

Scaling up Energy Efficiency: Bridging the Action Gap

An international workshop co-organised by the International Energy Agency, the International Finance Corporation and the United Nations Environment Programme

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Energy Efficiency in Buildings

Presenter: Mr Vic Lawrence

Mr Lawrence is a senior manager with Eskom, South Africa's Electricity supply utility, where he currently manages the Power Systems and Technologies Department. He has been actively involved in energy policy for the past 15 years, establishing Eskom's renewable and energy efficiency policies.

Mr Lawrence has a Masters Degree in engineering. He has also recently completed his PhD in engineering, focussing on utility plant energy efficiency modelling.

Discussant: Mr Gilberto Jannuzzi

Mr Jannuzzi is Associate Professor of Energy Systems at the University of Campinas' Mechanical Engineering Faculty, where he is the dean of the graduate programme on energy planning. He is also a senior researcher at the university's Centre for Interdisciplinary Energy Studies.

Mr Jannuzzi heads the International Energy Initiative, a Southern-conceived, Southern-led and Southern-located South-South-North partnership. He has been the executive secretary of the National Energy R&D Fund at the Brazilian Ministry of Science and Technology. Prior to this, he was executive director of the Technology Transfer Office of the University of Campinas.

Description of the programme presented

The presentation will focus on the energy intensities in the commercial environment in South Africa, and the methodology and approach taken as a means to total load reduction. It will also include various energy efficiency interventions in the commercial and industrial areas, with particular focus on plant and process optimisation with 'real' type scenarios and practical solutions demonstrated.

The presentation will also outline the current situation with respect to Eskom's demand-side management programme and its imminent implementation throughout South Africa. The development of suitable end-use technologies as a solution to the problem and as a means of achieving these prescribed annual demand-side management targets will also be covered, including the demand-side management and the end-use technology research programme – and the critical role that research and development plays in supporting the demand-side management and efficiency strategy on a national level.

Main points of the presentation

1. It is important for utilities to manage their electricity demand profile and to enhance capacity availability.

Since the early 1990s South Africa has embarked upon a rigorous electrification programme, in an effort to provide universal access to electricity. This has had a dramatic impact on Eskom's generation capacity availability. The pending capacity constraints identified the need to focus on the application and implementation of demand-side management interventions through the promotion of sound energy management strategies and best practices, coupled with a rigorous implementation roll out plan.

2. Energy efficient end-use technologies are a key complement to demand-side management and capacity management programmes.

This kind of programmes have been researched and developed and applied nationally in South Africa, together with other load shifting interventions. Currently they are being implemented across all sectors nationally – industrial, mining, commercial, residential and agricultural.