Energy Efficiency Modelling and Policy Impact Workshop

SANEDI Office, Sandton, Gauteng

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Overview of Energy Efficiency Initiatives
Presentation Outline

• NEES Vision

• Energy Efficiency Targets and Development Process

• Energy efficiency programmes and projects

• Improving energy performance of public facilities
To advance energy efficiency that are focused on developing and improving the energy efficiency market, which ensures the planning, developing, integration and coordination of measures with relevant associated institutions across all sectors.
To promote energy efficiency as the ‘first fuel’ in driving balanced, socially inclusive and environmentally sustainable economic growth, boosting job creation and leading technological innovation across the region.
Energy Efficiency Targets, 2015 - 2030

**Transport Sector**
- **20% reduction in vehicle energy intensity**

**Industry Sector**
- **16% reduction in energy consumption**

**Mining Sector**
- **Annual energy saving of 40PJ in the mining sector.**
- **33% reduction energy consumption of new household appliances**

**Residential Sector**
- **33% reduction energy consumption of new household appliances**

**Electricity Production & Generation**
- **Electricity distribution losses below 8% and average non-technical losses of below 0.5%**

**Agriculture Sector**
- **Electricity saving of 1 PJ**

**Municipal Services**
- **20% reduction in energy intensity of municipal provision.**

**Commercial Sector**
- **37% red. in the specific energy consumption**

**Public Buildings**
- **56% reduction in the specific energy consumption.**
Energy Efficiency Measures and Target Development Process

- **21.4 %** EE Improvement using energy consumption baseline of year of 2000

**Sectoral Focus: 2016 - 2020**
- Industry Sector
- Agriculture Sector
- Municipal Services
- Public & Commercial Building Sector
- Residential Sector: S&L
Annual Energy Savings Realised and Verified from EEDSM programmes/projects

**Target**

- Industrial EE Phase II Project
- municipal EE & Demand Side Management (EEDSM) programme
- Energy Efficiency in Public Infrastructure Programme

**Programmes/Projects**

- Net-zero energy of WWTWs
- Improving Energy Performance of Buildings
- Energy Efficient Appliances (S&L)
- Regulations: Energy Performance Certificates (EPC) & Data Management
- Energy Efficiency in Agriculture
- Energy Efficiency Monitoring System (EEMS)
**Public Facilities:** Wastewater Treatment Works (WWTWs), Buildings, Street Lighting

- **Strengthen capacity** of government officials and Energy Services Companies to improve energy performance of buildings.

- Establishment of energy footprint (consumption baseline) for public facilities.

- Develop and implement energy demand model for WWTWs, buildings and street lighting.

- Establishment of energy savings potential and technology catalogue for public facilities.
Design of Energy Efficiency Measures for Public and Municipal Services (2/2)

- Integrate small-scale embedded generation/off-grid renewable energy and energy efficiency in public facilities.

- Installing **energy management system** and smart meters in public facilities, and adoption of Minimum Energy Performance Standards

- Data management, analysis and **monitoring and evaluation system** including a Building Energy Performance Register
Opportunities and Challenges

- Access to international partnership for energy efficiency improvements.

- High increased in energy prices; and a drive towards environmental sustainability.


- Inadequate quality of data and modelling expertise on energy efficiency analysis.

- Constraints of the South African government fiscus for allocating budget for energy efficiency.
THANK YOU FOR YOUR ATTENTION

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