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# DRIVERS FOR OUR CLIMATE CHANGE APPROACH



- **Demand for energy is increasing and affordability remains key**

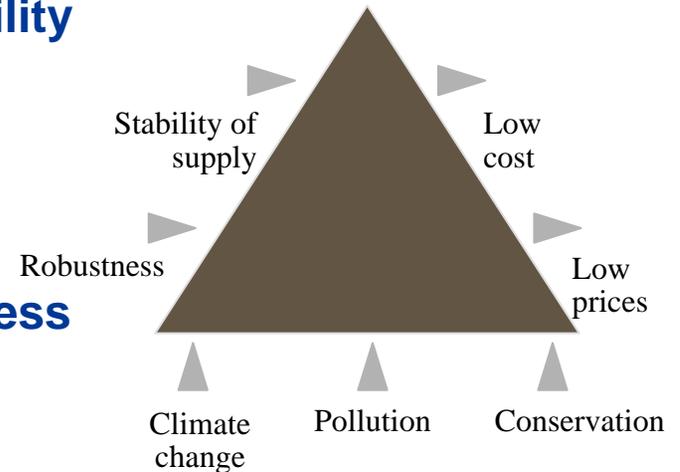
- Balance and trade offs between affordability, security of supply, low carbon future, environmental Concerns and opportunities

- **International and National Climate Policy process**

- Future policy and penalties
- Funders requirements

- **Eskom has made climate change a key priority**

- Coal currently constitute 90% of our generation fleet
- Long term nature of the electricity business
- Sustainability aspirations and impact on the environment
- Diversification strategy impacts on the competitiveness of South Africa, and energy security
- We need to ensure that technologies are suited for local conditions - necessity for research and development
- Carbon financing provides opportunities to reduce the financial burden
- Adaptation is a necessity
- Addressing public perception



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# ESKOM'S SIX STEP APPROACH



The Eskom Climate Change strategy seeks to address the challenge through a comprehensive **Six Point Plan**



SOURCE: Eskom 2008 Annual Report

*Hereafter referred to as “the white paper”*

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# GENERAL COMMENTS



- Eskom has made detailed comments on the white paper to the Department of Environmental Affairs (DEA). These can be made available to the Portfolio Committee if so desired. We will also make reference to our comments on the discussion document produced by the DEA; Defining South Africa's Peak, Plateau and Decline Greenhouse Gas Emission Trajectory which is referenced in the white paper.
- A formal national policy document on climate change is a welcome initiative as it is required to create certainty, outline objectives, key priorities and activities and key expected outcomes for all stakeholders. This paper has provided an overview whilst outlining some of these key priorities, activities and outcomes whilst taking into consideration that this will be a reiterative process for the country and for all stakeholders involved.
- Details on each of the climate change response activities proposed, role of various stakeholders and their accountability, assumptions made, national accounting systems for verification purposes, co-ordination of all policies and activities including funding opportunities still need to be further defined. The means of implementation for climate change activities especially in terms of funding is extremely important for the electricity sector. The IRP 2010, for example, based on a low carbon future has a price tag of R856 bn.
- A well researched, detailed and consulted carbon financing strategy is crucial. This must include an assessment of all market and non-market instruments available to the country and their macroeconomic impact. A blanket carbon tax, for example, is a blunt instrument that will not produce the desired results to reduce emissions and change behaviour. It may in fact result in pervasive behaviour (exporting emissions) and have a negative impact on emissions as well as greater economic impacts such as job losses.
- The vulnerability of the electricity sector needs to be acknowledged in the white paper. This is so that future planning takes into account the impact of climate change on the sector. The greatest impact is the unavailability of water, infrastructure loss and damage, etc.,

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# Focussed comments: Mitigation section (1)



- For Mitigation, it is envisaged that each “element” proposed will be presented separately over time through a consultation process where details on each of the elements will be outlined in terms of the assumptions, the data used, the plans, the governance, the institutions, the funding including its monitoring and evaluation. (Emissions trajectory, national carbon budget, inventory, sector plans).
- A national emissions trajectory, against which the combined national impact of mitigation actions will be measured is detailed in the DEA DOCUMENT: DEFINING SOUTH AFRICA’S PEAK, PLATEAU AND DECLINE GREENHOUSE GAS EMISSION TRAJECTORY (BCC11/06/01/01)
- Eskom welcomes the approach of a “benchmark.” As stated the trajectory is to be used as a benchmark for measuring the impact of mitigation efforts. As such it could be argued that even if the trajectory is inaccurate, it still works as a benchmark because it is a peg in the ground against which all future emissions can be measured and compared. As such then we see it as a yardstick for measurement and not a target.
- Given the wide range for the starting position of the Government BAU for the country as a whole, the expected electricity contribution (using the IRP number) would be between 39% (for the high BAU) and 49% (for the low BAU).
- We have done some calculations that show that the current policy-adjusted IRP exceeds the upper bound of the Copenhagen aspiration but nears this level after 2025. It does indicate, however, that the lower bound BAU is probably too low in that the current levels vastly exceed this.

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# Focussed comments: Mitigation section (2)



- We provide alternate numbers for the BAU in 2020 and 2025 which may fall into the range proposed in the explanatory note should the electricity sector work on 50% of the carbon space. While this may appear to be presumptuous, it is based on achieving emissions reductions in the electricity sector as proposed in the IRP policy adjusted. It must be noted that this is itself is an ambitious plan and can only be achieved with funding and technology support.
- In addition Eskom is completely supportive of an emissions reduction aspiration for the country as indicated in its own plans and climate change strategy.
- The benchmarks and aspirations we work towards must be pragmatic and cognisant of national circumstances while at the same time challenging enough for the country to increase its awareness of important issues such as energy efficiency and the contribution each of us can make towards emissions reductions.

|  |         |         |
|--|---------|---------|
| IRP 2010 emissions (POLICY ADJUSTED)                                   | 291 Mt  | 275 Mt  |
|  | 1050 Mt | 1129 Mt |
| Copenhagen -34% and -42%   | 693 Mt  | 655 Mt  |
| If we assume the 50% for the whole sector<br>(Eskom and non-Eskom) BAU | 882 Mt  | 948 Mt  |
|  | 693 Mt  | 655 Mt  |

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# Comments: National Carbon Budget

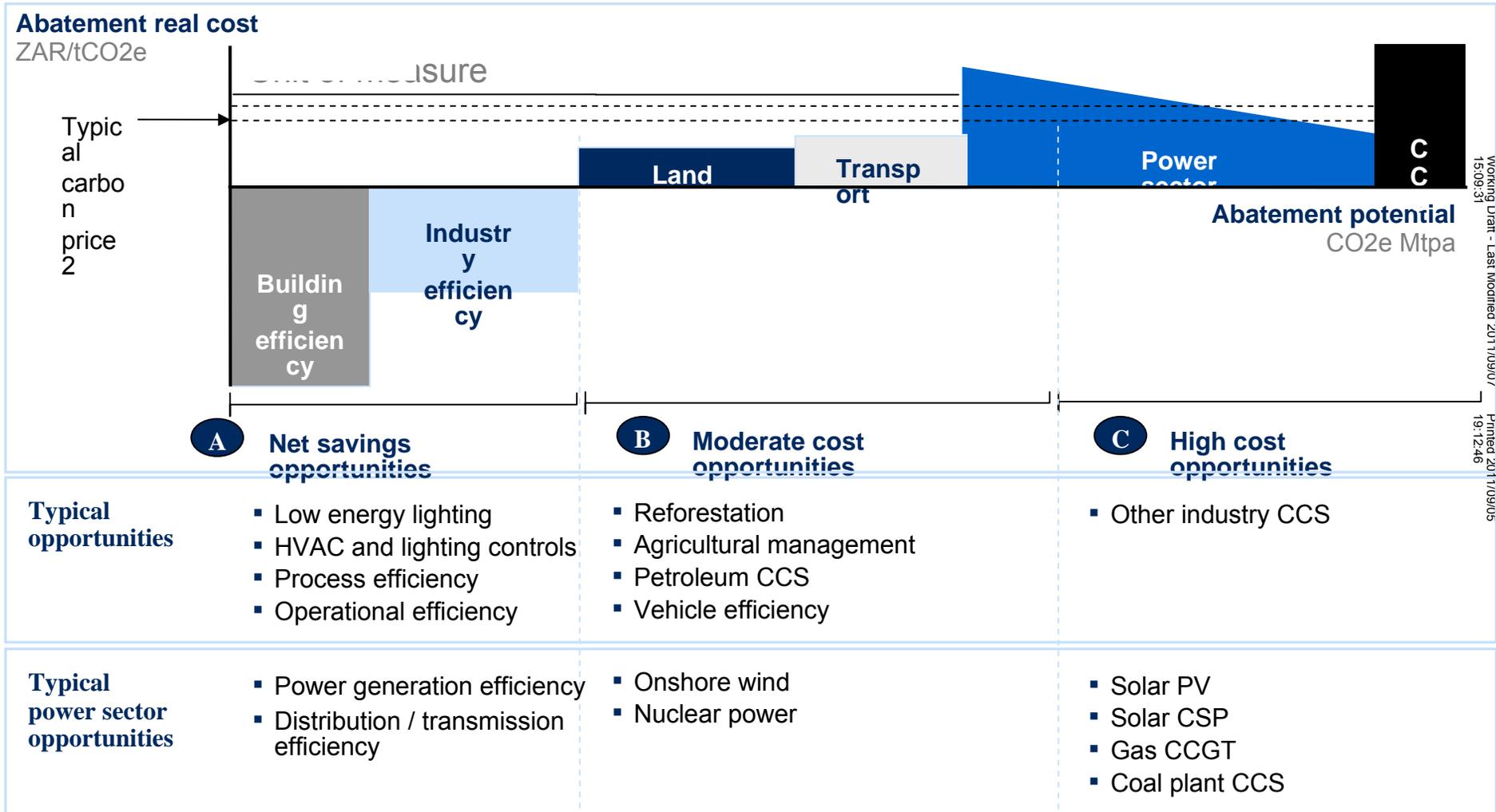


- It is important that this is a bottom up exercise that is fully consulted with all stakeholders to ensure that South Africa's carbon budget is reflective of the country's resources, capabilities and aspirations for sustainable growth. It is strongly recommended that the NCB process is preceded by the development of a cost abatement curve for the country which will highlight the capabilities and potential for the different sectors. In addition:
  - The definition and review of the national emissions trajectory must include analysis of data in the different sectors and not just informed by historical emissions
  - The differentiation between what is included in the NCB and what is included in the abatement curve
  - An analysis of the myriad of market and non market instruments available and how these can be applied in South Africa. There cannot be a one size fits all solution. This must be accompanied by a macroeconomic analysis of the impact of such instruments.
- It is strongly recommended that South Africa develops a cost abatement curve in order to quantify the mitigation potential, potential savings and costs thereof. This should be a collaborative effort between a multistakeholder grouping similar to the LTMS exercise. (and further that we pursue a similar curve for adaptation).

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# A conceptual cost curve for South Africa shows 3 broad groups of abatement opportunities



1 Estimated based on Global GHG Abatement Cost Curve v2.1 and other country cost curves, with transport adjusted for petroleum CCS  
 2 A proposed carbon tax of ZAR75 – ZAR200/tCO2e in 2005 terms (~ZAR100-300 today); EU carbon price EUR13/tCO2e

# ESKOM'S KEY MESSAGES



- We can limit the devastating impact that climate change will have on the country by dealing with emissions globally. At the same time climate change provides opportunities for innovation, partnerships and leadership from the South African perspective.
- It is not a one company, sector, or government department challenge. It is a national challenge and we therefore need to address it as such. Synergistic relationships between government policy and enabling environments and multistakeholder engagement are crucial for this to work.
- The electricity sector is a key sector both for reducing greenhouse gas emissions and for positive socio-economic growth. It is important

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