



**sanedi**

South African National Energy  
Development Institute.



A corporation established under Section 7 of the  
National Energy Act, 2008 (Act No. 34 of 2008)

# “Bridging the Gap Between Energy Research & Implementation”

*19 July 2013*

# Introduction



The transition to a low-carbon economy is globally recognised as a competitive and development priority, but with the understanding that this will require *far-reaching changes in technology, finance, policy, implementation and societal behaviour.*

Greater co-operation and accountability should be the order of the day and continuing to operate in a fragmented manner in the energy sector should no longer be tolerated. This requires the ability to *optimise, integrate, innovate & form strategic partnerships!*

# About SANEDI

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The National Energy Act, No. 34 of 2008 established the South African National Energy Development Institute (SANEDI) by transferring all the personnel, assets and liabilities of the South African National Energy Research Institute (SANERI), also a wholly owned subsidiary of CEF, and the National Energy Efficiency Agency (NEEA), to SANEDI.

The National Energy Act, **2008 (Act No. 34 of 2008), Section 7 (2) provides for** SANEDI **to** direct, monitor and conduct energy research and development **as well as undertake measures to** promote energy efficiency throughout the economy.

The overarching purpose of SANEDI is to assist the Department of Energy in fulfilling its energy mandate **and** transition **towards a** sustainable, low carbon energy future.

# SANEDI Mission and Vision



**Advance** innovation of **clean energy solutions** and **rational energy use**, that effectively supports South Africa's national **energy mandate** and **transition** towards a **sustainable, low carbon energy future**.

To **serve** as a **catalyst** for **sustainable energy innovation, transformation** and **technology diffusion** in support of South Africa's sustainable development that benefits our nation.

# Legislative Mandates



## National Policies and Strategies:

National Energy Research, Development and Innovation Strategy  
(developed by DME, DST and stakeholders)

**National target – Renewable Energy Production of 10 000 GWh by 2013 (under Review)**

**Biofuels Industrial Strategy 2007 – 2% penetration by 2013**

EE target - energy demand reduction of 12% by 2015

SWH National Target – 1 000 000 by 2014

**Ten-Year Innovation Plan for South Africa (5 Grand Challenges – Energy Security, Farmer to Pharma)**

Long Term Mitigation Strategy (scenarios to mitigate greenhouse gas emission)

IRP 2010 (42% by 2030)

REBID

**National Energy Act (No 34 of 2008)**

# Strategic outcomes /programmes



## STRATEGIC OUTCOMES

All/Crosscutting

Enable well informed and high confidence energy planning, decision-making and support policy\* development

Support accelerated transformation to a less energy and carbon intensive economy

Foster a culture of energy efficiency and more rational energy use

## PROGRAMMES

1. Corporate governance and administration

2. Applied energy research and demonstration including sub-programmes for:

- < Advanced fossil fuels including Carbon Capture and Storage
- < Clean Energy Solutions
- < Smart Grids
- < Green Transport
- < Working for Energy
- < Data and Knowledge Management

3. Energy efficiency programme

# Carbon Capture And Storage (CCS)



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South African National Energy  
Development Institute (SOCI) Ltd.



South African Centre for  
carbon capture  
& storage

## Core Parties



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South African National Energy  
Development Institute (SOCI) Ltd.



**SASOL**  
reaching new frontiers



**NORWEGIAN EMBASSY**

## Participants



**AngloAmerican**



**xstrata**  
coal



**TOTAL**  
coal



**PetroSA**

**ALSTOM**

**exxaro**

**ENERGY INNOVATION FOR LIFE**

# Working for Energy (WfE)



- 🌱 Renewable energy production and utilization for low income communities.
- 🌱 Creation of Green Jobs and contribution to the new growth path
- 🌱 Skills Development



**Various forms of Biomass and Waste to Energy initiatives**

Biomass Production value added goods and production of fuel pellets



# Smart grids



- 🌐 Development of SA smart grid vision
- 🌐 Compile current state assessment
- 🌐 Technology, governance, service and gap analysis as well as defined solutions
- 🌐 Smart Grid Business case
- 🌐 Smart grid implementation plan
- 🌐 Consolidated smart grid industry guideline

# Data/Knowledge Management



- 🌐 Development of an integrated data repository
- 🌐 Technology Management Information Centre
- 🌐 Review the strategic direction of Centre for Energy Systems and Analysis Research (CESAR)
- 🌐 Enhanced access to relevant energy information and knowledge

# Green Transport




- 🇳🇵 Develop a national Green Transport strategic vision and technology development plan
- 🇳🇵 Develop a technology development incubation centre to offer "soft" facilities to companies and technology partners
- 🇳🇵 Develop and implement demonstration projects to test proof technology
- 🇳🇵 Participate in knowledge clusters locally/internationally
- 🇳🇵 Develop substantive public advocacy programme to create market acceptability for alternative fuels and propulsion systems



# Renewable Energy Technologies





 Renewable Energy Centre of Research & Development (RECORD) in collaboration with GIZ and supporting technician training at CPUT

 Projects in progress:

Wind Atlas for South Africa

(WASA) consortium partners include DUT, Denmark, Waste to Energy, Algal Biofuels, Solar Road map, Energy Efficient Houses

 Support to Solar Park (met stations as part of larger SA Solar Atlas)

 International collaboration (IEA Implementation Agreements and NCP for E FP7)



k4885196 www.fotosearch.com



k11715130 fotosearch.com

# Energy Efficiency



- 🇮🇳 Support the Income Tax Amendment relating to tax rebate for energy efficiency improvements
- 🇮🇳 Energy Efficiency & Demand Side Management Centre of Research & Development (EEDSM)
- 🇮🇳 Industry Support
- 🇮🇳 National Champion for EE
- 🇮🇳 National M & V Centre



# Conclusion



We often tend to work in  which inevitably leads to duplication, mis-information and wastage!

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*area, using Applied Energy Research to assist in making informed decisions, towards a low carbon future in the country!*



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**THANK  
YOU**

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