



Department of Energy

Energy Efficiency Policies and Technologies Workshop

Energy Efficiency Regulations in South Africa

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Outline

- Background & Context
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- Energy Efficiency Implementation Gaps and NEES Review Process
- Energy Efficiency Standards and Regulations
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Background & Context (1)

- The National Energy Efficiency Strategy (NEES) was promulgated in 2005 and projected a reduction of the national energy demand of 12% by 2015 together with sectoral targets by which commercial and public buildings of was 10%.
- The sectoral targets did make an allowance for forecast growth of energy demand, and are defined as percentage reduction in a predicted end-usage of energy.
- The first review of the NEES was held in 2008, and a revised Strategy was afterwards gazetted for public comments.



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Background & Context (2)

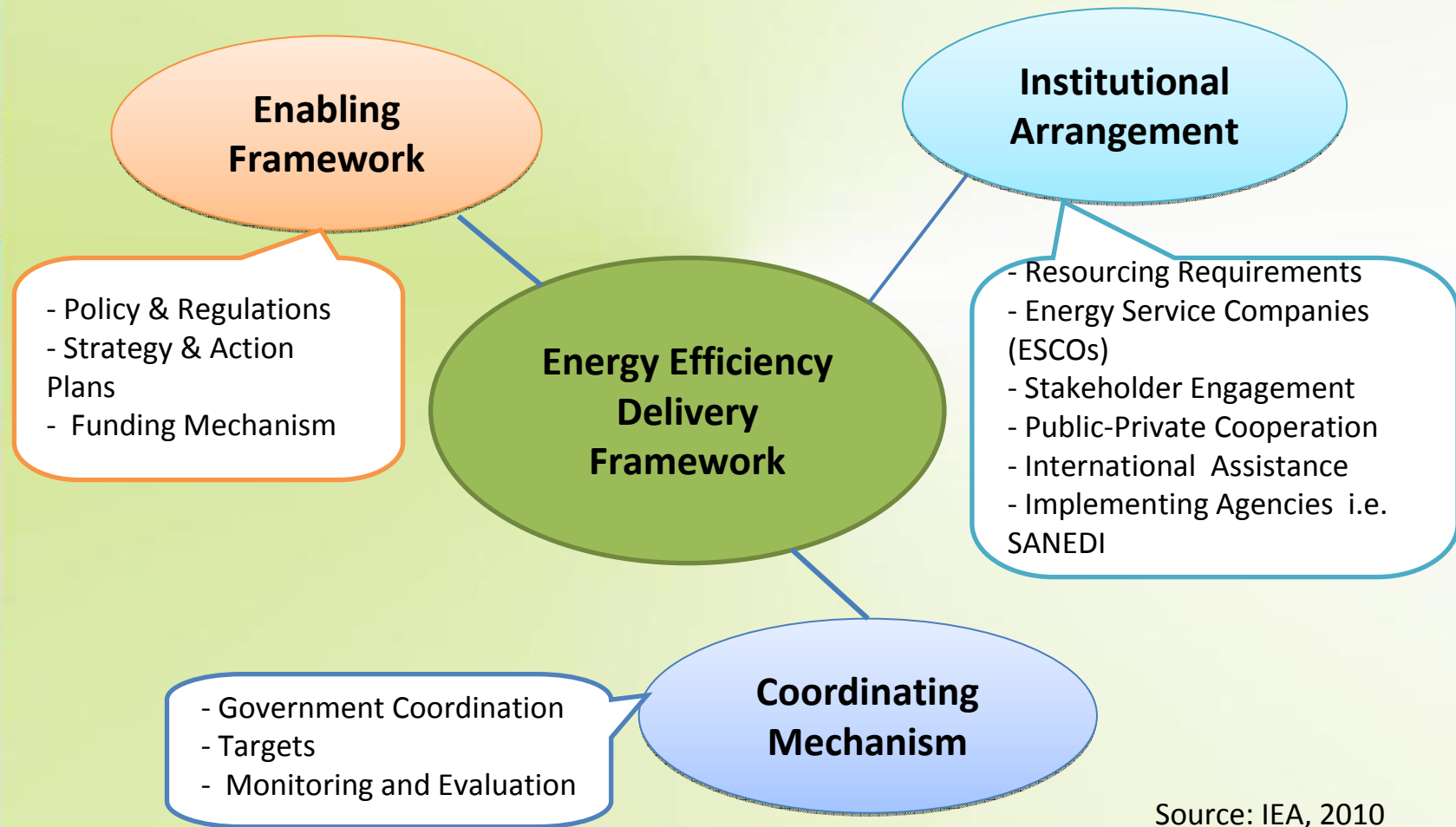
- In view of the received comments more work needed to be undertaken since the comments were critical, which amongst others, took into consideration that circumstances have changed since the 2005 NEES was developed, and that a more comprehensive review process is required.
- Parallel to the development of NEES in 2005, an energy efficiency target Monitoring Methodology Handbook was also developed.
- This EE Monitoring Methodology Handbook provide a detailed input data-streams required, however its review is necessary to ensure that the South African energy efficiency monitoring system take full advantage of the current development and international best practice updates.



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Energy Efficiency Delivery Framework



Source: IEA, 2010



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Energy Efficiency Implementation

- Energy efficiency is now recognised as one of the most cost-effective ways towards sustainable development.
- Energy efficiency improvement can help avoid the cost of new energy generation (and distribution) capacity, improve industry's competitiveness, increase access to energy and reduce pollution including emissions of greenhouse gases.
- Shifting to **energy efficient technologies** would reduce energy demand and allow new production streams in the market
- Government strive to **achieve** this using a broad range of **policy instruments**, including **regulatory instruments** (standards, obligations), **financial incentives** (subsidies, tax incentives), **market-based instruments** (i.e. ECS or carbon pricing) as well as **'information-based' instruments** (i.e. raising awareness, training, capacity building, R&D).



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Energy Efficiency Implementation Gaps Identified 2008 NEES Review

- The lack of energy efficiency monitoring system to track the achievements of the targets in the National Energy Efficiency Strategy.
- The lack of energy efficiency regulations including incentives to ensure improvement of energy efficiency across sectors.
- Non-availability of standard for energy management plans and/or system.
- Non-availability of Measurement and Verification (M&V) standard for calculation of energy savings.
- Insufficient energy efficiency awareness activities to change behaviour on how energy is being used.



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2011 NEES Review Process

- The second review process started in 2011 as part of the Industrial Energy Efficiency Improvement Project implemented in collaboration with the Department of Trade and Industry, Business, and other international partners.
- The 2011 NEES review has considered the power crisis of 2008 and beginning of 2009, the world financial crisis and its impact on SA; climate change impacts and response measures; energy policy development including the IEP, IRP and other plans.
- The 2011 NEES review process has been completed, and will be published for public comment pending Cabinet Approval.



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Energy Efficiency Standards & Regulations (1)

- Introduction of regulations for the Provision of the Energy Management Plans across all sector is being considered.
- It is envisaged that the components of the Energy Management Plan will include, among others, the following:
 - Establishment of baseline against which future reductions will be measured ;
 - Development of energy usage profile – to demonstrate how energy use is distributed in a particular operation or facility
 - Setting of energy efficiency targets – towards achieving the desired energy efficiency improvement goals;
 - Development and implementation of energy performance measures;



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Energy Efficiency Standards & Regulations (2)

- Training, education and communication – to effectively communicate the need for energy management and providing training and guidance on how to implement the specific strategies.
- Process for monitoring, reporting and verification of the achieved goals/targets
- However, the introduction of energy management plans will be informed by a detail study to determine minimum thresholds that will assist in the designation of energy users.
- In addition, a benchmarking exercise within sectors will be conducted in order to compare and standardize energy management plans within sectors/subsectors.



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Energy Efficiency Standards & Regulations (3)

- Minimum energy performance specifications for households electrical appliances are being developed as part of the Standard and Labeling programme. The aim is to discourage the use of inefficient households appliances.
- Regulations on the Allowance of Energy Efficiency Savings in terms of section 12L of the Income Tax Act are also in the process of being finalised, whilst section 12i of the Income Tax Act, which has a component of energy savings has already been introduced to the market by **the dti**.
- It is also the intention of Department of Energy to introduce annual reporting system on energy performance as part of the Energy Efficiency Target Monitoring System.



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Energy Efficiency Standards & Regulations (4)

- In this regard, plans are underway to develop procedures and templates that will form part of the Regulations for Provision of Energy Data, which came into effect as from the 1st March 2012.
- The reporting of the energy savings achieved will be verified through the use of the Measurement and Verification (M&V) Standard (SANS 50010).
- However, this process will require utilisation of bodies or organisation accredited by the South African National Accreditation System (SANAS)



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Energy Efficiency Standards & Regulations (5)

Standards for Energy Efficient Lamps

Purpose:

- Introduction of minimum energy performance requirements to various categories of lamps.
- Collaboration between Departments of Energy, Trade and Industry, Lamp Industry and other stakeholders

Lamp Technology and Efficacy:

- The two lamp technologies particularly relevant to this project compact fluorescent lamps (CFLs) and incandescent lamps.

Progress:

- Action Plan to Phase-Out Inefficient Lamps and Introduce Compulsory Standards for Energy Efficient Lamps developed.



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Energy Efficiency Target Monitoring System (1)

- The purpose of the EE Target Monitoring System (EETMS), mentioned above, is to introduce and institutionalise an Energy Efficiency Target Monitoring System for measuring and reporting of the achievement of the sectoral targets set out in the National Energy Efficiency Strategy.
- The EETMS will also be applicable to the public sector including street lighting, waste water and water purification process, and public buildings.
- With regard to building sector, the Minister of Public Works launched the National Green Building Framework in December 2011, which also has elements of energy efficiency in buildings.



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Energy Efficiency Target Monitoring System (2)

- This National Green Building Framework supports the energy efficiency regulations including the building regulations, that has been amended to include mandatory energy efficiency standards for new buildings.
- Already the Department of Energy is working with Public Works and other key stakeholders to introduce a policy framework that will see the introduction of energy performance certification in buildings.
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Energy Efficiency Target Monitoring System (3)

- The energy performance certificate is a tool to rate buildings according to their level of energy consumptions.
- The interventions identified will be a five step process which will commence with establishing a baseline on the extent energy usage by public buildings.
- This exercise will be in a form of a pilot projects on identified public buildings, and will further establish a standard for data measurements and issuing of the energy performance certificates.



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Conclusion (1)

- An Energy Efficiency Policy and Activity Mapping Study, which will provide the information basis for an increased coordination of policies and initiatives has just been completed.
- This Study did assess the relevance of existing and planned energy efficiency policies, as well as develop a tool to continuously monitor the energy efficiency policy landscape and required technologies to support implementation.
- Energy efficiency regulations are to provide opportunities for further training, boost job creation, and move towards a low-carbon economy.



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Conclusion (2)

- It is also expected that the regulations will drive the development and uptake of new and efficient technologies into the market, whilst at the same time facilitate the upgrading of skills.
- However, identify the most cost-effective energy efficient technologies will be critical, and the discussions today should assist in achieving that.



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