



South African Industrial Energy Efficiency Project

Phase II 2016 - 2020

A project designed to accelerate and expand the introduction of Energy Management Systems (EnMS), Energy Systems Optimisation (ESO), and the Energy Management Standard ISO 50001 Series within the South African industrial (and selected commercial) sectors.



The South African Industrial Energy Efficiency Project (IEE Project) has assisted industrial companies around the country to improve their energy efficiency since 2010.

Now in its second phase, the IEE Project is a multi-stakeholder initiative that supports increased and sustained energy efficiency within industrial and selected commercial sectors – by promoting the increased adoption of Energy Management Systems (EnMS), Energy Systems Optimisation (ESO), and the Energy Management Standard ISO 50001 Series.

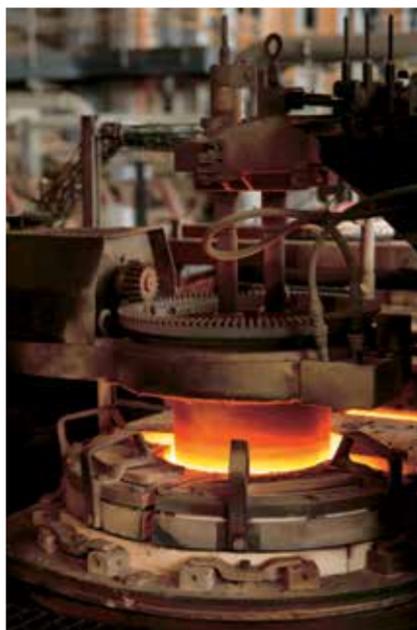
Outcomes and focus areas

The IEE Project Phase II aims to bring about increased investment in industrial energy efficiency through the wide-scale adoption of the two methodologies and the ISO 50001 series through a holistic approach that involves government, industry and selected regulatory bodies and education institutions.

This is achieved through a component approach, led by different project partners, focusing on: supporting energy efficiency policy; developing IEE skills in relevant sectors; technical support to industry and demonstrating the impact of IEE through sharing of achieved energy savings.

Targets 2016-2020

- To achieve direct energy savings of 1 000 GWh
- To achieve financial savings through energy efficiency
- To reduce greenhouse gas emissions by 1 million tonnes of CO₂e
- To reduce indirect greenhouse gas emissions by 3.3 million tonnes of CO₂e



Half way through its second phase (mid-2018), the IEE Project has assisted over 80 companies to achieve cumulative energy savings of 4 300 GWh and related costs totalling R 3.3 billion.

NATIONAL PARTNERSHIP

The project is funded by the Global Environment Facility (GEF) with co-funding through the South African Department of Trade and Industry (**the dti**).

The work of the project is implemented by the United Nations Industrial Development Organization (UNIDO), the National Cleaner Production Centre South Africa (NCPC-SA), the Department of Energy and the South African National Energy Development Institute (SANEDI).

The original phase of the IEE Project in South Africa (2010 – 2015) was the first of its kind, and served as an international pilot project. Similar EnMS/ESO projects are now operational through UNIDO in 16 other developing and emerging economy countries worldwide.

Project funders



the dti

Department
Trade and Industry
REPUBLIC OF SOUTH AFRICA



International implementing partner



IEE PROJECT IMPACT:



Energy saved

Phase II to date: **355 GWh**
 Cumulative savings: **4 286 GWh**



CO₂e mitigated

Phase II to date: **334 106 tonnes**
 Cumulative mitigation: **3 997 062 tonnes**



Financial savings

By ± 80 participating industrial companies

Phase II to date: **R 293.7 million**
 Cumulative savings: **R 3 316 million (R 3.3 bn)**



IEE Training

Experts developed: **188**
 Professionals trained: **5 300**
 Training courses introduced: **10**

Phase II to date: January 2016 – April 2018; Cumulative: since 2010

Capacity building

The development of relevant skills in industry is a core element of the IEE Project. Not only does the transfer of skills to industry ensure sustained energy savings, but the implementation of IEE Project interventions is predominantly carried out in the process of training IEE experts.

Training courses are developed by UNIDO and offered by the NCPC-SA at end-user and expert level, covering ESO in a range of energy intensive systems, EnMS aligned to ISO 50001, as well as focused courses in basic energy management and energy performance indicators.



Gender mainstreaming

The IEE Project is committed to ensuring and promoting an improved gender balance within the energy efficiency industry in South Africa. This includes promoting greater participation of women in energy efficiency through policy engagement, inclusion of women in capacity development, participation in thought leadership, networking and role model initiatives and outreach programmes at tertiary institutions.



Visit www.ncpc.co.za for more information and the training calendar

DID YOU KNOW?

EnMS
 =
 Energy Management Systems

ESO
 =
 Energy Systems Optimisation



Project implementers



energy
 Department:
 Energy
 REPUBLIC OF SOUTH AFRICA



sanedi
 South African National Energy
 Development Institute



NCPC
 NATIONAL CLEANER PRODUCTION CENTRE
 SOUTH AFRICA



PARTICIPATION OPTIONS

Companies and individuals can begin the IEE journey by signing up to participate in one or more of the following ways:

- **ESO or general energy assessment** A good first step is to assess your company's energy use patterns through an energy audit, subsidised by the IEE Project. This can help plan a way forward and identify opportunities for improvements.
- **IEE Training** is offered in Pretoria, Cape Town, Durban and Port Elizabeth. End-user training is a 2-day classroom course that will provide technical professionals with the knowledge and tools necessary to initiate EnMS and ESO interventions. The expert training programme comprises theoretical and in-company practical modules spread over a number of months.
- **Expert-level host and candidate plants** Many of the companies that have saved energy and costs through the project have done so by making their sites available as candidate or host plants for the expert-level training programme. Implementation by the candidate forms part of the EnMS programme, with companies realising significant savings in the process. As a candidate plant, a company qualifies for a complimentary seat in the relevant expert-level training.
- **EnMS or ESO demonstration plant** The IEE Project team of EnMS and ESO experts will work with a willing company to implement an EnMS or ESO; based solely on the understanding that the company will agree to sharing the results of the process – in order to demonstrate the benefits. This support is offered at no cost.
- **ISO 50001 certification** It is the underlying aim of the IEE Project to see South African industry adopt the ISO 50001 series of standards, and the project team will gladly support companies in the journey to certification, through one of the models outlined above.
- **Consulting expert opportunities** Consulting engineers who progress through the IEE Project training and become ESO and EnMS experts have the opportunity to become a training facilitator, or a consulting expert to support industrial plants on behalf of the project. ESCo's can benefit through these opportunities, including the use of specialised diagnostic equipment housed at the NCPC-SA.

INTERESTED?

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