

Climate Change and Air Quality



Energy and Climate Change in SA

Enerkey Colloquium

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5 April 2019



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA



Energy Emissions

- The Energy sector is by far the largest contributor to greenhouse gas (GHG) emissions in the country
- The sector accounted for 79.5% of the total gross emissions for South Africa

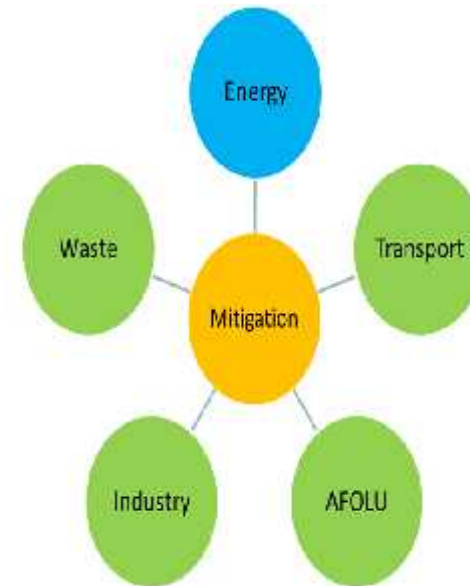


South Africa's Greenhouse Gas Mitigation Potential Analysis (MPA)

Mitigation Potential

- *Overall objective:* Present a set of viable options for reducing GHGs in key economic sectors...by identifying and analysing mitigation options - *Energy,.....*
- The abatement options for the power sector dominate abatement potential for the Energy sector – accounting for between and 79% and 89% of the total energy mitigation potential

MPA Sectors



MPA

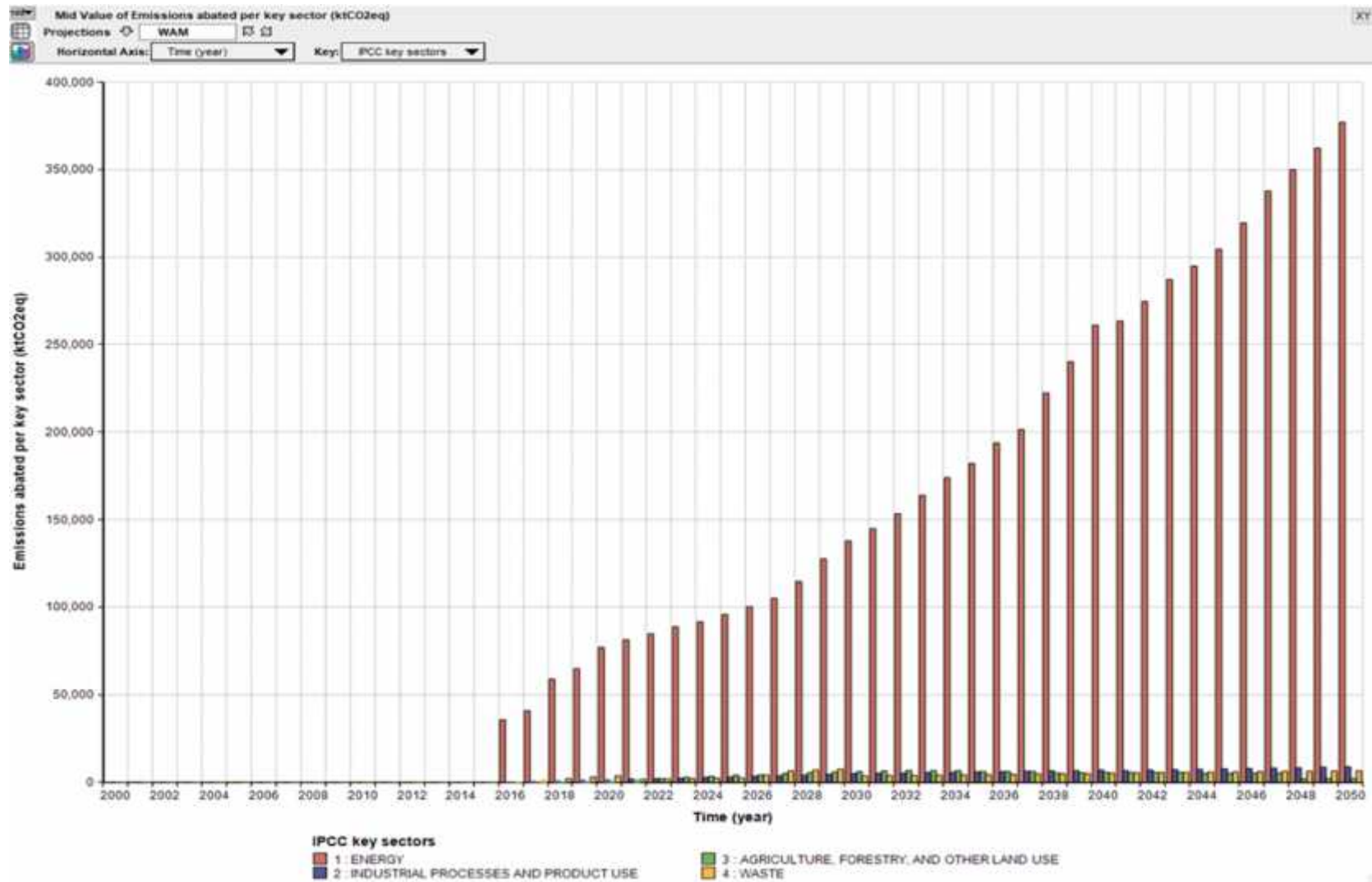
2014: Mitigation Potential for the RE measures & installed capacity required

Abatement measure		2020		2030		2050	
		ktco ₂ e	MW	ktco ₂ e	MW	ktco ₂ e	MW
Renewable Energy	Onshore wind	12,524	5,600	33,396	13,600	78,794	32,000
	Solar photovoltaic (concentrated)	8,921	3,700	20,977	8,700	54,227	22,500
	Concentrated solar power (parabolic trough)	1,966	700	5,897	1,700	11,009	3,000
	Biomass	900	250	2,699	750	11,471	1,500
	Import (hydro)	-	-	1,695	3,489	8,947	3,489
	Domestic (hydro)	-	-	-	-	-	-
	Total RE		24,311	10,250	64,664	28,239	164,448

Sector Potential

- Power sector analysis influenced by the IRP 2010
 - eg
 - Choice of measures
 - Annual built caps imposed on RE

MPA Update Preliminary Results: Breakdown of Mitigation Potential

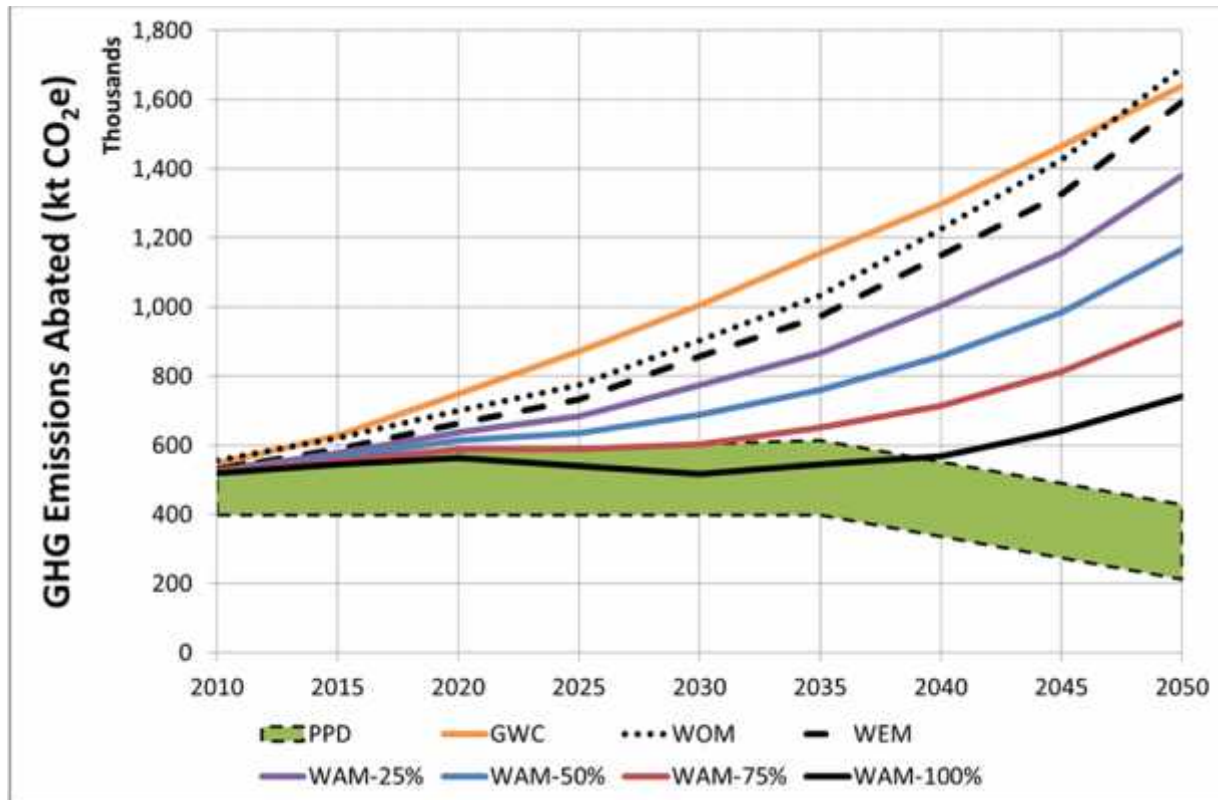


Reducing emissions in the energy sector

- key important facts – when considering how to reduce emissions:
 - The *electricity sector is the most cost-effective sector to reduce emissions in* – the technology is currently mature and available now (cleaner technologies), and there are far more options than there are in sectors
 - *Costs of clean energy is decreasing rapidly* - cheaper to invest in low-carbon technology than in high-carbon technologies such as coal plants
 - Globally – *decline in demand for coal & lack of appetite to invest in fossil fuels*

This means that in future, emissions from the electricity sector should be a far smaller percentage of national emissions than they are now. Otherwise, other sectors will face disproportional costs.

National Mitigation Potential

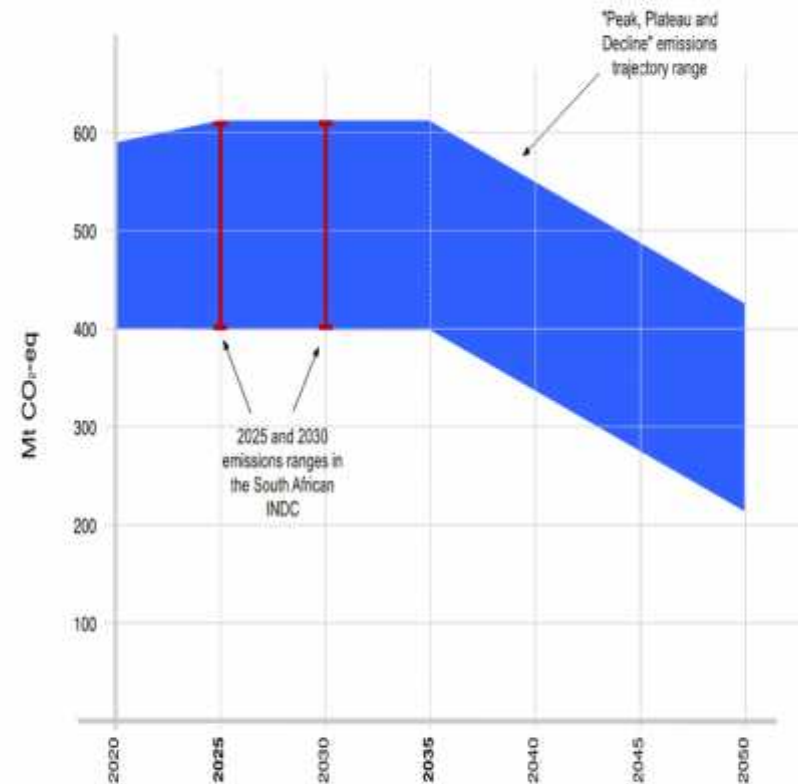


National Climate Change Policy Response



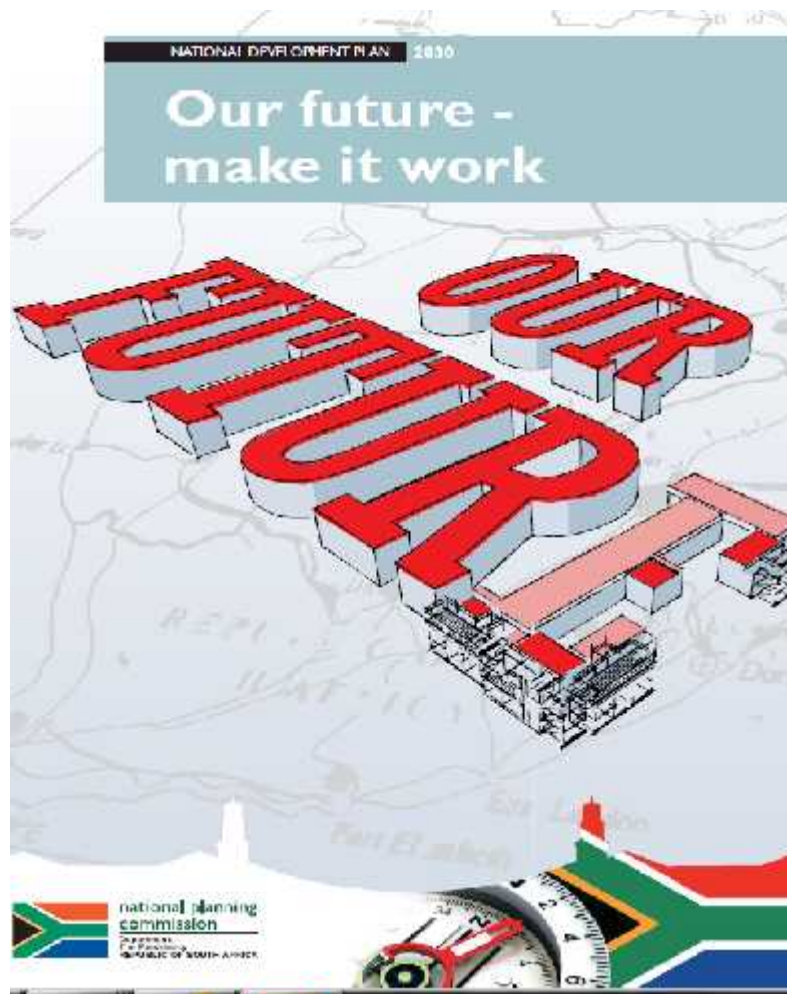
National Response: SA NDC

Key outcomes of COP 24:
-Rulebook agreed - *Now time to implement*



National Response

NDP...(1)



- The NDP 2030 – energy sector that promotes:
 - Economic growth and development through *adequate investment in energy infrastructure*
 - Social equity through *expanded access to energy at affordable tariffs*
 - Environmental sustainability through *efforts to reduce pollution and mitigate the effects of climate change*

National Response NCCRP....(2)

VISION

Transition to a climate resilient and lower-carbon economy and society

National Climate Change Response Policy

OBJECTIVE

Manage CC impacts through interventions that build & sustain SA's social, economic & environmental resilience

OBJECTIVE

Make a fair contribution to the global effort to stabilize GHG concentrations.....

National Response

NCCRP...(3)

- NCCRP prioritises interventions with significant socio-economic benefits
- Phased approach: Implementing first phase of the Mitigation System- 2016-2020
 - MPA, carbon budgets
- Mitigation System for the post-2020 period - mandatory phase – currently being developed
- Just Transition:
 - NPC Just transition process - plan
 - National Employment Vulnerability Assessment
 - Sector Jobs Resilience Plans

National Response Climate Change Bill...(4)

4 No. 41009

GOVERNMENT GAZETTE, 0 JUNE 2018

GOVERNMENT NOTICES • GOEWERMENTSKENNISGEWINGS

DEPARTMENT OF ENVIRONMENTAL AFFAIRS

G. 580

08 JUNE 2018

CLIMATE CHANGE BILL, 2018

The Minister of Environmental Affairs, Dr Bomo Edna Edith Molewa, hereby publishes the Climate Change Bill, 2018 in the Schedule hereto, for public comment. Copies of the socio-economic impact assessment report and memorandum of objects are available at www.environment.gov.za

Members of the public are invited to submit to the Minister, within 60 days of publication of this notice in the Gazette, written inputs or comments to the following addresses:

By post to: The Director General: Department of Environmental Affairs
Attention: Ms Dineo Ngobeni
Private Bag X447
Pretoria, 0001

By hand at: Environment House, 473 Steve Biko Street, Arcadia, Pretoria, 0001.

By email to: Climate@environment.gov.za

Any inquiries in connection with the National Climate Change Bill, 2018 can be directed to Mr Tiou Ramaru at (012) 399 9252, and Ms Deborah Ramaiope at (012) 399 9160.

Public comments or inputs received after 08 August 2018 may not be considered.

- Legislative foundation for the country's **mitigation system**
- Future review and determination of the **national greenhouse gas emissions trajectory**
- Determination of **sectoral emissions targets (SETs)** –
 - **Energy & its subsectors,**
 - **emission constraint in the electricity plan**
- Provincial or municipal climate change response **implementation plan**
 - Aligned to sectoral priorities and targets
- **National Adaptation Strategy** – adaptation scenarios



Thank You