

SA INDUSTRIAL ENERGY EFFICIENCY PROJECT

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www.ieeproject.co.za / www.ncpc.co.za

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BACKGROUND

Now in its second phase, the South African Industrial Energy Efficiency (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 ISO 50001 series.

The IEE Project was launched in 2010 to assist industrial companies around the country to save energy and money, improve effectiveness and demonstrate the positive impact of energy management on GHG emissions.

The Project in South Africa was the first of its kind, and served as an international pilot project. The concept was developed by the United Nations Industrial Development Organization (UNIDO) and the primary national implementer was the National Cleaner Production Centre South Africa (NCPC-SA), a programme funded by the Department of Trade, Industry and Competition (**the dtic**) and managed by the Council for Scientific and Industrial Research (CSIR).

The first phase (2010 – 2015) was a significant success and the model was used to replicate the IEE Project in other developing countries. Today, 17 other developing countries run IEE projects by UNIDO and country partners. The success also led to UNIDO and local partners securing funding for a second phase, which commenced in 2016. Phase II is funded by the Global Environment Facility (GEF).

PROJECT FOCUS

Phase I – A world first (2010 – 2015)

- Promoting energy management systems and standards to provide companies with a platform to sustain energy-efficient practices
- Promoting energy-systems optimisation to unlock the energy-savings potential of priority industrial sectors in South Africa
- Training energy experts and practitioners to transfer skills to industry
- Demonstrating the impact of energy efficiency practices on local industries
- Raising awareness around the importance and impact of industrial energy efficiency

Phase II – Bigger and better (2016 – 2021)

- Improving industrial energy efficiency data as an input into policy development
- Supporting strong policies and frameworks for energy management systems and standards
- Mainstreaming training programmes aimed at the implementation and sustainability of energy management systems and energy savings
- Supporting access to financial products and incentives for energy efficiency and savings opportunities
- Ongoing awareness creation

PROJECT PARTNERS AND FUNDERS

- **National executing agency:**
 - Phases I and II: National Cleaner Production Centre, South Africa (NCPC-SA)
 - Phase II: DMRE and the South African National Energy Development Institute (SANEDI)
- **International implementing agency:** United Nations Industrial Development Organization (UNIDO)
- **South African national departments:**
 - Department of Trade, Industry and Competition (**the dtic**)
 - Department of Mineral Affairs and Energy (DMRE)
- **International funders:**
 - **Phase I:** Swiss State Secretariat for Economic Affairs (SECO), UK Department of International Development
 - **Phase II:** Global Environment Facility (GEF)

ACHIEVEMENTS

Cumulative savings (Phases I and II):	
Energy saved:	6.5 TWh* of cumulative energy savings in participating companies
CO₂e mitigated:	6.4 million tonnes mitigated
Costs saved:	R5.3 billion cumulative cost avoidance in participating companies

**Equivalent to the electricity required to power 900 000 middle income SA homes for 12 months, or 5 years of load shedding (at the 2019 level of 1.352 TWh)*

Capacity Building

The training of industry professionals is a critical component of the project, key to driving the sustained implementation of energy management. Together, UNIDO and the NCPC-SA developed internationally benchmarked courses with locally relevant content in energy management and energy systems optimisation.

- 6490 engineers, technicians and managers trained (private and public sector)
- 223 national experts trained in EnMS and ESO, and deployed in plants
- 116 national trainers trained, some of whom are being contracted to train and advise internationally
- 12 different courses developed and offered
- 40 lead auditors for ISO 50001 trained

Other noteworthy highlights (prior to the winning of the AEE Award)

- The IEE Project is one of only two **United Nations Framework Convention on Climate Change NAMA recognition projects from Africa**. The NAMA – Nationally Appropriate Mitigation Action – refers to a set of policies and actions undertaken by countries as part of a commitment to reduce greenhouse gas emissions.
- The Project also serves as custodian of the **SANS/ISO 50001 Certification Register** in South Africa.
- In 2019, the Project was recognised by the Southern African Energy Efficiency Confederation as the **South African Energy Project of the Year**.

Opportunities for participation and industry support

The IEE Project will run until December 2021, but even after this time, the work will continue through the NCPC-SA. Should companies wish to get support to realise energy and related cost savings, the NCPC-SA offers the following:

- Online energy efficiency information sessions
- Various online energy efficiency training courses
- Advice on existing energy efficiency funding mechanisms such as the [Income Tax \(12L\) Allowance for Energy Efficiency Savings](#)
- Fully subsidised energy assessments
- Energy Management Systems (EnMS) implementation support
- ISO 50001 certification readiness support
- South African case studies showcasing tangible energy efficiency benefits
- Free energy management tools and guides

For more information, contact ncpc@csir.co.za or visit www.ncpc.co.za