



South Africa: Current Status of its Energy Sector and Possible IEA Engagement



25-26 February 2009

**Sang H. YOON, Sub-Saharan Africa Programme Manager,
Division for Asia Pacific, Latin America and sub-Saharan Africa
Directorate of Global Energy Dialogue**

© OECD/IEA - 2009



South Africa – a force to be reckoned with

- Economy: 28th in the world, **8th among non-members**, largest in Africa
- Interesting energy economy:
 - **A major coal producer** and exporter and developed synthetic fuels industry
 - Very polluting energy economy, but progressive in COP negotiation.
- Participation in G8 summits since 2005:
 - Involved in the Heiligendam Dialogue Process (HDP)
- Ad-hoc observer of IEA committees

© OECD/IEA - 2009



Objectives of the IEA visit (Feb 2-6, 2009)

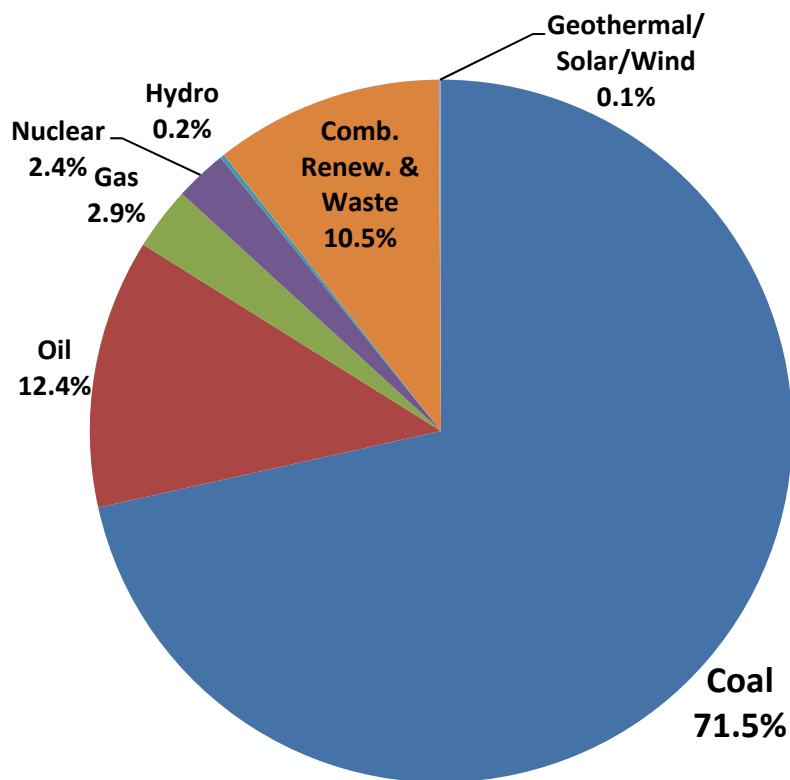
- Ascertain political and economic situation as well as energy sector development
- Encourage their active engagement in international cooperation including IPEEC
- Explore ways to increase interaction between IEA and South Africa

© OECD/IEA - 2009

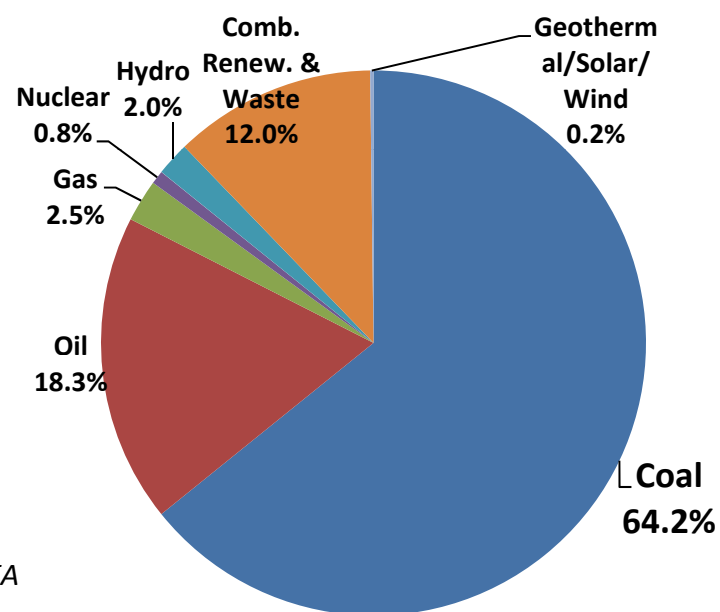


South Africa *coaler* than China

Share of South Africa TPES (2006)



China's TPES Share (2006)



Source: IEA database

Coal primarily for power generation and CTL production, while biomass is a main energy source in rural areas.

© OECD/IEA - 2009



Power Crisis 2008: a wake-up call for energy policy

- **Rolling blackout and power rationing** in early 2008
 - Reserve margin went down to 6%
- **Under-investment:** Government stopped Eskom from investing to build new power plants in 2001-04
- **Expansion plan: 40GW addition to 80 GW by 2025**
 - Nuclear 20GW, Renewable 1.6GW, Coal for the rest.
 - Construction of coal plants (9.6GW) started, but nuclear plant stalled.
 - *Funding sought after, but making electricity price cost-reflective is imperative.*

© OECD/IEA - 2009



CO₂ intensive economy – is this sustainable?

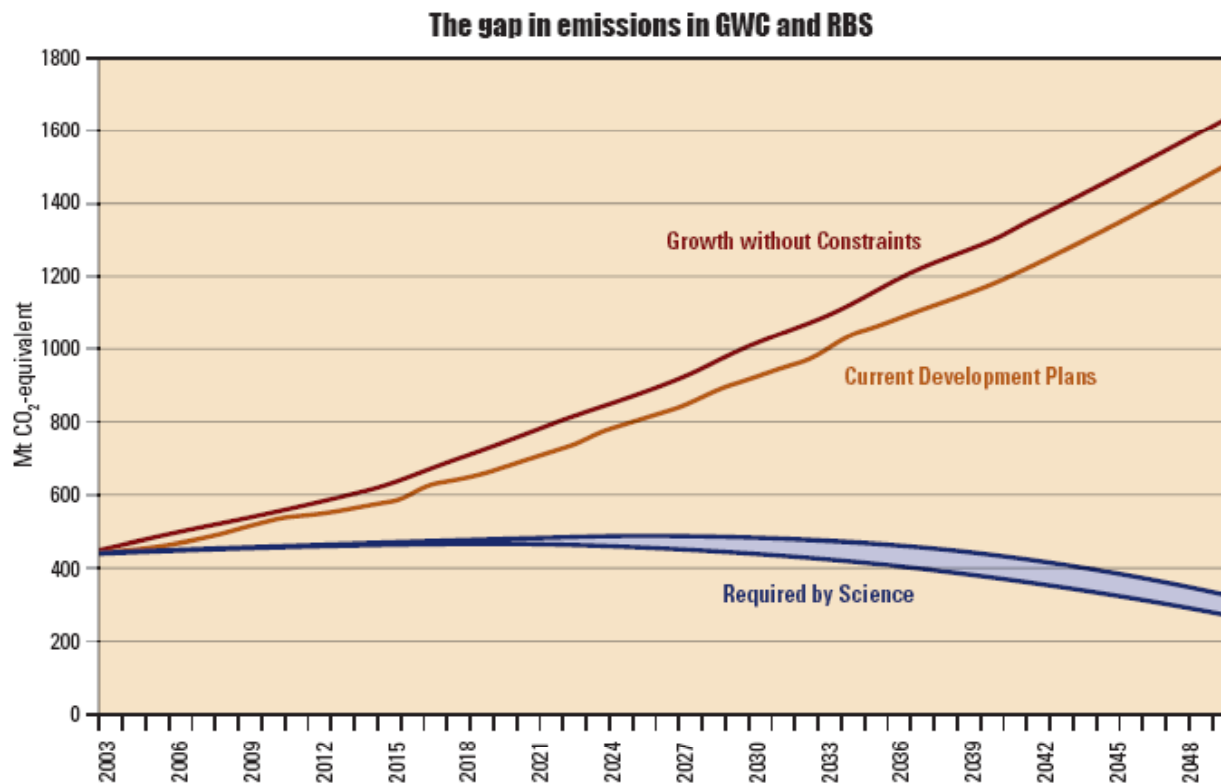
- 342 Mt of CO₂ emission, higher than Spain
- Policy papers on **Renewable Energy** (2003) and **Energy Efficiency** (2005)
 - Target of 10,000 GWh renewable contribution by 2013 and energy demand reduction of 12% by 2015
 - *hardly implemented, due to dire shortage of human capacity in the government*
- **Feed-in tariff of renewables** for power generation is too low, and needs to be increased.

© OECD/IEA - 2009



Climate Change Mitigation

...Progressive thinking alongside ours...



Source: Long Term Mitigation Scenarios, DEAT, South Africa

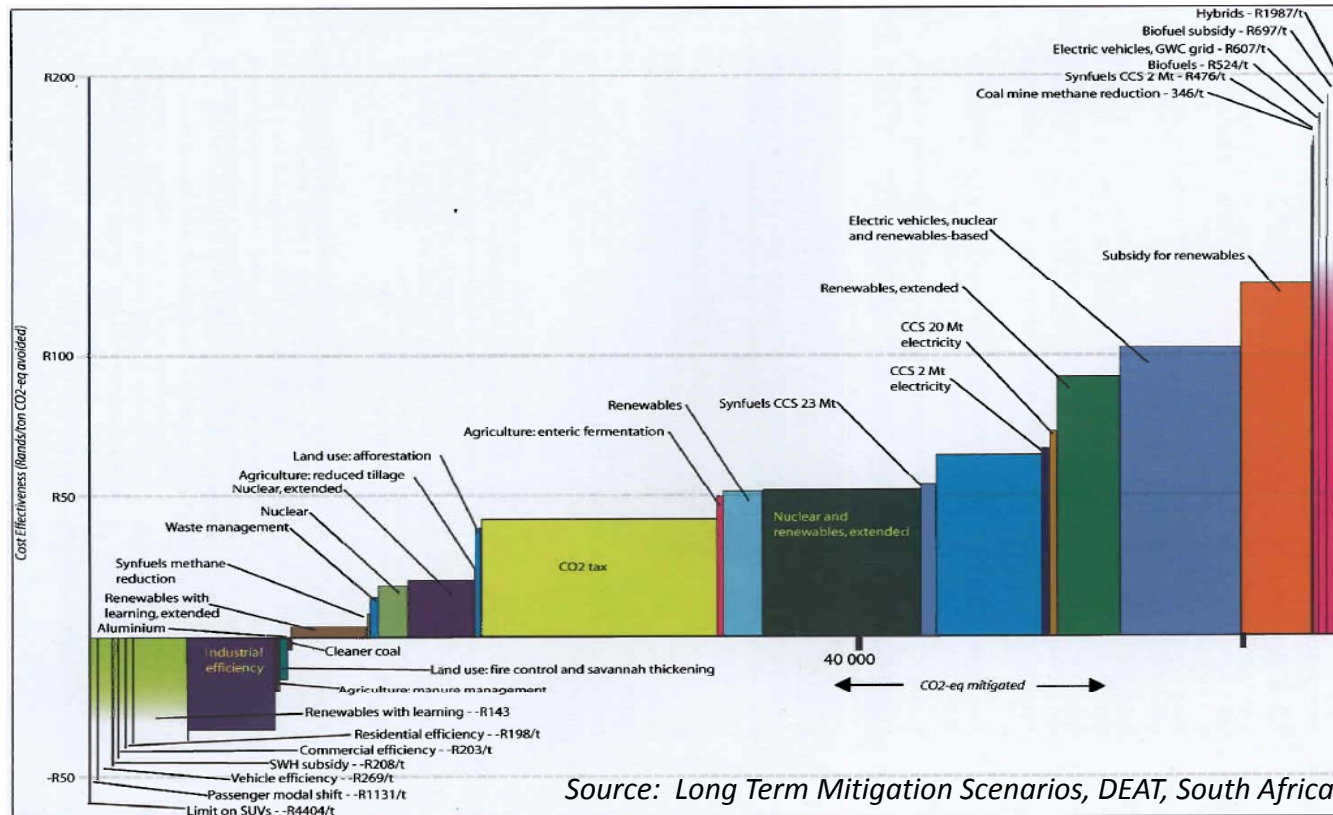
The Cabinet commissioned to produce the Long-Term Mitigation Scenarios (LTMS). The radical scenario targets reduction to 30-40% of 2003 level by 2050.

© OECD/IEA - 2009



Mitigation cost curve ...a catalyst for action?

Mitigation Cost Curve in South Africa



Who will pay for the cost for various measures, domestically and internationally? -- That is the question.

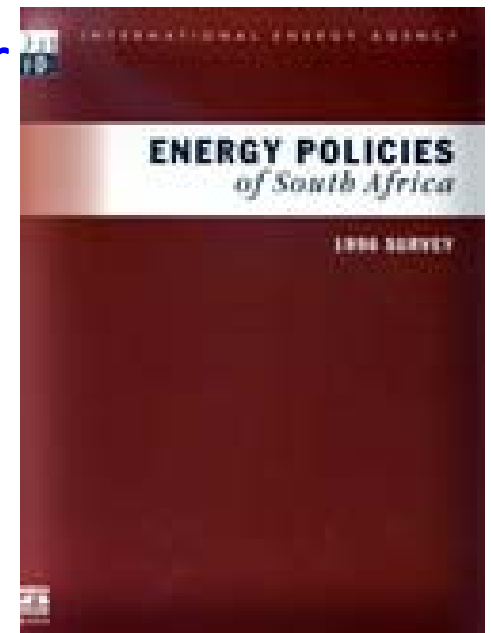
© OECD/IEA - 2009



Collaboration with South Africa

- in 1990s, IEA had robust relationship -

- **Survey of Energy Policies of South Africa (1996)**
 - Requested by the then Energy Minister
 - Broad sets of observations:
 - Governance, statistics, R&D
 - energy efficiency, environment
 - electricity, coal, liquid fuels, gas,
 - renewables
 - regional cooperation
 - Input to *South Africa White Paper 1998*
 - Memories of working with the IEA still remain in South Africa



© OECD/IEA - 2009



Since 2005 G8, cooperation resumed

There have been some engagements since then:

- **NEET Workshop** (Johannesburg, Feb. 2007) and involvement in 6 Implementing Agreements
- Regular Participation in **Coal Industry Advisory Board**
- **Rural Energisation WS** (May 2008), and **Efficiency Indicators WS** (Jan 2009)

Potential Key Partners would be:

- **Government:** DME, DFA, DST, DEAT, DPE, NERSA
- **Institutions:** SANERI, Univ. of Cape Town, NBI
- **Companies:** Eskom, Sasol

© OECD/IEA - 2009



Prospect of Sustained Engagement with South Africa and the Region

1. Participation in:

- Implementing Agreements:
- IEA projects: e.g., Rural Energisation, 2nd generation biofuels

2. Collaboration through international cooperation:

- Joining technology roadmapping efforts for ETP 2010:
- Participation in IPEEC:

3. Some more ideas:

- Revisiting the Energy Policy Review?
- Statistics and Indicators training?
- *Beyond South Africa: Delve into energy poverty in sub-Saharan Africa in general?*

© OECD/IEA - 2009