



South Africa: You cannot improve what you cannot measure - South Africa is improving energy management and monitoring in public buildings

The South African government is taking the lead in showing the possibilities within energy efficiency in buildings by increasing the capacity of energy management and monitoring in selected buildings. This task was kick started at an inception workshop September 28, 2015 in South Africa, which also included international experiences from the Danish Technological Institute and the Danish Energy Agency.

Global potential in buildings

In 2010 buildings accounted for 32% of total global final energy use, 19% of energy-related GHG emissions (IPCC, 2014), an amount that qualifies buildings as one of the leading and primary users of energy and resources. As a result, the deployment of energy efficiency practices in buildings with the aim of reducing energy consumption and carbon footprint is consistently growing globally.

15% energy efficiency improvements in South Africa's commercial and public building sector

In South Africa, the national government recognised the need for transformation and shift towards a more resource efficient low-carbon economy that can lead to both new sources of growth and compliment economic reforms that support greater competitiveness (National Treasury, 2012). Such recognition has been further complemented with the adoption of a range of energy efficiency policies and programmes.

A key strategy is the National Energy Efficiency Strategy from 2005. The

overall target is a 12% reduction of the national energy demand by 2015. The sector specific target for commercial and public building sector is 15% energy efficiency improvement by 2015 compared to 2005 levels. From 2015 to 2016 the post 2015 to 2030 National Energy Efficiency Strategy is being developed and access to accurate data is identified as one of the key barriers in order to set targets and monitor the process towards them.

Lead by examples and reduce the use of energy in public buildings

In order to motivate others to reach the targets in the National Energy Efficiency Strategy, the government wants to lead by example and show their examples of reduced energy consumption in public buildings.

To support this the Department of Energy with the support of the South Africa Danish Energy Programme and the Danish Energy Agency have initiated a pilot project aiming at increasing the knowledge sharing and capacity building within the public building sector.

In order to build capacity and develop a user friendly framework for effective Energy Management Systems, a selected number of departments and municipalities who have already shown interest in energy efficiency and participated in the installation of smart meters and energy auditing process will be used as pilot cases. The selected participants are officials from the Department of Energy, Provincial and National Departments of Public Works, Regional Offices of DPW and four municipalities selected from four provinces, namely Gauteng (City of Johannesburg), Free State (Mangaung), Eastern Cape (Nelson Mandela Bay) and KwaZulu Natal (eThekweni). Selected officials will be trained on energy management, smart metering and energy performance for public buildings.

Kick starting the institutional capacity building with international experience from Denmark

Monday the 28th of September 2015 the inception workshop for the institutional capacity building was held at SANEDI in Sandton, South Africa. Here participants from both the Department of Energy, the Department of Public Works, representatives from the municipalities, the Danish Energy Agency and the Danish Technological Institute were represented. The expectations for the pilots and the specific setup of the six month long project were discussed. See the presentation from the Department of Energy which explains the context and aim of the pilots [here](#).

Building on Denmark's decades of experiences within energy efficiency

In order to build on already tested approaches the Danish Energy Agency had invited [the Danish Technological Institute](#) to share their experiences on how to build long lasting capacity within energy management and monitoring in public buildings. The Danish Technological Institute DTI has been operating within the area of energy since 1912 and for the past 20 years the division has been working with international transfer of knowledge, capacity building etc.. The international activities are based on methods, know-how and experience of energy efficiency, achieved during the last 30 years of development in Denmark and the EU and are adapted to the specific needs of each country.

At this workshop it was Søren Draborg, Product manager at Energy Efficiency and Ventilation, who shared Denmark's experiences on:

- Energy management in buildings
- Energy data collection and analysis
- Impact of behavioral changes
- Capacity building in Denmark

The interaction during the presentation, which you can see [here](#) were very dynamic and one of Søren Draborg's key messages was:

“Energy efficiency is about people. The key to unlock the potential energy savings in public buildings is to ensure capacity to do an intelligent analysis of a building on the ground. Here you will find saving potentials of 15% to 30% often with a very short payback period”

The final scope of work will be defined within the next weeks and from there we hope for successful implementation of the pilots in order to generate good cases that can be rolled out across the country.

Read more about the cooperation between South Africa and Denmark [here](#).

[About the cooperation between South Africa and Denmark](#)

[Presentation from the Department of Energy](#), [Presentation from The Danish Technological Institute](#)

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