

South Africa – Public Buildings and Infrastructure project



PROJECT NAME	CO ₂ MITIGATION	PROJECT DURATION	SECTOR	LOCATION
South Africa – Energy Efficiency in Public Buildings and Infrastructure Programme (EEPPIP)	4,262 tCO ₂ e	2018-2026	Energy	



On behalf of

Supported by:



of the Federal Republic of Germany

The project

OBJECTIVE

The project aims to reduce energy consumption and emissions in South Africa's public buildings and infrastructure by scaling up energy efficiency (EE) investments. It introduces new financing mechanisms, strengthens institutional capacity, and supports the development of a national market for energy-efficient retrofitting. Through a combination of technical support, policy alignment, and catalytic financial instruments, the project seeks to improve public-sector energy performance while contributing to national mitigation targets and long-term cost savings.

CONTEXT

South Africa's public buildings consume a substantial share of the country's electricity, driven by old infrastructure, inefficient equipment, and limited investment in energy upgrades. Many government facilities rely on outdated systems with high operating costs, adding pressure to already strained municipal and provincial budgets. Improving the energy performance of public buildings is therefore both a climate mitigation priority and a fiscal necessity. The project responds to these challenges by helping the public sector adopt modern efficiency solutions and mobilise private capital for sustainable infrastructure improvements.

APPROACH

The project centres on three pillars that support system-wide change:

- Supporting the development of a **standardised investment pipeline** for energy-efficient retrofits in public buildings, including audits, feasibility assessments, and project preparation.
- Deploying **innovative financial instruments**, including a Partial Credit Guarantee, to unlock private-sector finance for EE projects and reduce risk for participating financial institutions.
- Strengthening the **enabling policy and institutional environment** by aligning procedures across national and provincial governments, supporting guidelines for procurement, and developing technical capacity for long-term implementation.

Working across multiple levels of government, the project promotes replicable models for financing and delivering retrofits that can be scaled nationally.

THE FACTS

Project name

South Africa – Public Buildings and Infrastructure (EEPBP)

Funding volume provided

EUR 20 million

Project duration

2018–2026

Leverage targets

EUR 23 million (public sector) and EUR 71 million (private sector)

Call

3rd Call (2015/2016)

Partner ministries

Department of Electricity and Energy (DEE) Office of the Presidency

Implementation Organisations

Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

Project partners

Industrial Development Corporation; South African National Energy Development Institute; National Business Initiative; selected South African Provinces, Municipalities and State-Owned Entities

Project status

Active

Phase

Implementation



The mid-term results

The project is steadily laying the groundwork for large-scale energy efficiency implementation across South Africa's public building sector. The following mid-term results have been documented:



200 PUBLIC BUILDINGS

have been included in the project's Energy Performance Contracting (EPC) preparation process through planned or initial energy audits.



3 MUNICIPALITIES

have credible baseline data through earlier EEDSM-supported audits, forming the technical backbone for future EPC projects.



1 NATIONAL PARTIAL CREDIT GUARANTEE (PCG)

valued at EUR 12.35 million has been designed to provide 50% risk coverage for ESCO loans supporting energy-efficiency projects.



1 NATIONAL EPC FINANCING ARCHITECTURE

has been defined, establishing the procedural and financial building blocks for future public-sector retrofits.



10+ LARGE-SCALE EE PROJECT CONCEPTS

are under preparation across municipalities, forming an emerging investment pipeline for future EPC tenders.



1 STANDARDISED M&V AND PROCUREMENT FOUNDATION

has been developed, integrating lessons from the EEDSM programme into EPC design, contracting, and verification approaches.

Predicted legacy



"eThekweni Municipality is paving the way for contracting, backed by energy audits, compliance with national legislation, strong governance structures, and strategic partnerships - showcasing its readiness to drive sustainable energy solutions."

Sindile Buthelezi, Energy Efficiency Manager at eThekweni Municipality

The project is helping establish the institutional, financial, and technical structures needed for long-term investment in public-building EE. By introducing standardised project preparation processes, expanding technical expertise, and demonstrating viable financing approaches, it is positioning the public sector to scale up retrofit investments in the coming years. Although progress has required extensive coordination and some processes have taken longer than anticipated, the project continues to build the foundations for sustained market development.

A key legacy is the strengthened collaboration across national ministries, provincial departments, municipalities, and implementing partners. These relationships are improving alignment on procurement, budgeting, and technical standards, reducing fragmentation and supporting a more coherent national approach to EE.



"Energy Performance Contracting is a game changer, unlocking large-scale energy efficiency projects despite limited public funds. Its success rests on credible data, that reveals consumption patterns and drivers, enabling conservation measures and impactful public sector projects."

Ngoanthari Maja, Energy and climate specialist at the South African National Energy Development Institute

The project is also influencing South Africa's wider policy landscape by generating evidence on financing mechanisms, project structuring, and building performance improvements. This learning is expected to inform future programmes and help mainstream EE within public-sector planning and budgeting processes.

The mid-term evaluation also identified several positive unintended outcomes: lessons from EPC are now being explored for water savings initiatives in public buildings; awareness and capacity around EE have spread to departments beyond the project's direct scope; and the initiative is helping to mature the ESCO market, fostering stronger private-sector engagement in South Africa's energy efficiency transition.



ACHIEVING TRANSFORMATIONAL CHANGE

A transformational effect is likely because the project is demonstrating a scalable, finance-ready model for public-building retrofits that combines policy alignment, capacity development, and catalytic finance to unlock long-term public and private investment.

Preliminary learnings

The 2025 mid-term evaluation identified key lessons that have shaped the ongoing implementation of EEPBIP. The following learnings show how the project team has applied these recommendations to reinforce institutional ownership, enhance coordination, and strengthen long-term impact.

LEARNING

RECOMMENDATION

PROJECT RESPONSE

Learning 1: Ensuring long-term sustainability and country ownership

Capacity development is a vital foundation for successful project delivery, and the evaluation highlighted that long-term sustainability is strengthened when behavioural change accompanies technical improvements. This includes updating maintenance practices, establishing site-operated energy management systems, and supporting institutional strengthening within SANEDI and IDC to embed lasting ownership.

To enhance participation from Energy Service Companies (ESCOs), the project team should leverage the ESCO Foundation to facilitate structured engagement and test market interest. This includes convening dialogues to understand ESCOs' constraints, sharing project pipelines, and co-developing solutions to barriers such as creditworthiness and procurement bottlenecks. Procurement processes should also be reviewed jointly with ESCOs and public entities to align contractual models with performance-based implementation.

A key component of the capacity development work under the NBI grant agreement focuses on strengthened ESCO engagement. An engagement plan has been developed that includes the ESCO Association, the South African Energy Efficiency Confederation, the Black Energy Professionals Association, and South Africa Females in Energy Efficiency. This coordinated approach aims to expand market readiness and support scalable implementation.

Learning 2: Securing political and institutional buy-in to reinforce sustainability

The evaluation confirmed that early and sustained political support is essential for effective project delivery. Strong alignment across departments, proactive engagement with key institutions, and sensitivity to political dynamics contribute to both smoother implementation and long-term sustainability of EE initiatives.

To improve coordination and decision-making, the project team should design a digital project dashboard that consolidates key indicators across all workstreams, including procurement, training, financial flows, GESI integration, and pilot project performance.

A centralised dashboard is being designed and implemented at the PSC level to present programme achievements and track progress across workstreams. This tool will enhance transparency, support timely decision-making, and help maintain focus and alignment throughout implementation.

Learning 3: Fostering knowledge exchange, teamwork, and communities of practice

Collaborative learning has played an important role in capturing insights and integrating them into decision-making across the project. Strengthening communities of practice, and leveraging synergies with related initiatives such as Municipal Energy Management Systems (MEMS), supports more consistent implementation and expands the project's reach and impact.

A 3–6-month market-testing phase is recommended to assess the feasibility, operational performance, and scalability of the EPC model. Engaging ESCOs, government departments, and other key stakeholders during this period would help refine the approach and establish a credible benchmark for EPC in the public sector.

With the project running until December 2026, the timeline should allow for meaningful testing of the EPC model. Actual implementation will depend on stakeholder engagement and the pace of activities, and the project team and TSU will continue to pursue this work as planned.



MITIGATION ACTION FACILITY KNOWLEDGE & LEARNING HUB



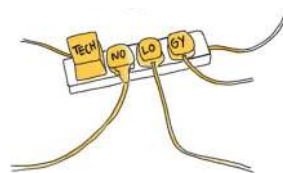
A comprehensive list of all lessons can be found in the full mid-term Evaluation & Learning Exercise (ELE) report available via the [Mitigation Action Facility website](#). Just select the filter "Report" and the country you are looking for in the pull-down menu of our digital library.

What are the ELEs?

The Mitigation Action Facility engages in a number of strategic efforts to extract lessons learnt from its project portfolio and create valuable resources for future implementations. This is part of its role as Knowledge and Learning Hub.

All projects with an overall duration of more than three years are subject to both a mid-term and a final Evaluation and Learning Exercise (ELE). These evaluations are part of the Mitigation Action Facility's approach to catalyse transformational change through continuous monitoring processes that support fearless learning. The ELEs follow a theoretical framework that combines document reviews, participatory workshops, and stakeholder interviews to collect evidence for the in-depth analysis of project results and lessons. Mid-term ELEs are conducted halfway through the project to assess early progress, while final ELEs analyse the overall impact and lessons learned at the end of the project.

All ELEs can be accessed through the [download library](#) on Mitigation Action Facility's website. This factsheet is based on the mid-term ELE of the project "[South Africa – Public Buildings and Infrastructure](#)".



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