

Long Term Mitigation Scenarios For South Africa

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Overview

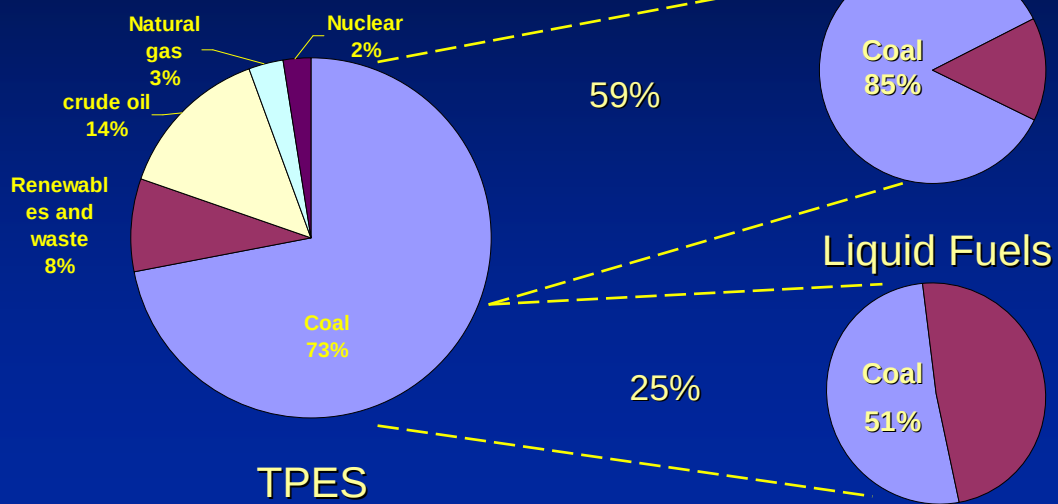
- Energy supply
- LTMS Objective
- LTMS Process
- Modelling Challenges
- Output



SA Energy Supply

● Emissions intensity

- 7.2 (t CO₂/capita)
- 0.7 (kg CO₂/2000 US\$ PPP)



LTMS Objectives

- Two sets of key objectives:
 - Robust, broadly supported recommendations for a long-term national climate policy
 - Develop a sound analytical basis for SA's negotiating position on post-2012

Outcome

- Cabinet endorsed (2008) peak, plateau and decline emissions trajectory
- Initiated a process to develop formal policy to adopt a legislative, regulatory and fiscal package

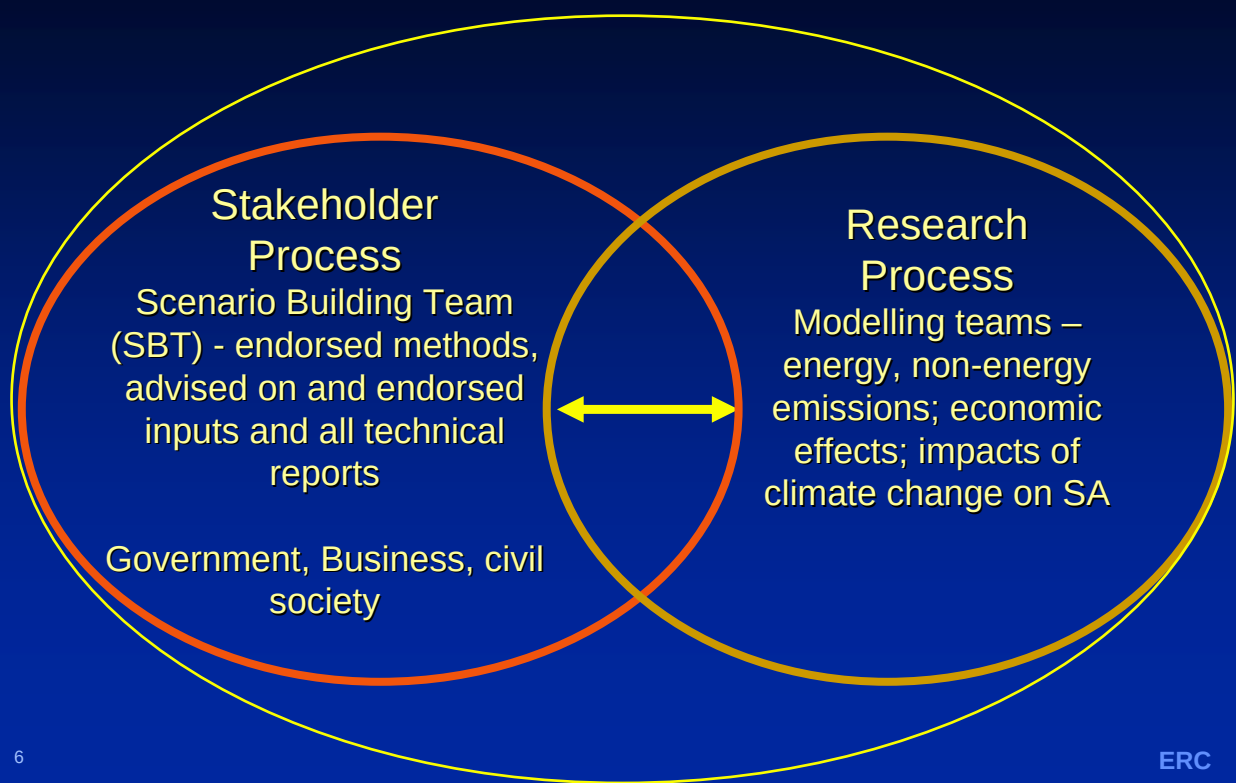
LTMS Process

- LTMS is a Cabinet-mandated process (2006)
- Lead by Department of Environmental Affairs and Tourism



- Cabinet approval (2008)

Process



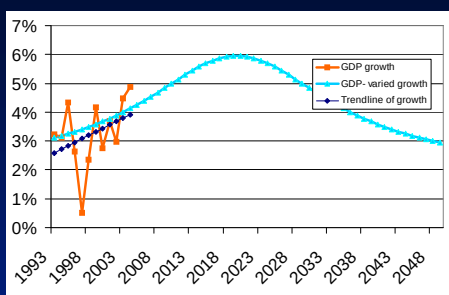
Emissions scenario-building process

1. Two basic scenarios:
 1. Growth Without Constraints (business as usual / baseline)
 2. Required by Science – emissions reductions in line with requirement for global reduction of emissions
2. Modelling of mitigation options or ‘wedges’
3. Combination of ‘wedges’ into several mitigation scenarios – moderate, cheaper wedges into ‘start now’, and more ambitious wedges into ‘scale up’
4. Consideration of robustness of scenarios against possible global developments

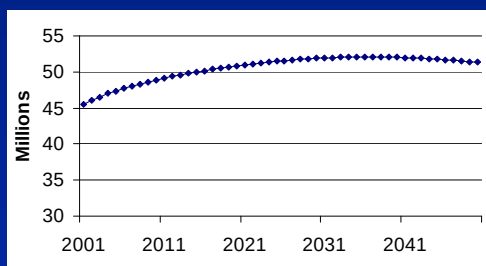
- Base year emissions estimated for 2003, mainly from 1990/1994 national GHG inventory
- Three different modelling processes:
 - Energy emissions (MARKAL)
 - Industrial process emissions
 - Other non-energy emissions (agriculture, forestry, savanna thickening, etc)
- All modelling inputs, plus modelling methodology, discussed and endorsed by the SBT

SBT Challenges

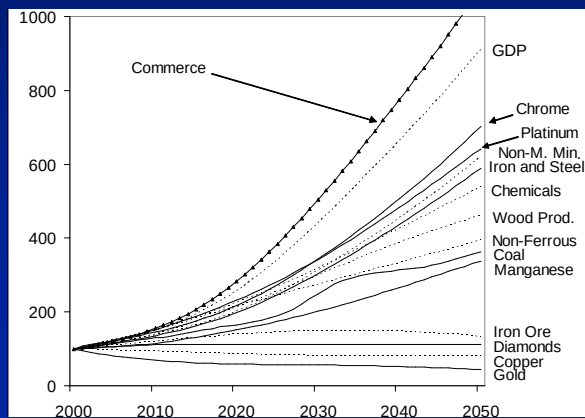
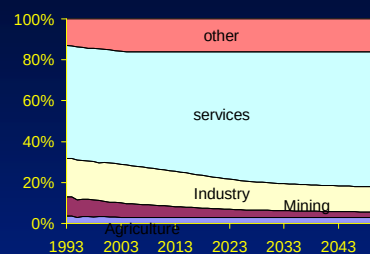
Economic Growth



Population growth

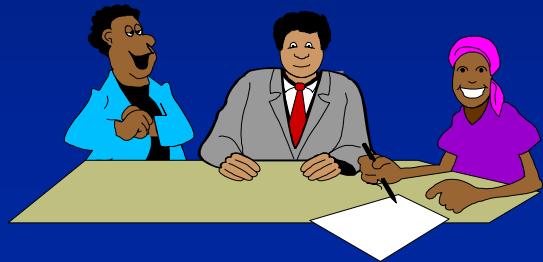


Sectoral growth and contribution to GDP

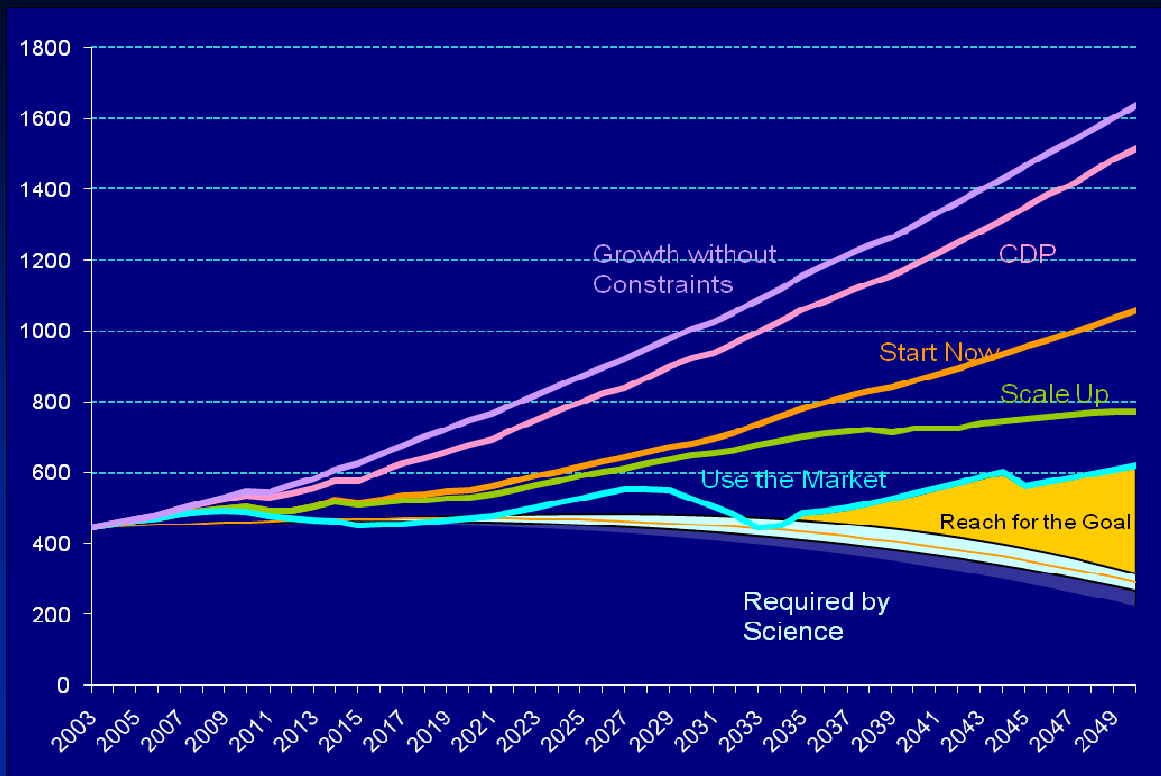


SBT Challenges contd

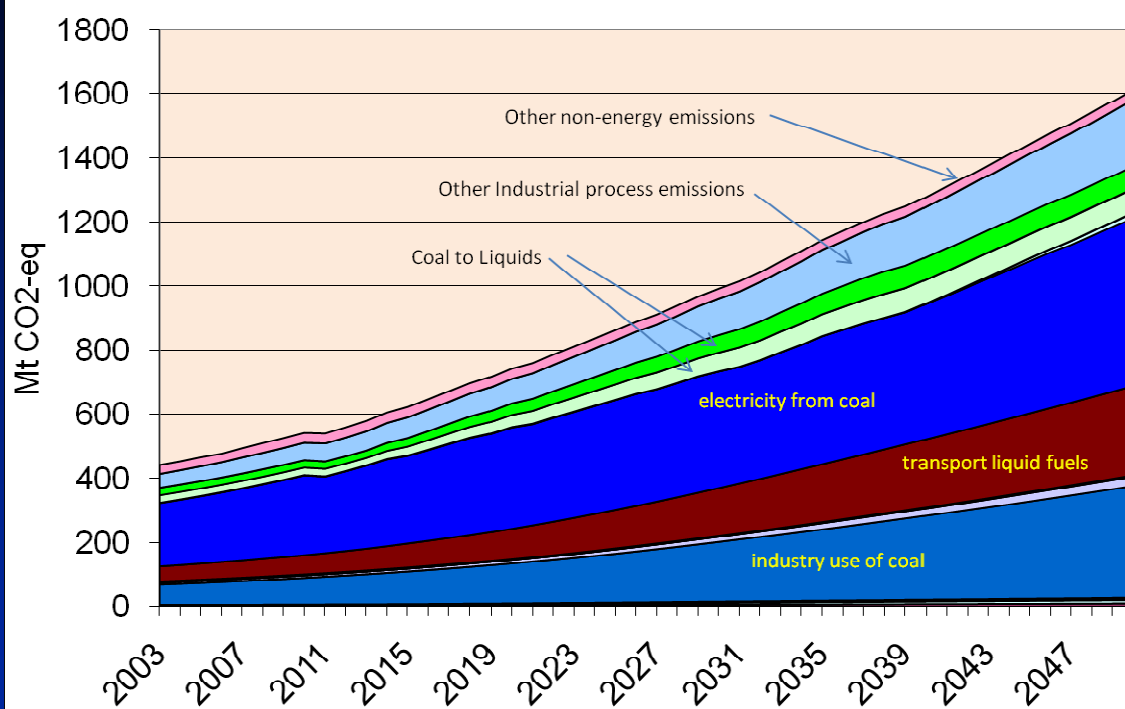
- Household disaggregation (income and fuel)
 - Rural / urban migration
 - Electrification (rate and impact)
 - Household income
- Energy intensity
 - Increasing/decreasing
- Transport
 - Road/rail
 - Private/public
- Technology transfer
 - Energy efficiency
 - Supply side technologies

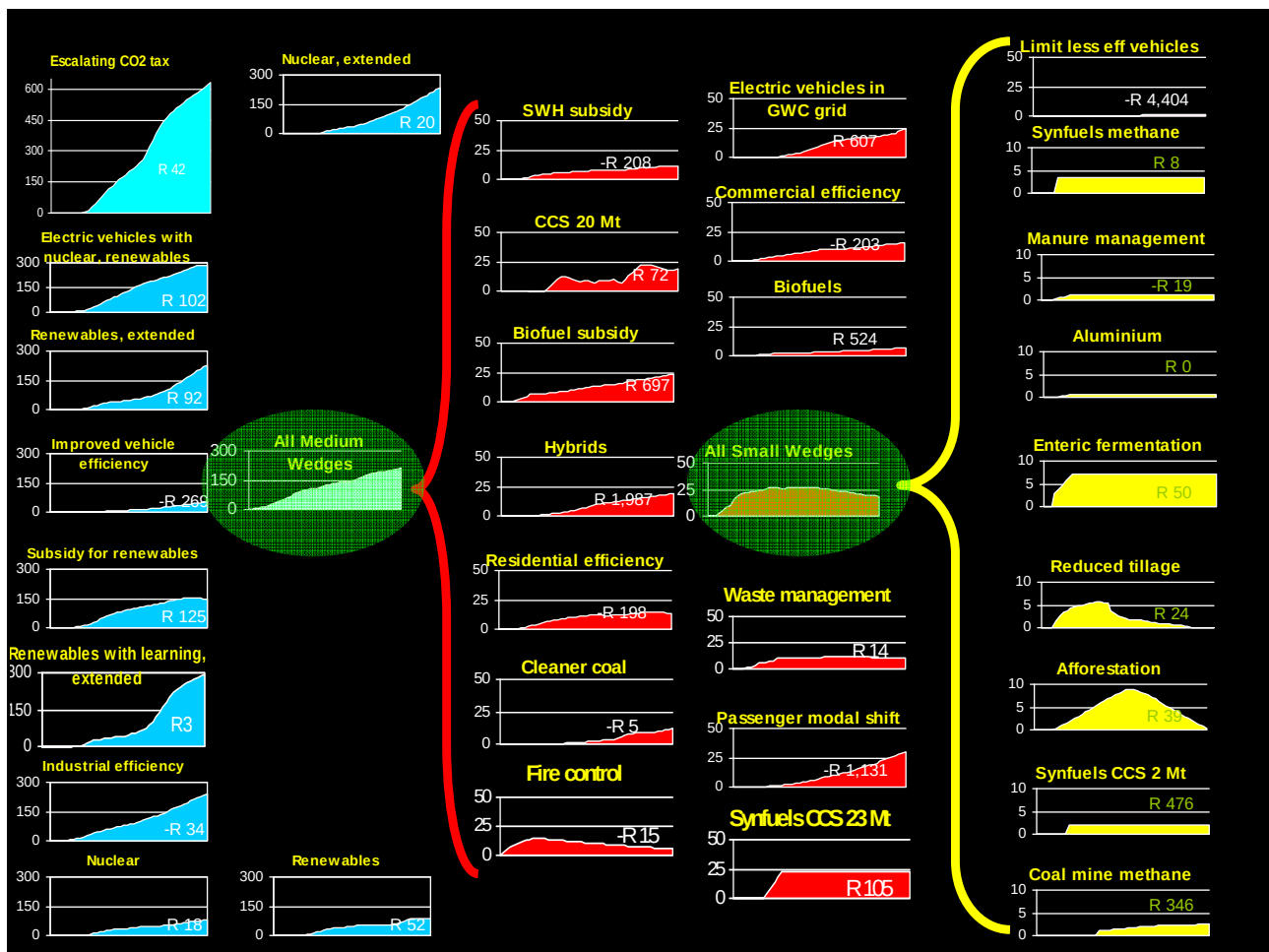


Final emissions scenarios



2050 emissions are 4 x 2003 emissions





LTMS reports

- Technical Reports
- Process Report
- Economy-wide Modelling
- Impacts, Vulnerability and Adaptation

Available on the ERC website – www.erc.uct.ac.za

Or the DEAT website – www.deat.gov.za

Use the Market disaggregated

