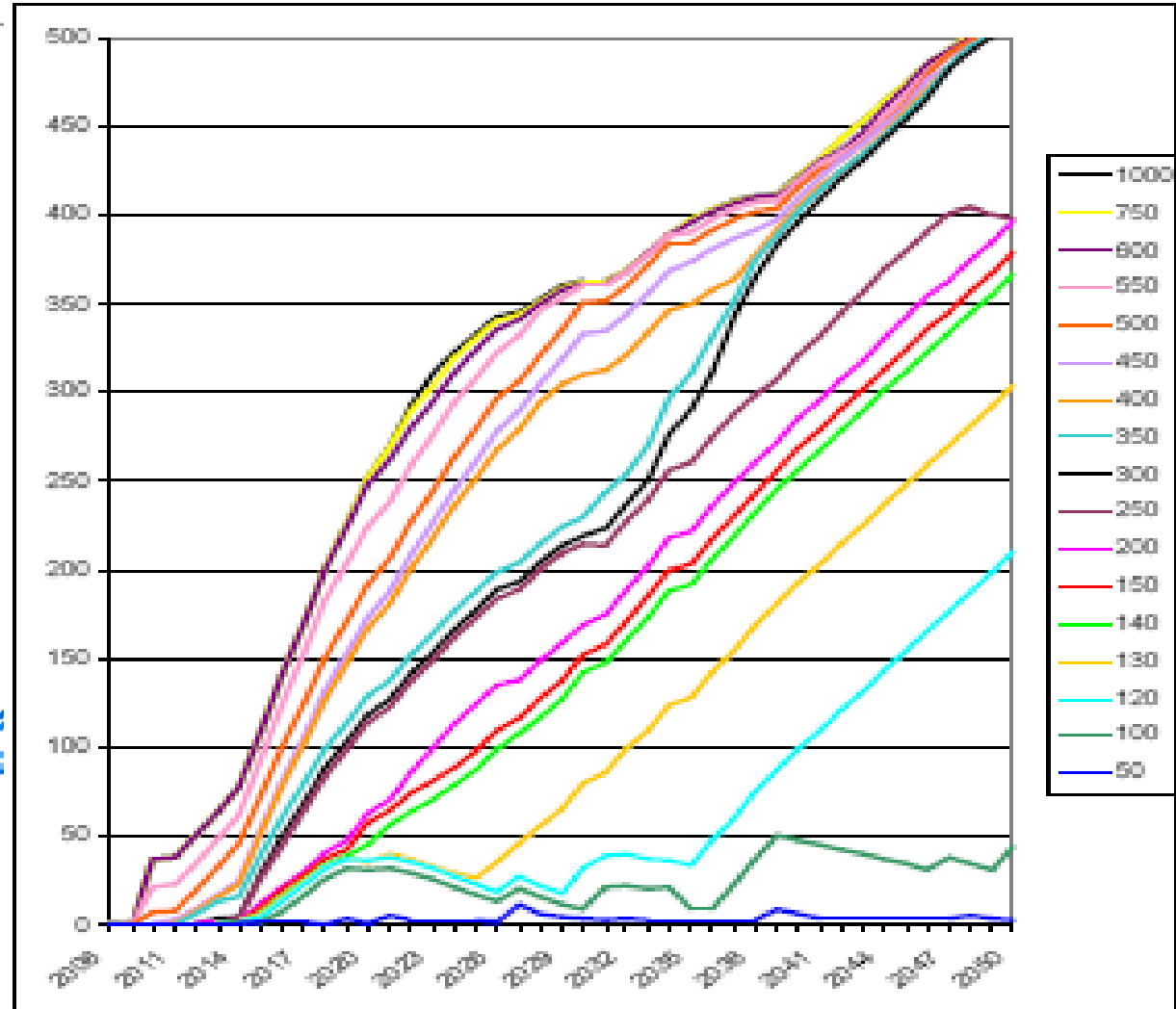
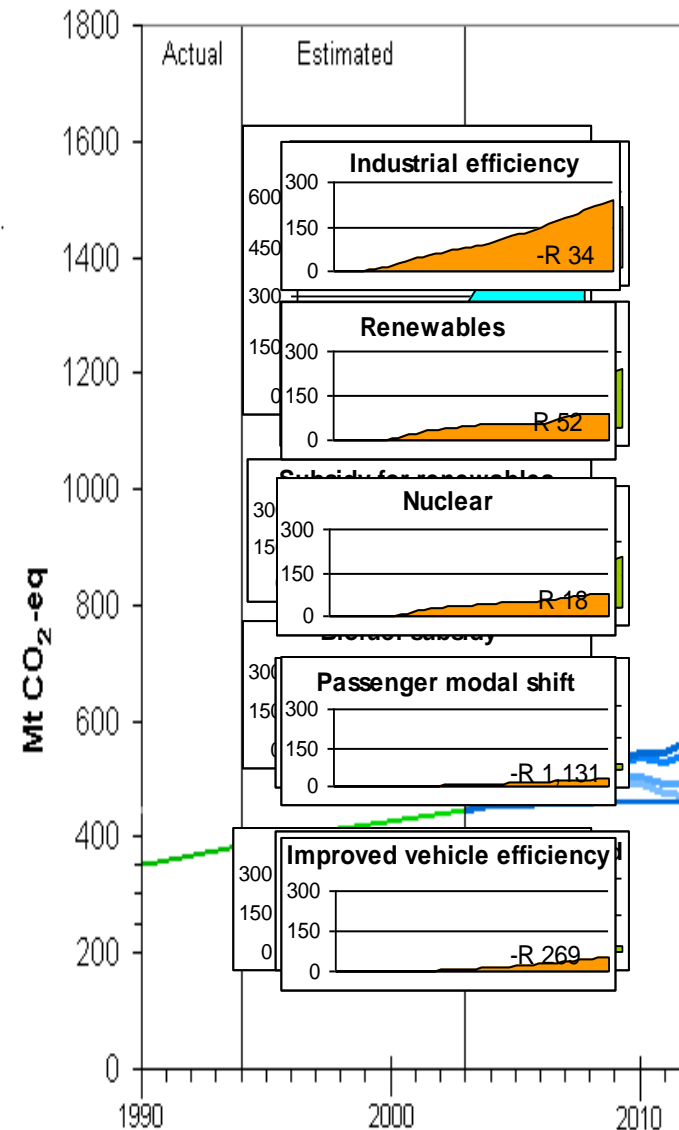
Presentation to the National Treasury's Carbon Tax  
Workshop, 16 March 2011, Development Bank of South  
Africa (DBSA), Vulindlela Academy, Midrand

# Presentation overview

- The Long-Term Mitigation Scenarios (LTMS) and the pricing of carbon
- Cabinet's 2008 directives, the 2009 Climate Change Summit and the 2010 National Climate Change Response Green Paper and the pricing of carbon
- South Africa's Greenhouse Gas (GHG) profile
- New developments in monitoring, reporting and verifying (MRV) our GHG emissions
- Greenhouse Gas (GHG) MRV challenges



# LTMS – The findings 2007



The marginal benefit of increasing the tax level provides some more detail: a large initial peak in the R100-200 region is followed by a small number of peaks, culminating in a small R750-800 peak, after which raising the tax level has minimal impact on emissions.

# Cabinet's 2008 Policy Directives

- In July 2008, the Cabinet approved the six broad policy directions themes to be addressed in a National Climate Change Response Policy, and included in these –
  - Treasury will study a carbon tax in the range modelled by the LTMS, starting at low levels soon and escalating to higher levels by 2018/ 2020, with sensitivity to higher and lower tax levels, and report to Cabinet on its findings.
  - Increasing the price on carbon through an escalating CO<sub>2</sub> tax, or alternative market mechanism



# The 2009 Climate Change Summit

- “Following active and vigorous discussions and debates around South Africa’s policy response to climate change, there was widespread consensus on –
  - ...putting a price on carbon. The most appropriate mix of instruments (markets, taxes, incentives and GHG standards) to achieve this requires further work.”
- Immediate priorities include –
  - Completion of the Treasury report on options to implement a price on carbon this year



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# The 2009 Climate Change Summit (Cont.)

- The following areas of divergence required more discussions –
  - On economic instruments, most participants felt that taxes, emissions trading, incentives and subsidies could play a role. Some felt that a double dividend (both GHG emission reductions and socio-economic benefits) could be achieved by recycling the revenues of a carbon tax or auctioning allowances for domestic GHG emissions trading, while others cautioned about the potential impacts of increased taxes in the current financial context, as well as concerns about ear-marking of revenues. Some participants proposed a pilot phase for domestic emissions trading, which could be voluntary initially and develop into a mandatory cap-and-trade system.



# The 2010 National Climate Change Response Green Paper

- 5.4.3 Use market-based policy measures such as an escalating carbon tax to price carbon and internalise the external costs of climate change. The use of such market-based policy measures should be aimed at using the market to motivate or drive the diversification of our energy mix, the implementation of far reaching energy efficiency measures and investments in the development of new and cleaner technologies and industries. Furthermore, some form of partial on-budget funding for specific environmental or social programmes may be considered to promote the long-term benefits of the carbon tax policy and help to minimise potential adverse impacts on low income households and trade exposed sectors.



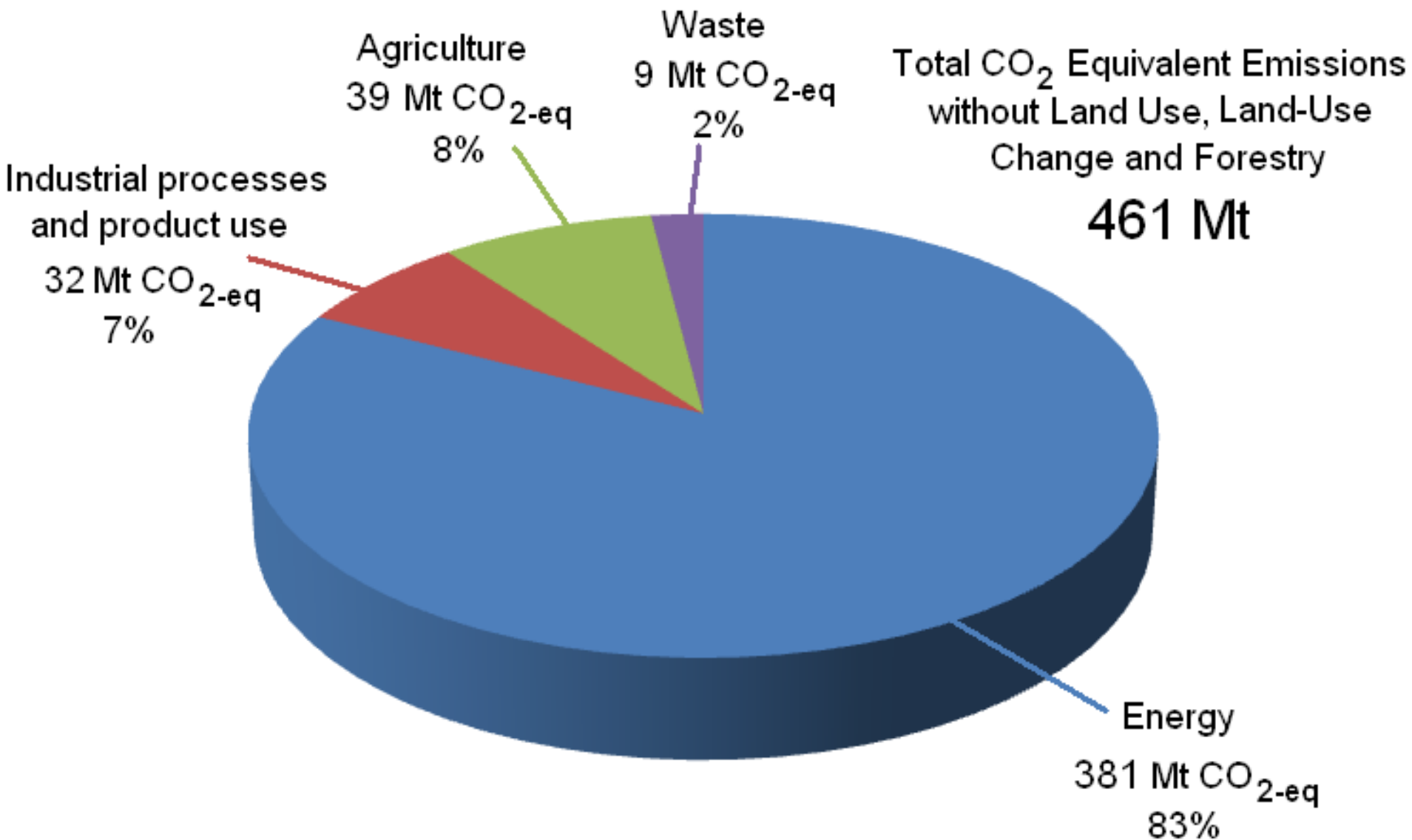
# The 2010 National Climate Change Response Green Paper (Cont.)

- 5.5.4 Continue to develop and implement an escalating CO<sub>2</sub> tax on all energy related CO<sub>2</sub> emissions, including process emissions from the coal to liquid fuel process.
- 5.6.7 Implement the flat rate specific excise tax based on passenger vehicle carbon emissions which applies to each gram CO<sub>2</sub> vehicle emissions above a target range and investigate expanding the emissions tax to include other categories of motor vehicles.

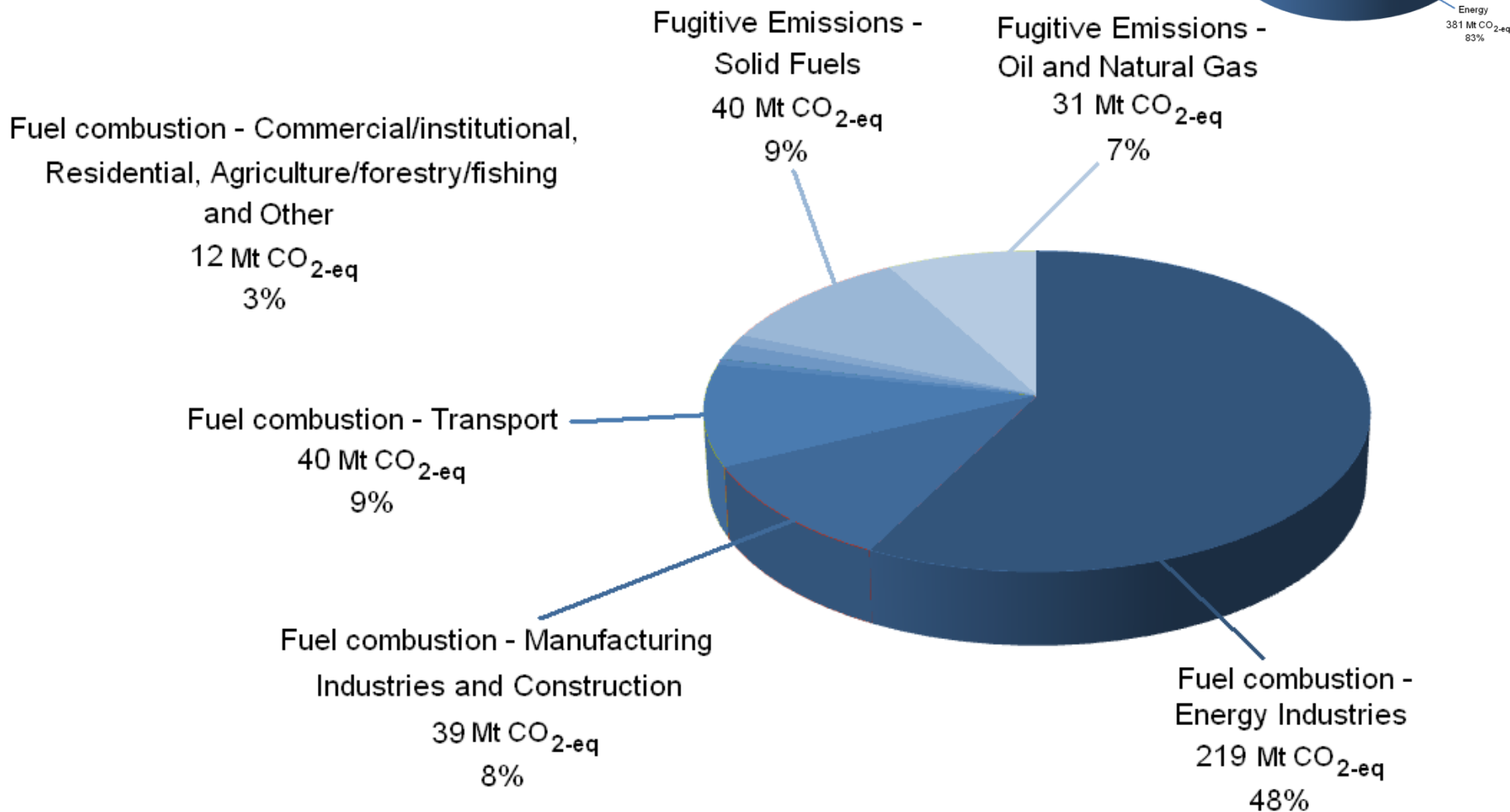
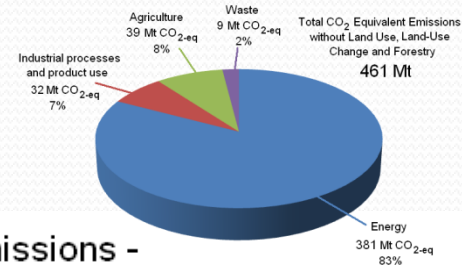




# South Africa's GHG profile (2000)

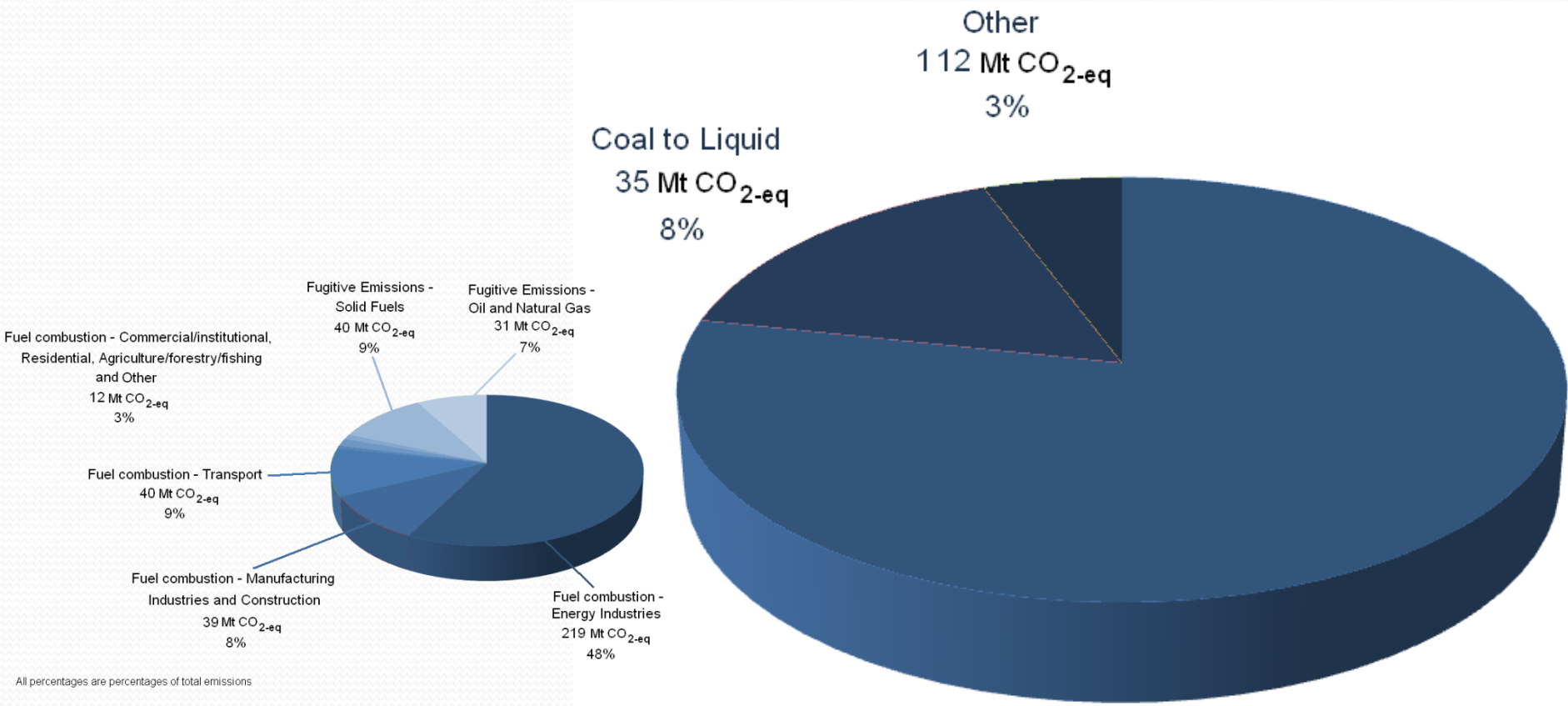


# South Africa's GHG profile – Energy Emissions



All percentages are percentages of total emissions

# South Africa's GHG profile – Fuel Combustion Energy Industries

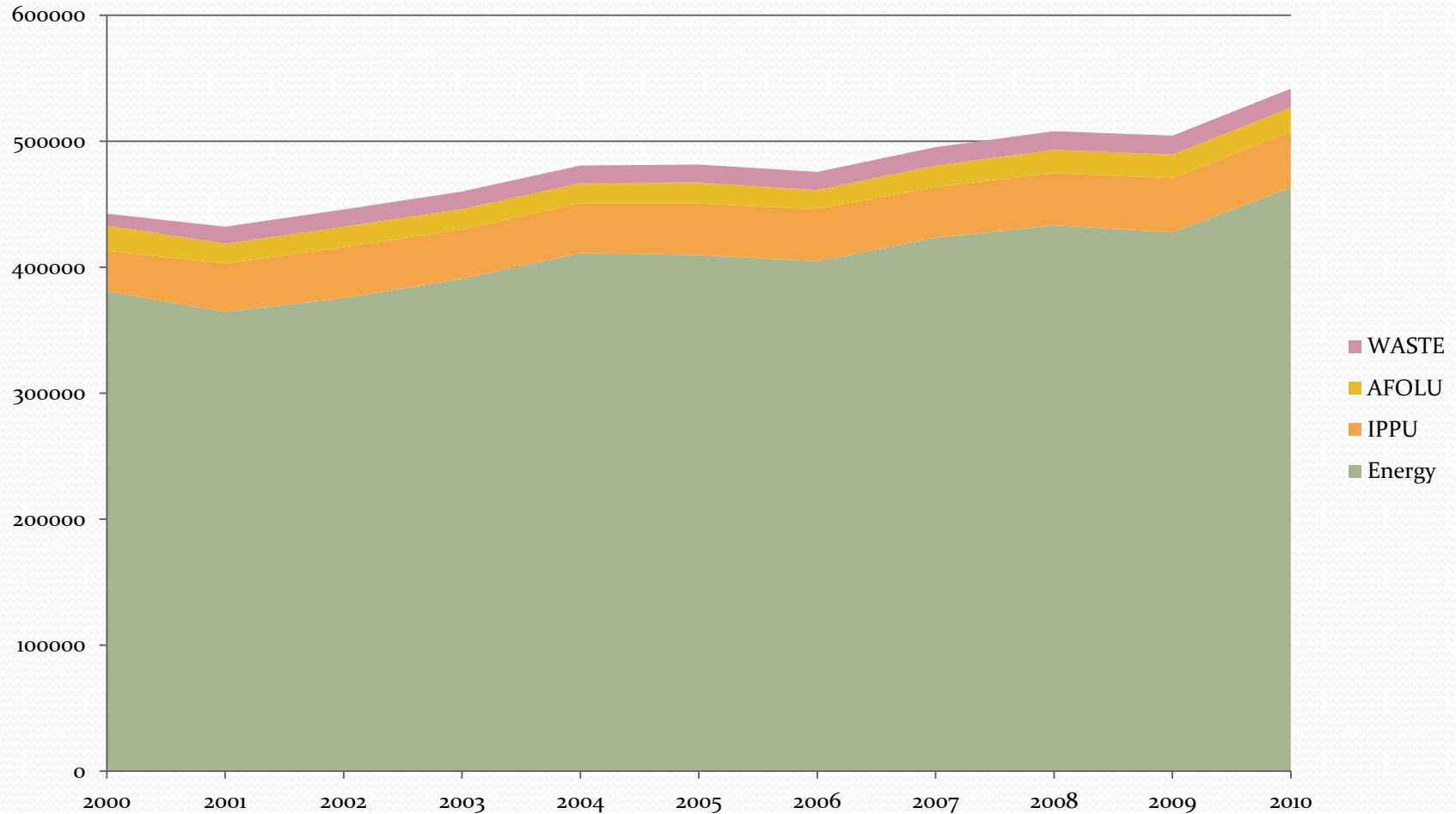


All percentages are percentages of total emissions

Coal-fired power stations  
172 Mt CO<sub>2</sub>-eq  
37%

All percentages are percentages of total emissions

# South Africa's GHG profile – Initial update figures



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# GHG MRV – The Green Paper

- In order to monitor, verify and report mitigation progress and the efficacy of South Africa's mitigation interventions, South Africa will –
  - 9.2.3 Develop, test and commission a web-based greenhouse gas emission reporting system as part of the National Atmospheric Emission Inventory component of the South African Air Quality Information System by 2012.
  - 9.2.4 Require the mandatory submission of greenhouse gas emission data to the National Atmospheric Emission Inventory by all significant emitters and compilers of greenhouse gas emission related data and/or proxy data by 2013.
  - 9.2.5 Publish an annual report ...



# GHG MRV – SAAQIS Phase II

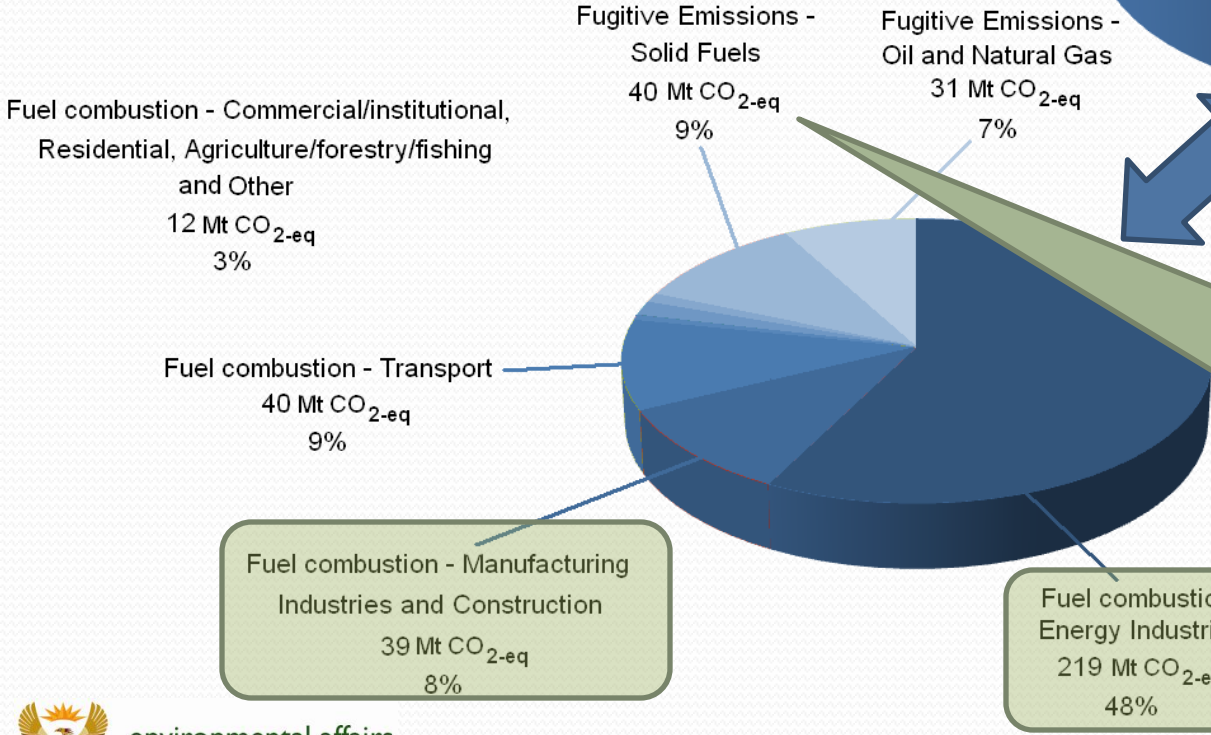
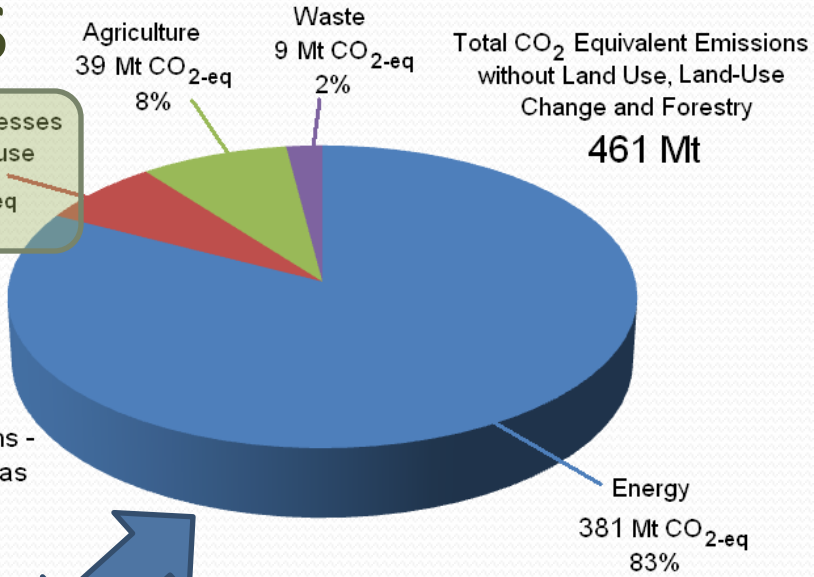
- The tender process for the implementation of the South African Air Quality Information System (SAAQIS) Phase II - National Atmospheric Emission Inventory Project has been concluded and the project will now formally commence
  - Local and international systems reviews ~July 2011
  - System architecture and functionality description ~ September 2011
  - Pilot reporting system starts in end 2011 and ends ~April 2013
  - System launch with regulations mid-late 2013



# GHG MRV Challenges

Direct measurement may be possible

Industrial processes and product use  
32 Mt CO<sub>2</sub>-eq  
7%



Fuel combustion - Manufacturing Industries and Construction  
39 Mt CO<sub>2</sub>-eq  
8%

Fuel combustion - Energy Industries  
219 Mt CO<sub>2</sub>-eq  
48%

New research by the Chamber of Mines appears to suggest that this figure should be reduced by 95%!



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sustainable  
future



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ATTENTION**



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