



**SUPPORTING SA'S TRANSITION TO A
LOW-CARBON ECONOMY THROUGH
SUSTAINABLE ENERGY SOLUTIONS
FOR THE INDUSTRIAL SECTOR**





UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION

Progress by innovation

A SELECTION OF UNIDO'S ENERGY PROJECTS IN SOUTH AFRICA

SUPPORTING SA'S TRANSITION TO A LOW-CARBON ECONOMY

Through its cross-cutting programme of action in South Africa, UNIDO promotes the operationalization of the SDGs, championing in particular the implementation of SDG 9, with the aim to *"build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation"*.

Projects and interventions in SA are aligned with the national priorities of the country, and are conceptualised and implemented in close collaboration with the Department of Trade, Industry and Competition (**the dtic**) as UNIDO's line department in the country. The projects are coordinated through the Regional Office for Southern Africa in Pretoria, which covers the following countries: SA, Angola, Botswana, Lesotho, Malawi, Mozambique, Namibia, Eswatini, Zambia, and Zimbabwe.

A selection of current and recent UNIDO projects in South Africa, relating to decarbonisation and sustainable energy, is discussed on the following pages.



*While UNIDO contributes to all goals of the 2030 Agenda, **SDG 9** takes a special position for the Organization, as it recognizes the role of industry, innovation and infrastructure for sustainable development.*



global
environment
facility
INVESTING IN OUR PLANET

INDUSTRIAL ENERGY EFFICIENCY (IEE) PROJECT

FOCUS: To accelerate and expand the introduction of Energy Management Systems, Industrial Energy Systems Optimization, and the Energy Management Standard ISO 50001 series within the South African industrial context in order to realize increased investment in industrial energy efficiency through the wide-scale adoption of the two methodologies and ISO 50001. Key activities of the project were localised and absorbed into offerings of the NCPC-SA and SANEDI.

FUNDER: GEF, with co-funding by **the dtic** (with initial funding from SECO and the UK Department of International Development)

BUDGET: USD 5.7 million

DURATION: 2011 - 2021

KEY LOCAL COUNTERPARTS: NCPC-SA and SANEDI
(executing agencies)

SOME ACHIEVEMENTS

Savings achieved (cumulative)

- Energy saved: **6.5 TWh**
- CO₂e mitigated: **6.4 million tonnes**
- Financial savings: **ZAR 5.3 billion** cost avoidance in participating companies

Also:

- Provided technical assessments to **>450 industrial companies**
- Supported **18 company sites** with ISO 50001 certification
- Capacity building (key to awareness creation and sustainability):
 - » Professionals trained: **6000+**
 - » Experts trained: **314**
 - » Local trainers trained: **199** (now contracted to offer training across Africa and Asia)

Winner of various awards, including:

- 2019 SA Energy Project of the Year
- 2020 global Association of Energy Engineers Project of the Year



Forestry, Fisheries & the Environment
Mineral Resources & Energy
Trade, Industry & Competition



sanedi
South African National Energy
Development Institute



NCPC
INDUSTRIAL EFFICIENCY IN SOUTH AFRICA



Flanders
State of the Art

STRENGTHENED ADAPTATION CAPACITY FOR A GREEN AND RESILIENT ECONOMY IN SA

FOCUS: To accelerate the transition to a decarbonized industry, a green and inclusive economy and a vibrant job market in South Africa. Addresses the barriers to the adoption of climate technologies and an enabling environment for the private sector to capitalize on the opportunities to shift towards a green economy. This is achieved through the following:

- Implementing and showcasing technology upgrades in pilot enterprises focusing on the application of renewable energy, energy and water efficiency: Five pilot projects underway, implementing climate-resilient energy and water services to increase the resilience in the agro-processing sector
- Stimulating and nurturing marketable green innovations: Five innovative companies supported with enterprise development services to commercialise their products/services
- Building capacity to mainstream climate action: Various training workshops are being presented by the project, aimed at the private sector, the public sector and academia. A public-private sector forum will develop a roadmap to ensure the sustainability of the project interventions.
- A study tour to Flanders was undertaken in November 2023 to enhance knowledge and facilitate exchange between South African and Flemish institutions on strengthening climate resilience in industries.

SECTOR: Water/Energy Nexus in the Agro-processing sector

FUNDER: Government of Flanders

BUDGET: €2.4 million

DURATION: 2022 – 2024

KEY LOCAL COUNTERPARTS: NCPC-SA, Technology Innovation Agency (TIA)



the dtic

Department:
Trade, Industry and Competition
REPUBLIC OF SOUTH AFRICA





global
environment
facility
INVESTING IN OUR PLANET

SUSTAINABLE ENERGY SYSTEMS FOR URBAN-INDUSTRIAL DEVELOPMENT IN SOUTH AFRICA

The overall objective of the project is to reduce greenhouse gas emissions and other environmental and social impacts by accelerating the decarbonization of Industrial Parks and Special Economic Zones (SEZs), addressing both the energy supply and demand side. Six parks are supported through the project, namely Coega Development Corporation, East London Industrial Development Zone, Atlantis SEZ, Phuthaditjhaba Industrial Park, AECL Umbogintwini Industrial Complex and Ekandustria Industrial Park. The project is strongly aligned with **the dtic's** Industrial Parks Revitalisation Programme (IPRP).

FOCUS:

- Reducing GHG emissions and accelerate the decarbonization of Industrial Parks and SEZs through providing support to park management, tenants, municipalities and other core stakeholders
- Demonstrate the feasibility and attractiveness of low-carbon energy options for Industrial Parks and SEZs
- Ensuring a conducive IP-associated policy and regulatory environment, especially with regard to sustainable energy generation and consumption
- Building on and collaborating with UNIDO's Global Eco-Industrial Parks Programme (GEIPP)

FUNDER: Global Environment Facility (GEF)

KEY LOCAL COUNTERPARTS: **the dtic**, NCPC-SA (execution partner)

BUDGET: USD 1, 390.000

DURATION: 2023 – 2027



the dtic

Department:
Trade, Industry and Competition
REPUBLIC OF SOUTH AFRICA



NCPC

INDUSTRIAL EFFICIENCY IN SOUTH AFRICA



global
environment
facility
INVESTING IN OUR PLANET

GLOBAL CLEANTECH INNOVATION PROGRAMME (GCIP)

FOCUS: The GCIP is part of a global initiative aimed at promoting clean technology innovation and supporting entrepreneurs in growing their Small, Medium and Micro Enterprises (SMMEs) and start-ups into viable, investment-ready businesses. Objectives are to:

- Promote clean technology innovations and entrepreneurship in SMMEs and start-ups in the country
- Increase number of SMMEs that pursue innovations in clean technologies
- Identify and nurture early stage entrepreneurs with promising innovative local clean technologies
- Facilitate local and global linkages and networking for SA's most promising start-ups with mentors and potential business partners. Services include the following:
 - » Training and mentoring
 - » Access to capital
 - » Showcasing
 - » Cash prize
 - » Attendance of International Global Forum by top performers (*GCIP-SA top performers won various awards at annual Global Forums*)

FUNDER: Global Environment Facility (GEF)

BUDGET: USD 3,326,281

DURATION: 2014 – 2017, with a follow-up project from 2022 – 2024

EXECUTING AGENCY: Technology Innovation Agency (TIA)



science & innovation

Department:
Science and Innovation
REPUBLIC OF SOUTH AFRICA



ENQUIRIES

UNIDO VIENNA

Karin Reiss-Haimbala
Industrial Development Expert

✉ k.reiss@unido.org

Önay Geylan

Project Administrator

✉ o.geylan@unido.org

UNIDO SOUTH AFRICA

Mchange Nyoka
National Project Coordinator

✉ m.nyoka@unido.org

🌐 www.unido.org