



Department of Energy

**Overview on the National Energy Efficiency
Strategy (NEES) Post 2015**

Integrated Energy Plan Public Workshop

Indaba Hotel

26 September 2013



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Presentation Outline

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Background on 2005 National Energy Efficiency Strategy

- The White Paper on Energy Policy (1998) gives a mandate to the Department of Energy (DoE) to pursue Energy Efficiency programmes which is one of the lowest cost options for reducing energy consumption.
- The NEES, was approved by Cabinet and released in 2005 to explore the potential for improved energy utilisation through reducing the nation's energy intensity (thus reducing greenhouse gas emissions), and decoupling economic growth from energy demand.
- The original NEES stated that “Government will ensure that the necessary resources are made available to establish systems and legislation to facilitate the specification, collection, storage, maintenance and supply of energy-related data, according to the requirements of integrated energy planning and international standards.”



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National Energy Efficiency Strategy Goals

- The NEES outlined how an overall energy intensity reduction target of 12% by 2015 could be achieved with the following sectoral energy efficiency improvement targets:
 - ❖ Industry and Mining (15%),
 - ❖ Commercial and Public buildings (15%),
 - ❖ Residential (10%) and
 - ❖ Transport (9%).
- The Implementation plans were drawn up for each of the sectors with forecasted targets of energy use reductions based upon assumptions about energy demand over the next 10 years (2005 – 2015 using the 2000 year baselines), including the associated drivers, such as the economic development and population growth.



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National Energy Efficiency Strategy Objectives

The Vision of the NEES is “Reducing the energy intensity of the economy through energy efficiency”

Achievement of this vision will assist in fulfilling the following national objectives:

- ❖ Enhancing energy security by making better use of existing and new generation capacity.
- ❖ Improving South Africa’s global competitiveness through reduced energy input cost.
- ❖ Decoupling growth in energy consumption (and GHG emissions) from growth in GDP.
- ❖ Improving global competitiveness will, in turn, contribute to job creation.



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National Energy Efficiency Strategy Implementation

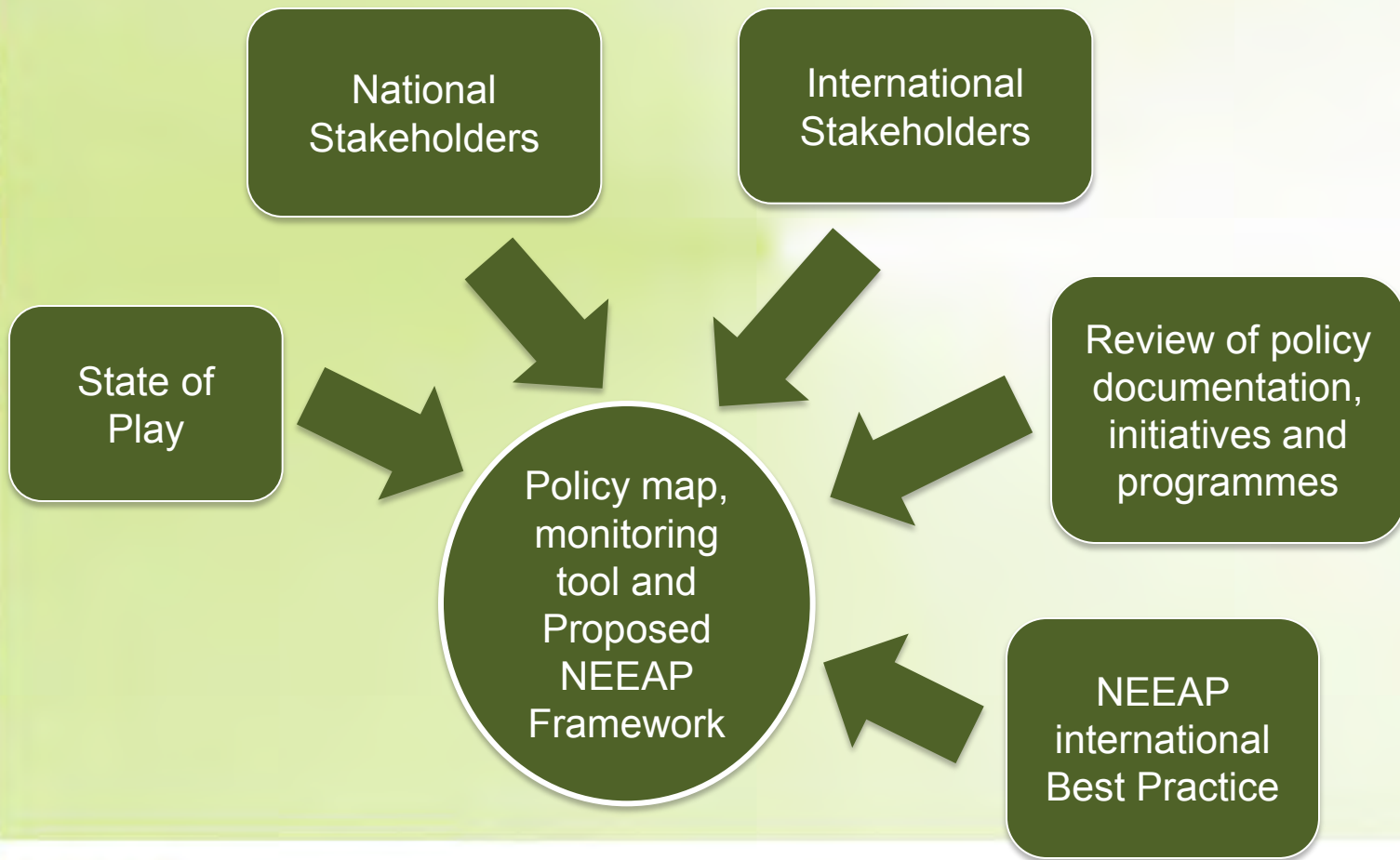
- As part of implementing the 2005 NEES, interventions were to be implemented by concentrating on no-cost and low payback options with a high impact. These were to be followed by medium to long-term higher investment interventions.
- However parallel to the implementation of the NEES, several legislative frameworks had to be developed or put in place including an energy efficiency target Monitoring Methodology Handbook.
- The EE Target Monitoring Methodology Handbook provides a detailed input data-streams required, however it is worth noting that its review is also necessary to ensure that the South Africa's energy efficiency monitoring system take full advantage of the current development and international best practice updates.
- Lack of some of the enabling legislative frameworks and systems slowed down or delayed the full implementation as anticipated.



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Overall Energy Efficiency Policy Framework



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1st & 2nd NEES Review Process

- In 2008, the Department undertook the first review of the NEES, however the review document was not favourably received by most of the stakeholders as it was clear on the comments from the public consultation process.
- The comments needed a more radical alterations including clear definition of energy efficiency, monitoring system and baseline information, etc.
- In 2011 the second review of the National Energy Efficiency Strategy (NEES) started, with public and sector workshops to discuss the scope and elements of the NEES that need review.
- Focused engagements/discussions were held on all related legislation, regulations and standards interlinked to the NEES to make sure that the final outcome remain relevant and practical for implementation and also get coherence on key issues.



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2nd NEES Review process: EE Policy Mapping Study

- In 2012 October, Cabinet approved the release of the second review NEES document for public consultation which closed in January 2013 too many request for extensions pushed the process to close in February and consolidation of the comments was done in March 2013.
- During the review process, an EE Policy Mapping Study was conducted through the South African Energy Programme (SAGEN) in collaboration with SANEDI and GIZ.
- The outputs of the study provided a **comprehensive policy and legislative context** for the development of the National Energy Efficiency Action Plan (NEEAP) for the Republic of South Africa.



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2nd NEES Review Process: EE Policy Mapping Study (2)

- The purpose of this review was therefore to:
 - understand the existing energy efficiency policy and regulatory environment, key initiatives and programmes, and the stakeholders
 - develop the framework for a **monitoring tool and action plan** to be used to assist in the development of a coordinated, unified and effective approach to:
 - energy efficiency,
 - energy conservation and
 - demand-side management.

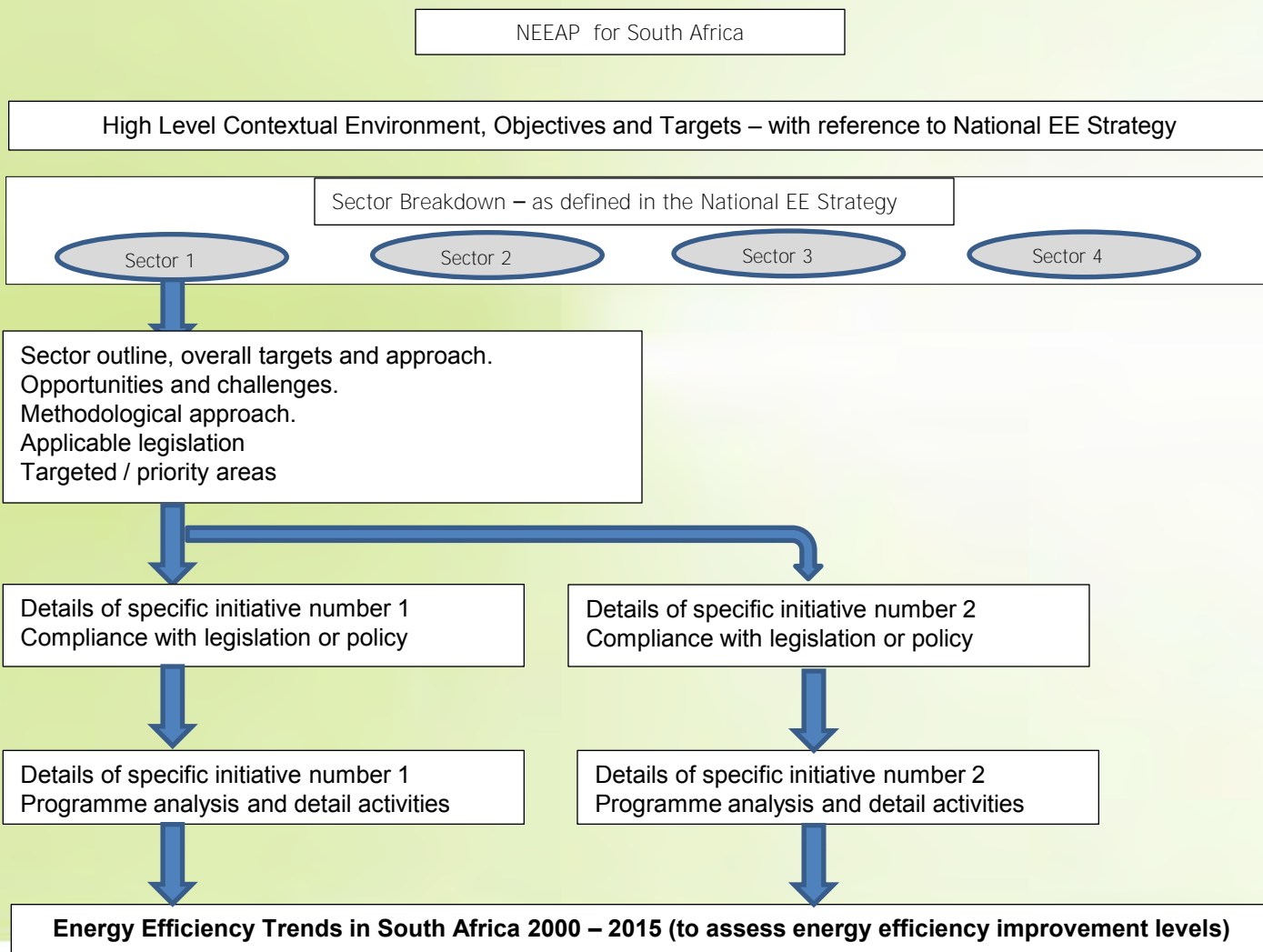


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Proposal for SA NEEAP Structure

Alignment between individual programmes and overall objectives



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2nd NEES Review Process

- Although the 2nd NEES review is completed, the targets were not revised because the current cycle of the Strategy is ending in 2015.
- The focus was more on lessons learnt, identifying the gaps and how the gaps were and are being addressed and last focus on potential areas of improvement or strengthening opportunities and propose future recommendations (i.e. what can still be done prior to 2015).
- All the recommendations will be implemented through the National Energy Efficiency Action Plan.
- The NEEAP's objectives amongst others is also to determine adjusted sector/sub-sector baselines from those developed in 2000 in preparation for the post-2015 NEES targets.
- Other key deliverables of the NEEAP for the next 18 months is the finalisation of establishment and implementation of the energy efficiency monitoring system, energy management regulations and plans, measurement and verification of the past energy savings, functional energy efficiency incentive scheme.



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National Energy Efficiency Interventions

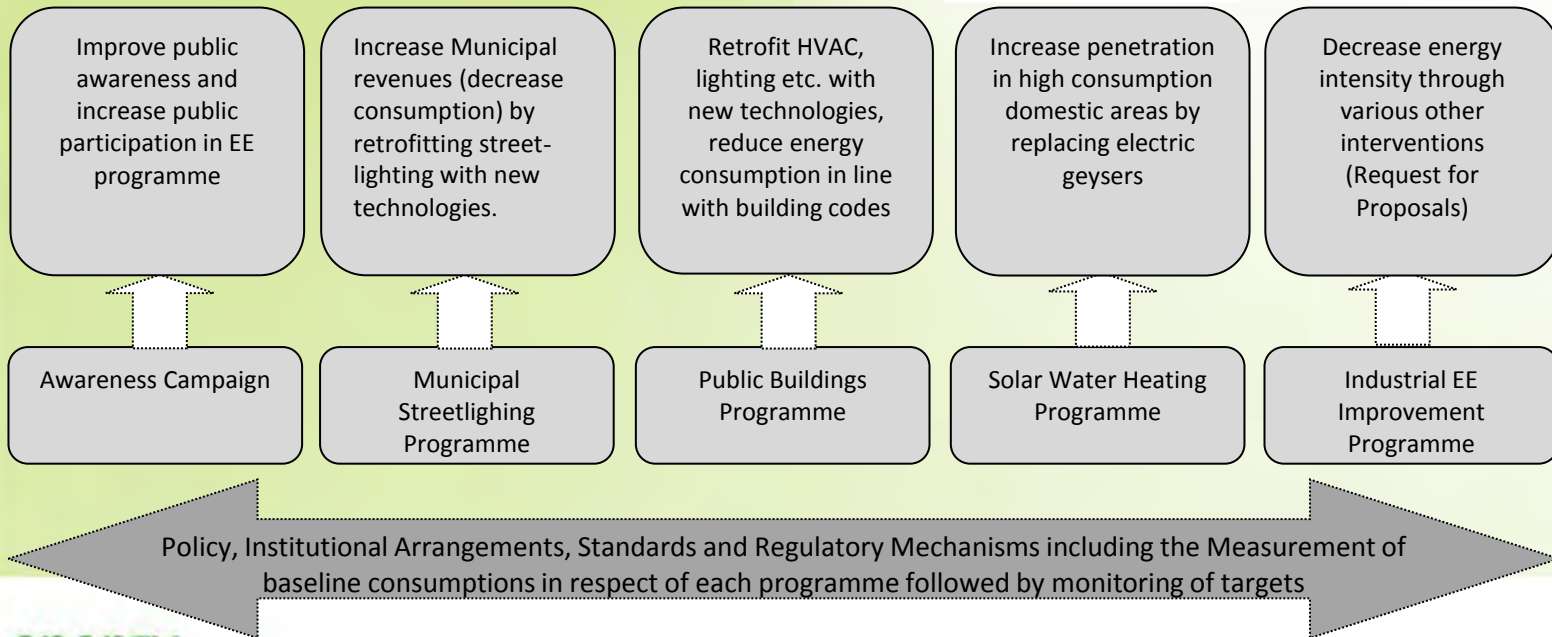
- 49m campaign
- Other campaigns including schools etc.

- Localize supply of LED technology for street-lighting
- Source supply-install of LED
- Measure impact relative to baseline

- Collate database of public buildings
- Measure baseline consumption
- Source supply-install of technologies that reduce consumption
- Measure impact relative to baseline

- Source supply of product that is >80% local content.
- Source installation and maintenance
- Initiate Standard Offer model for solar geysers
- Measure impact relative to baseline

- *Solicit various interventions through a Request for Proposals*
- *Measure impact relative to baseline*








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NEES Implementation Progress

South African National Energy Efficiency Standards



SANS 61400
Wind
Turbines

SANS 50285
Electric Lamps

SANS 12567-1
Windows &
Doors

SANS 1307
Solar Water
Heating

SANS 60969
Self-balasted
Lamps

SANS 10400-N
Glazing

SANS 959
Series

SANS 1935 &
SANS 833

SANS 50010
Energy
Savings

SANS 54511-3
Air
Conditioners

SANS 50001
Energy
Management

SANS 204
SANS 10400 – XA
Energy Efficiency
in Buildings

SANS 1561-1
Low-voltage
Three-phase
induction
Motors

SANS 62087
Audio & Video
Equipment

SANS 428
Insulated
Buildings

SANS 60034-30
3-Phase Cage
Induction
Electrical Motor

SANS 941
Typical Energy
Efficiency Label

SANS 61199
Single capped
Fluorescent
Lamps

SANS 50229
Clothes
Washer-dryer

SANS 60456
Clothes
Washing
Machine



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NEES Implementation Progress (2)



SANS 10147 Refrigeration Plant	SANS 50304 Electric Cooking Range	SANS 62552 Household Refrigeration	SANS 20100 Vehicles Emissions	SANS 20100 Vehicles with Electric Power Train
SANS 1381-4 Reflective Foil Laminate	SANS 959 Series	SANS 1935 & SANS 833		
SANS 1935 & SANS 833 Petrol & Diesel Fuel Pump	SANS 151 Electric Geysers			



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NEES Implementation Progress: Regulations for Allowance on Energy Efficiency Savings

- The Department together with **the dti** and National Treasury finalised the Regulations for Allowance on Energy Efficiency Savings and were developed in terms of Section 12L of the Income Tax Act and will be enforced through Tax Amendment Laws, 2013
- The Regulations are expected to be promulgated prior to the end of financial year.
- SANEDI is expected to facilitate the certification process prior to companies claiming the incentive through the SARS.
- Preparations are in progress to enforce the regulations once promulgated.



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NEES Implementation Progress: Other Regulations

- Income Tax Allowance on Energy Efficiency Savings (section 12i & 12L of the Income Tax Act).
 - Regulations in terms of Section 12i of the Income Tax Act administered by **the dti** aimed at the large manufacturing investments (i.e. upgrades, expansions or new facilities that exceed R30 million and R200 million respectively).
 - The National Building Codes and Regulations
 - Minimum Energy Performance Specifications (MEPS) of household electricity appliances are being developed including energy performance of buildings.
- Mandatory provision of energy management plan is being considered with stakeholders – Draft Regulations on Energy Management are in progress.



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National Energy Efficiency Strategy Post 2015

- The Department is commencing with the preparations for the National Energy Efficiency Strategy post 2015. The post 2015 preparations will be based on the 25 Energy Efficiency Policy Recommendations developed by the International Energy Agency that member and non-member countries should consider in the context of their energy economies.
- These policy recommendations are developed for seven priority areas within which some of the work has already being implemented, that is:
 - ❖ **Cross-sectoral**
 - ❖ **Buildings**
 - ❖ **Appliances and equipment**
 - ❖ **Lighting**
 - ❖ **Transport**
 - ❖ **Industry; and Energy utilities**
- According IEA, 2008 estimates that if implemented globally without delay, the proposed actions could save as much as 7.6 gigatonnes (Gt)CO₂ /year by 2030.



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25 EE Policy Recommendations by IEA

Policy Recommendation Priority area	Focus on Priority Areas
Cross-sectoral	<ul style="list-style-type: none"> • Data Collection and Indicators • Strategies and action plans • Private investment in energy efficiency • Monitoring, enforcement and evaluation • Competitive energy markets with appropriate regulation
Buildings	<ul style="list-style-type: none"> • Mandatory building codes and MEPS • Net-zero energy consumption in buildings • Improved energy efficiency in existing buildings • Building energy labels or certificates • Energy performance of building components and systems
Appliances and equipment	<ul style="list-style-type: none"> • Mandatory MEPS and labels • Test standards and measurement protocols • Market transformation policies



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25 EE Policy Recommendations by IEA (2)

Policy Recommendation Priority area	Focus on Priority Areas
Lighting	<ul style="list-style-type: none"> • Phase out of inefficient lighting products • Energy-efficient lighting systems
Transport	<ul style="list-style-type: none"> • Mandatory vehicle fuel-efficiency standards • Measures to improve vehicle fuel efficiency • Fuel-efficient non-engine components • Eco-driving • Transport system efficiency
Industry	<ul style="list-style-type: none"> • Energy Management • High efficiency industrial equipment and systems • Energy Efficiency services for SMEs • Complimentary policies to support industrial energy efficiency
Energy Utilities	<ul style="list-style-type: none"> • Utilities end-se energy efficiency schemes



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Conclusion

- The Energy Efficiency Target Monitoring System to be in place by 2015
- The second review of the 2005 National Energy Efficiency Strategy assisted in identifying the gaps while recommendations are put forward for implementation through the National Energy Efficiency Action Plan as priority areas for the next 18 years;
- Identified areas that require closing the gaps through the development of standards and regulations on energy efficiency;
- The Review strengthened the plan for the process to establish post-2015 National Energy Efficiency Strategy



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