

The Cape Town Partnership Energy Efficiency Project

Background

The latest set of country-wide blackouts has changed the view that power cuts of 2006 were a freak occurrence. The threat of continued blackouts is placing pressure on business to accept the need for investment in energy-related infrastructure and adopt long term strategies to reduce energy consumption. The **Energy Efficiency Project (EEP)** initiative has been conceived to assist building owners in implementing measures to improve energy efficiency. It is ideally positioned to overcome the barriers to implementation and to facilitate a large scale improvement in energy efficiency in the City of Cape Town.

The project is the product of a partnership between the Cape Town Partnership, which played a central role in negotiations relating to the CBD during the power crisis of 2006, and the Sustainability Institute which, for a number of years, has been working with a range of stakeholders in Cape Town to promote more efficient use of natural resources, including energy. Seed funding for the project has been obtained from CORDAID, a large Dutch foundation.

Why become Energy Efficient?

Buildings are the largest consumers of energy in our cities. Reducing energy consumption not only releases pressure on the over-utilised Eskom network, but also plays a vital role in addressing environmental issues such as global warming. From a financial perspective, new technologies can result in significant monetary savings and possible supplementary funding through the Demand Side Management (DSM) programme and the Clean Development Mechanism (CDM). A majority of interventions have a payback time of less than two years. For example, a building with a monthly electricity bill of R50 000, could invest R100 000 in energy efficient equipment and become 10% more efficient. This will result in monthly saving of R5000, with a payback time of 20 months.

Our goal

The EEP aims to consolidate and fast-track the delivery of energy efficiency projects in buildings in the Cape Town CBD in a way that reduces operating costs for building owners, the consumption of grid electricity, and the total environmental impact of the CBD. A longer term aim is to redirect a proportion of the savings into pro-poor infrastructure development and the establishment of a self-financed agency to manage energy efficiency projects within the CBD. The Project will also investigate the possibility of implementing energy efficient equipment on new buildings or buildings undergoing complete refurbishment.

Energy Efficient Technologies for Buildings

There are a number of proven energy efficiency technologies that may be applicable to different buildings. The most common technologies include:

- The replacement of all incandescent lighting with fluorescent lighting (in particular compact fluorescent lighting), halogens and the new 'low energy diodes' (LEDs)

Project

- The introduction of automatic sensor systems which trigger lights when movement is detected
- The replacement of electric geysers with solar water heating systems (which can be single stand alone units or centralised integrated multi-user systems for an entire building)
- The introduction of energy efficient airconditioning and heating systems.

The Project team

The project will be run as a special project from within the offices of the CTP and will receive support and guidance from the Sustainability Institute. Professor L.J. Grobler, of the Mechanical Engineering Department at Potchefstroom University and his commercial consulting operation called Energy Cybernetics will provide technical support for the audits and retrofits. In the past seven years Energy Cybernetics has undertaken and completed more than one hundred industrial and commercial energy audits.

The EEP will work in close collaboration with the Center for Renewable and Sustainable Energy studies (CRSES), at Stellenbosch University, which has a considerable network of expertise in this area. It will also engage with other universities, NGOs and metropolitan councils involved in similar projects in other areas of the country.

Contact details

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