
Mid-term Evaluation and Learning Exercise of the Energy Efficiency in Public Buildings and Infrastructure Programme (EEPBIP)

Project Evaluation and Learning Exercises for the Mitigation Action Facility

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Final Report

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Preface

The Mitigation Action Facility is a joint initiative of the German Federal Ministry for Economic Affairs and Climate Action (BMWK), UK's Department for Energy Security and Net Zero (DESNZ), the Danish Ministry of Climate, Energy and Utilities (KEFM), the Danish Ministry of Foreign Affairs (MFA), the European Union and the Children's Investment Fund Foundation (CIFF). The Mitigation Action Facility evolved from the NAMA Facility, which was established in 2012. The Mitigation Action Facility's vision is to accelerate decarbonisation to keep temperature rises to below 1.5 degrees Celsius by financing measures that shift priority sectors in a country towards a sustainable, carbon-neutral pathway. All projects with an overall duration of more than three years are subject to a mid-term and a final evaluation and learning exercise.

The Technical Support Unit (TSU) functions as the secretariat of the Mitigation Action Facility. The TSU commissioned Dorsch Impact and Oxford Policy Management to conduct mid-term and final Evaluation and Learning Exercises (ELEs). Each ELE is conducted using the same Theoretical Framework (FW), which involves the application of a document review, participatory workshops, and stakeholder interviews to collect evidence about projects' results and lessons analysed using a Theory-based approach centred on the use of contribution analysis reinforced by elements of process tracing.

This document presents the findings of the **mid-term ELE of the Energy Efficiency in Public Buildings and Infrastructure Programme (EEPPIP)**. The report has been reviewed by Luca Petrarulo (Technical Lead, ELE project). For further information, please contact davita.steinemann@dorsch-impact.de.

Executive summary

This document presents the findings of the **mid-term Evaluation and Learning Exercise (ELE) of the Energy Efficiency in Public Buildings and Infrastructure Programme (EEPBIP)**. The ELE was undertaken during the period January-May 2025. In accordance with its Terms of Reference, this ELE sought to address the following questions:

- Is the Project achieving its planned results?
- Is the Project starting to trigger transformational change?
- What can be learnt from the Project so far?

More information about the focus of this ELE and the methodology followed can be found in Section 1.2 and Section 2, respectively. The rest of the executive summary provides the highlights of the ELE's findings and key lessons. Please refer to Section 3 and 4 for the detailed findings and conclusions, and Section 5 for the full lessons and recommendations.

EEPBIP aims to empower national, provincial, and municipal authorities to develop and implement bankable energy-efficiency projects in public buildings. The project strategically combines a Technical Cooperation (TC) Component with a Financial Cooperation (FC) Component to mobilise essential technical expertise and investment.

The Department of Mineral Resources and Energy (DMRE)¹ serves as the principal national implementing partner, executing day-to-day activities through its technical agency, the South African National Energy Development Institute (SANEDI), which receives implementation support from the project team at the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ).

The primary objective of EEPBIP is to enhance energy performance and reduce greenhouse gas (GHG) emissions within public buildings and infrastructure across South Africa. To achieve this, the project focuses on promoting, identifying, and implementing energy efficiency (EE) measures within various public sector entities, including municipalities, provincial and national government bodies, and State-Owned Entities. The overall intention is to significantly decrease energy consumption in these buildings and infrastructure while also actively leveraging both public and private sector investment to foster the growth and maturity of the Energy Service Company (ESCO) market.

Through EEPBIP, public sector institutions would gain the capacity to identify, develop, and implement large-scale EE projects throughout their buildings and infrastructure, primarily utilising the energy performance contracting model (EnPCs). This approach empowers municipalities and ESCOs to access and utilise technical expertise via SANEDI and financing through the Industrial Development Corporation (IDC), enabling them to scale up their EE programmes, accelerate the reduction of energy consumption and related expenditures, and further decrease GHG emissions. To facilitate this investment, a partial credit guarantee has been established at the IDC, specifically designed to support ESCO investment in EE measures within public sector buildings and infrastructure.

¹ As of April 2025, the Department is now the Department of Electricity and Energy (DEE). For the purposes of this report it will remain DMRE as the Evaluation's baseline was March 2025

Ultimately, EEPBIP aims to assist public sector entities in developing high-quality, bankable EE projects.

Key findings

The mid-term evaluation of EEPBIP highlights its **relevance and strategic alignment** with national energy and climate change priorities, underscoring the significant potential for energy efficiency within the public sector. The project's strategic framework appropriately addresses key structural, financial, and institutional barriers to sustainable development and resource efficiency, aligning with the mandates of DMRE and supported by the insights of evaluation exercises.

Support for enabling policy frameworks has been a notable strength, with the project contributing to a range of conducive EE policies and strategies. Working collaboratively with government partners, including the DMRE, and supported by organisations like SANEDI and GIZ, the project has facilitated the implementation of policies that promote EE investments, such as the Electricity Regulation Amendment Act (2024), the Municipal Energy Efficiency and Demand Side Management (EEDSM) Programme, the General Budget Support Programme (GBS), and the approved regulations for the mandatory display of energy performance certificates. In addition, in January 2025, a competitive wholesale energy market was introduced to diversify energy supply, enhance efficiency and encourage private sector participation. However, challenges arising from the **complex multi-partner implementation structure**, involving numerous stakeholders and intricate institutional arrangements among various government levels and implementing partners, have led to a lack of clarity in roles and responsibilities, complicating coordination and potentially impeding efficiency at the operational level.

The project benefits from **strong political backing** from the Minister of the DMRE and the Presidency, which is crucial for ensuring policy coherence and sustained government support. Furthermore, the project has shown **progress toward improved energy efficiency and behavioural change** within select public sector bodies. Robust data collection, while challenging for municipalities, is yielding evidence suggesting a positive trajectory towards achieving project core objectives, including the development of EE projects and promoting energy-efficient practices within institutions supported by EEPBIP.

The evaluation has demonstrated clear evidence of **capacity development and increased awareness and capacity within institutions** as a result of the project, with the involvement of partners like SANEDI and GIZ. Recognising the initially low baseline capacity in municipalities, the project has directed targeted support, including capacity-building efforts focused on financial aspects, such as developing business cases for loans and addressing challenges related to municipal energy baselines and balance sheets, in collaboration with the IDC. The **integration of Gender Equality and Social Inclusion (GESI)** has been given significant consideration, with the project incorporating principles and developing frameworks for mainstreaming GESI, with potential for further enhancement in procurement and policy design.

However, the project has experienced **significant implementation delays**, notably the protracted finalisation of the Intergovernmental Project Agreement (IPA) between the South African and German Governments. At this interim assessment, there has been no physical project implementation of the Financial Cooperation Component, and whilst capacity has been developed under the Technical

Cooperation Component, as yet, no projects are up and running, and no contracts have been tendered to ESCOs. This is a timing issue rather than a result of the robustness of the project design.

The project clearly demonstrates **potential for sustainability and replication**, with stakeholders acknowledging the high quality of advisory services provided by entities like SANEDI, Africa International Advisors (AIA) and National Business Initiative (NBI) – see process map Figure 1. The influence on the development of the broader Public Sector Net-Zero Building Strategy indicates long-term policy and practice leverage **Workshops and consultations** facilitated by EEPBIP have covered crucial topics like supply chain management, project development, and procurement, directly supporting the implementation of EE initiatives. The project has also placed a dedicated **focus on procurement and contracting enhancements** related to energy efficiency, specifically addressing prevailing challenges and promoting improved practices in areas such as EnPCs and social development considerations in contracts. Finally, the **commitment to monitoring, evaluation, and learning** is evident in the mid-term evaluation, which highlights the project's proactive approach to assessing its objectives and identifying areas for adaptive management and learning, ensuring accountability to DMRE and other funding partners.

Conclusions

The report identifies significant implementation delays as a primary challenge, notably the protracted finalisation of the Intergovernmental Project Agreement (IPA) between the South African and German Governments. This delay pre-2023 has stalled the FC Component, preventing project financing and commissioning, while also limiting progress on the EnPCs, which remain unfinalised, unfunded, and untendered. To mitigate these challenges, the Energy Efficiency Project Support Unit (EESU) has focused on providing technical assistance for bankable project development and public sector project preparation. Efforts are underway to expedite progress in the three pilot municipalities, as well as prepare for the FC Component to become fully operational. Furthermore, the design of the Partial Credit Guarantee at IDC is complete, with stress-testing of potential bidders currently in progress.

The project's intricate structure, involving multiple stakeholders, has contributed to implementation delays due to unclear mandates and overlapping roles. The establishment of the EESU aims to provide a centralised point of support and coordination. Additionally, efforts are focused on clarifying the roles and mandates of key stakeholders such as SANEDI, NBI, IDC, and the municipalities.

Capacity limitations within municipalities, which lack the necessary technical expertise, pose another challenge. The project has responded with capacity development activities, receiving positive feedback on training delivered by SANEDI, NBI, and GIZ, covering essential areas like EnPC drafting, tender formulation, and baseline establishment. Data scarcity within municipalities is also a constraint, addressed by project efforts to construct baselines.

While Gender Equality and Social Inclusion (GESI) has been considered, **the GESI Action Plan requires strengthening** through further awareness campaigns and sensitisation measures.

In summary, this ELE evaluation highlights substantial implementation obstacles, particularly related to delays and structural complexity. However, it also emphasises the project's proactive

measures to address these issues through technical assistance, capacity development, and institutional strengthening, involving key government entities and project partners.

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List of abbreviations

AIA	Africa International Advisors
BBBEE	Broad-Based Black Economic Empowerment
BMS	Building Management Systems
BMWK	German Federal Ministry for Economic Affairs and Climate Action
BMZ	German Federal Ministry for Economic Cooperation and Development
CEO	Chief Executive Officer
CIFF	Children's Investment Fund Foundation
CO ₂	Carbon Dioxide
COVID-19	Corona Virus Disease 2019
CSP	Climate Support Programme
DDG	Deputy Director-General
DEE	Department of Energy and Electricity
DESNZ	Department for Energy Security and Net Zero
DFI	Development Financial Institution
DMRE	Department of Mineral Resources and Energy
DPME	Department of Planning, Monitoring and Evaluation
DPWI	Department of Public Works and Infrastructure
DTI	Department of Trade and Industry
EASA	ESCO Association of South Africa
EE	Energy Efficiency
EEDSM	Energy Efficiency and Demand Side Management
EEPBIIP	Energy Efficiency in Public Buildings and Infrastructure Programme
EEPSU	Energy Efficiency Project Support Unit
ELE	Evaluation and Learning Exercise
ELEQ	Evaluation and Learning Exercise Question
EnPC	Energy Performance Contract
EPC	Energy Performance Certificate
EQ	Evaluation Question
ESCO	Energy Service Company
EUR	Euro
FC	Financial Cooperation Component
FW	Theoretical Framework
GBS	General Budget Support Programme

GESI	Gender Equity and Social Inclusion
GHG	Greenhouse Gases
GIZ	Gesellschaft für Internationale Zusammenarbeit
HVAC	Heating, Ventilation and Air Conditioning
IDC	Industrial Development Corporation
IDT	Independent Development Trust
IO	Intermediate Outcome
IPA	Intergovernmental Project Agreement
KEFM	Danish Ministry of Climate, Energy and Utilities
KfW	KfW Development Bank (KfW – Kreditanstalt für Wiederaufbau)
KII	Key Informant Interview
KPI	Key Performance Indicator
Logframe	Logical Framework
M&E	Monitoring and Evaluation
MAF	Mitigation Action Facility
MEMS	Municipal Energy Management Systems
MOA	Memorandum of Agreement
MRV	Measuring, Reporting, and Verification
NAMA	Nationally Appropriate Mitigation Action
NBI	National Business Initiative
NCCRP	National Climate Change Response Policy
NDC	Nationally Determined Contributions
NEES	National Energy Efficiency Strategy
NGO	Non-Governmental Organisation
OECD DAC	Organisation for Economic Co-operation and Development's Development Assistance Committee
OPM	Oxford Policy Management
PCG	Partial Credit Guarantee
PMU	Project Management Unit
PPP	Public-Private Partnership
QA	Quality Assurance
QC	Quality Control
RAG	Red Amber Green
REIPPP	Renewable Energy Independent Power Producer Programme
RSA	Republic of South Africa
SAEEC	Southern African Energy Efficiency Confederation

SAGEN	South Africa German Energy Programme
SALGA	South African Local Government Association
SANEDI	South African National Energy Development Institute
SEA	Sustainable Energy Africa
SBU	Strategic Business Unit
SBF	Small Business Finance
SOP	Standard Operational Plan
SPV	Special Purpose Vehicle
TC	Technical Cooperation Component
TCMF	Transformational Change Measurement Framework
ToC	Theory of Change
TS	Types of Sources
TSU	Technical Support Unit, Mitigation Action Facility
UNFCCC	United Nations Framework Convention on Climate Change
WWTP	Waste-Water Treatment Plant

1 Introduction

This document presents the findings of the **mid-term Evaluation and Learning Exercise (ELE) of the Energy Efficiency in Public Buildings and Infrastructure Project (EEPBIP)**. The ELE was undertaken during the period January-May 2025.

1.1 Overview of the project

South Africa's public buildings portfolio, which includes office accommodation, schools, hospitals, administrative offices, and other state facilities, **is a major, yet under-addressed, source of energy-related greenhouse gas (GHG) emissions**. Energy efficiency (EE) in South Africa's public sector buildings is severely constrained by structural, financial, and institutional barriers, limiting the vast EE retrofit potential to lower operating costs, reduced load-shedding pressure, and measurable climate change mitigation gains. The ageing, inefficient building stock makes up more than 40 % of national, provincial, and municipal properties which were built before minimum-efficiency standards existed; many rely on obsolete lighting, heating, ventilation and air conditioning (HVAC) and hot-water systems that waste 25-40 % of delivered energy. **Electricity drawn from the country's coal-dominated grid to run HVAC and hot water systems makes the public-building sector responsible for an estimated 12 % of national territorial GHG emissions**. Escalating electricity tariffs, enduring load-shedding and mounting maintenance backlogs have further exposed the sector's vulnerability and its drag on public finances. So far, on the ground, most provinces and municipalities still face critical capacity, policy guidance and financing gaps that limit their ability to plan and execute large-scale energy-efficiency retrofits.

In its updated Nationally Determined Contributions (NDC) of 2021, the Government of South Africa pledged to reduce building sector electricity emissions by at least 3 million tCO₂e by 2030 and to cut the specific electricity consumption of public buildings by 20 % relative to a 2015 baseline. To help realise these targets, the Mitigation Action Facility-funded EEPBIP was initiated. The EEPBIP is a project that aims to support public sector institutions identify, develop, and implement large-scale energy efficiency projects throughout public buildings and infrastructure using an energy performance contracting model.

EEPBIP seeks to deliver technical assistance, capacity development and policy guidance, underpinned by a targeted financing window, to national, provincial, and municipal authorities for the development and execution of bankable EE projects in public buildings. The project has been developed by the Department of Minerals and Energy (DMRE) to support public sector institutions identify, develop, and implement large-scale energy efficiency projects throughout their buildings and infrastructure using an energy performance contracting model. This will enable institutions to leverage technical expertise and finance to scale up programmes and projects, and fast-track the reduction of energy, expenditure and GHG emissions. The main objective of EEPBIP is to improve the energy performance and reduce GHG emissions of public buildings and infrastructure by promoting, identifying, and implementing EE measures in public sector entities, including municipalities, provincial and national government, and State-Owned Entities. The project sets out to assist South Africa in achieving a considerable reduction in energy consumption within public sector buildings and thus decrease GHG emissions. Leveraging on public and private sector funding, a partial credit

guarantee was established at the Industrial Development Corporation (IDC) to support Energy Service Companies' (ESCOs) investment in EE measures within public sector buildings and infrastructure. In addition, EEPBIP will support public sector entities in developing high-quality bankable projects.

Although the project activities commenced in mid-2022, its concept dates to 2017, when a scoping study first highlighted the potential for bundled energy-performance contracting across government facilities. The project's principal national implementing partner is the DMRE, which executes day-to-day activities through its technical agency, the South African National Energy Development Institute (SANEDI) and receives implementing support from the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) as the Implementation Organisation.

EEPBIP is governed and implemented by a consortium of project partners responsible for providing governance and delivering the Technical Cooperation (TC) and Financial Cooperation (FC) Components of the project. Below is the process map and organogram of the project.

Figure 1. Process Map (organogram)

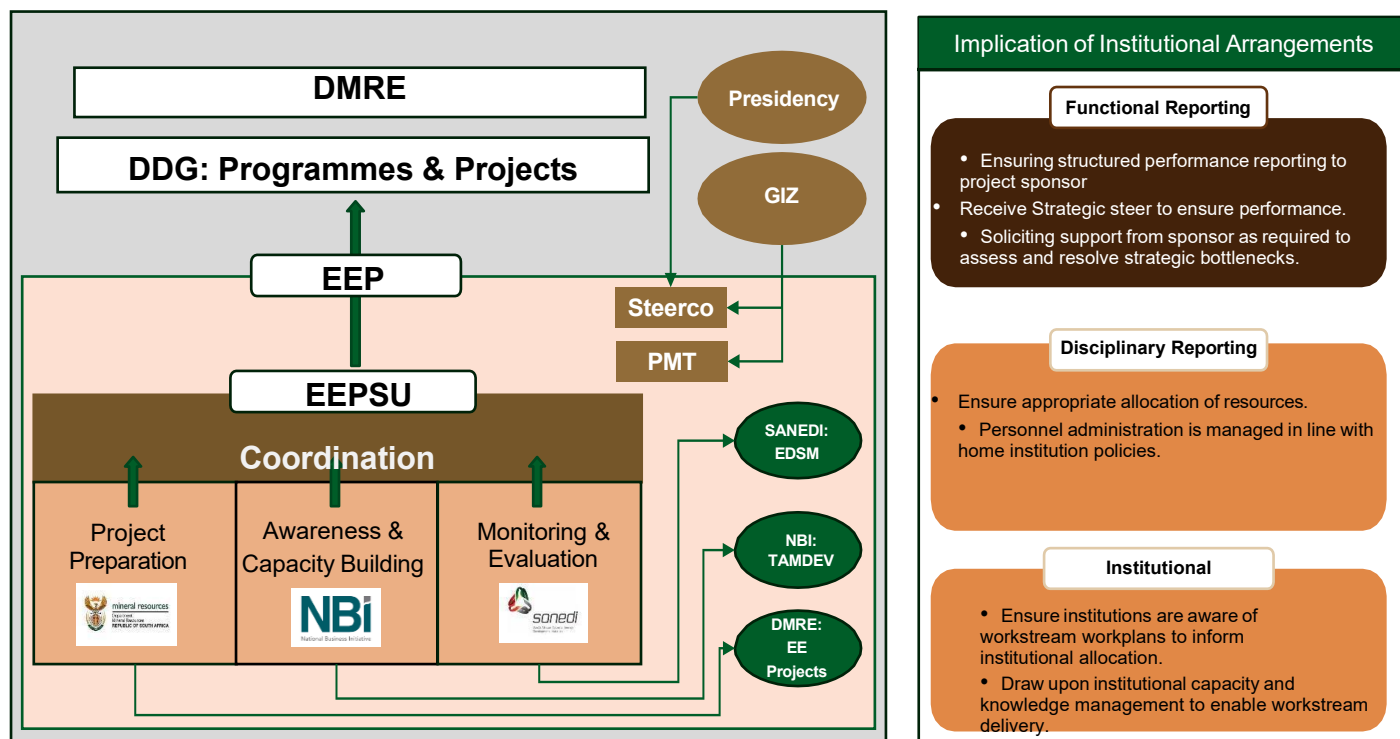


Figure 1 shows EEPBIP's process map, illustrating how the project is coordinated through the Energy Efficiency Project Support Unit (EEPSU) under the DMRE Programmes & Projects. It has oversight from DMRE and strategic guidance from GIZ, and is supported by SANEDI, NBI, and DMRE divisions to deliver project preparation, capacity building, and monitoring, while ensuring functional, disciplinary, and institutional alignment.

Project design originally combined a **TC Component and an FC Component** to mobilise both the technical know-how and investment through a single national facility. The component of technical support within public sector entities included the creation of standardised procurement and contracting procedures, capacity building, awareness campaigns, policy and regulatory development, and monitoring and evaluation. Additionally, contributed to mitigating investment risks through the

establishment of a Partial Credit Guarantee (PCG) mechanism. **The fund will provide a 50% partial credit guarantee to ESCOs seeking finance for EE Projects. Mandated by DMRE through a Memorandum of Agreement with IDC**, the fund is governed by an IDC-DMRE Project Steering Committee and supported by a **EUR 12.35 million grant** from the Mitigation Action Facility via GIZ. Managed by the IDC's Partnerships Programmes Department, the fund disburses loans through either the Services Strategic Business Unit (SBU) or the Small Business Finance and Regions (SBF) SBU, strictly targeting private sector ESCOs and excluding third-party fund access.

The project has experienced a significant delay attributed to administrative challenges in the Republic of South Africa (RSA) postponing the signing of the Intergovernmental Project Agreement (IPA), which subsequently held up the project. In 2023, the proposal was revised, and the PCG mechanism under the FC Component remained unchanged from its original design. The only modification to the FC Component's structure was procedural, involving a direct grant agreement with the IDC instead of routing through the DMRE. On the TC Component side, the main adjustment was the restructuring of the EEPBIP, with the core implementation team now based at SANEDI rather than DMRE.

By the time of the ELE, EEPBIP's state of play showed small to moderate progress due to delays in implementation despite great effort in preparatory work. No energy efficiency projects have been implemented yet, but the project has delivered a financial framework, institutional capacity building, and valuable knowledge outputs. These foundations position the project well for success if implementation is accelerated. The project has a limited window to achieve meaningful outcomes. The next nine months are critical to translating groundwork into verified energy savings, GHG reductions, and market development for ESCOs.

The impact and outcomes of the project

EEPBIP aims to reduce GHG emissions in South Africa by driving a transformation in EE practices within the public sector. The project consists of two main components as stated above. EEPBIP reflects a joint agreement between GIZ, the DMRE, and the RSA Presidency to foster sustainable energy solutions. It supports the implementation of EE projects through Energy Performance Contract (EnPC) models and seeks to expand opportunities for South African ESCOs. EnPC is a financing model where an ESCO implements energy-saving upgrades at no upfront cost to the client and is repaid from the resulting energy cost savings. The ESCO guarantees performance, assumes the risk, and the client benefits from reduced energy bills and long-term savings. In doing so, EnPCs will contribute to the development of the ESCO market, enhance technical skills, support job creation, and promote enterprise development.

The project complements and builds on existing initiatives such as the Energy Efficiency and Demand Side Management (EEDSM) Project by aligning project preparation activities, leveraging on energy audits and baseline data to identify and prepare bankable EnPCs. It was designed to be implemented over a four-year period and is intended to act as a catalyst for systemic change by encouraging increased public and private sector investment in energy efficiency.

The overall goal of EEBIP is to **catalyse large-scale EE implementation and drive transformational change in public sector energy efficiency roll-out.** Specifically, the Outcomes sought by each component are:

- **FC Component Outcome:** An enhanced investment climate and growth of the ESCO market through financial risk mitigation for public sector energy efficiency interventions.
- **TC Component Outcome:** Strengthened institutional structures and processes across municipalities, provinces, and national government to support the identification, procurement, implementation, and impact monitoring of GHG mitigation projects.

Once implementation is done, EEPBIP is expected to deliver a multifaceted impact, with a primary focus on driving meaningful outcomes within South Africa's public sector, including:

- **Reduction of GHG emissions:** By promoting EE practices, EEPBIP is expected to contribute significantly to South Africa's climate mitigation efforts. The project will reduce the energy consumption of public buildings, leading to a decrease in GHG emissions.
- **Transformation in public sector energy efficiency:** Through its two components, EEPBIP will catalyse systemic changes in how EE projects are implemented across the public sector, driving large-scale adoption of energy-efficient solutions.
- **Development of the ESCO market:** The project will support the growth of the ESCO market by providing financial risk mitigation (through the PCG), enhancing access to credit for ESCOs, and promoting the EnPC models. This will lead to the development of a robust market for energy service companies in South Africa.
- **Capacity building and job creation:** By offering technical support and fostering awareness, EEPBIP will build capacity within public institutions, enhancing skills and fostering the creation of green jobs. This includes capacity development for municipalities, provinces, and national government agencies.
- **Strengthened institutional structures and processes:** The project will contribute to the establishment of institutional frameworks that can support the procurement, implementation, and monitoring of EE projects. This will help integrate energy efficiency into the day-to-day operations of public entities, ensuring long-term sustainability.
- **Leveraging public-private sector investment:** By improving the investment climate and reducing perceived financial risks, EEPBIP is expected to stimulate increased investment in EE projects. This, in turn, will lead to greater energy savings and enhanced GHG reduction potential. Overall, EEPBIP aims to foster a transformative shift in public sector energy practices, setting the stage for a broader adoption of EE measures and a more sustainable energy future for South Africa.

These objectives will be realised by:

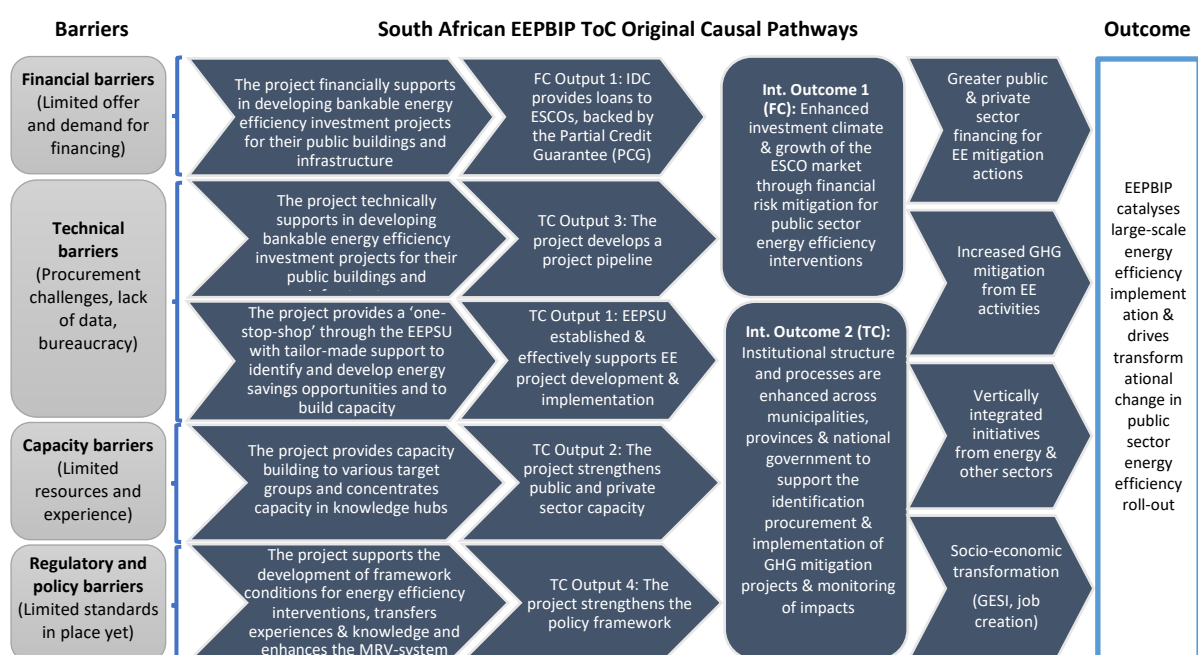
- Establishing an efficient, performance-driven co-financing system that directs National Treasury budget allocations and climate finance resources to sub-national level entities; and
- Issuing technical guidelines, policy tools and retrofit projects that demonstrate best practice in project design, procurement, and GHG measurement, reporting and verification (MRV).

By establishing a national financing window underpinned by clear standards and robust MRV, the project will not only safeguard efficient use of public funds but also set the investment conditions that attract private capital from ESCOs, green-bond issuers and commercial lenders into the public-building sector. Complementary workstreams such as detailed energy audits, feasibility studies

for deep retrofits, and the development of standardised performance-contract templates will expand the pipeline of bankable projects while reducing perceived risk. Together, these interventions will improve planning certainty for provincial works departments, strengthen dialogue with the private sector, and create a steady flow of high-quality, low-risk efficiency projects that drive down operating costs, cut emissions, and reinforce South Africa’s commitment to a low-carbon, fiscally responsible public infrastructure portfolio.

In order to progress from the initial problem and barriers identified to the achievement of the outcomes presented, the project Theory of Change (ToC) foresees **two** causal pathways sustaining each of the two Intermediate Outcomes and the final Outcome of the project, which are illustrated in Figure 2.

Figure 2. Overview of Casual Pathways



Causal Pathway for Intermediate Outcome 1: To address a key barrier, which can be described as limited offer and demand for financing, IDC provides loans to ESCOs, backed by the Partial Credit Guarantee (PCG) (**FC Output 1**). At the same time, the project financially supports in developing bankable energy efficiency investment projects for their public buildings and infrastructure. EEPSU is key in this effort, establishing a robust pipeline of bankable projects. (**TC Output 3**). This technical element feeds into the FC Component and acts to result in greater public and private sector financing for EE mitigation actions. This progression intends to culminate in the enhanced investment climate and growth of the ESCO market through financial risk mitigation for public sector energy efficiency interventions (**Intermediate Outcome 1**).

Causal Pathway for Intermediate Outcome 2: To address technical, capacity and policy and regulatory barriers, the project takes three interlinked (sub-)pathways leading to TC Outputs 1, 2 and 4. The specific sub-pathways go as follows:

- **To address technical barriers** such as procurement challenges, lack of data and excessive bureaucracy, the project establishes the EEPSU, which provides a 'one-stop shop' for project partners and municipalities to identify and develop tailor-made energy savings opportunities

and strengthen the capacity of the partners involved. This will lead to an enabling environment, created by EEPSU to effectively support EE project development and implementation **(TC Output 1)**.

- **To address existing capacity** barriers including limited resources and experience, the project provides capacity development to various target groups and concentrates capacity in knowledge hubs. The increase in capacity (technical and financial) leads to the project having strengthened public and private sector capacity **(TC Output 2)** and subsequently vertical integration of initiatives from energy and other sectors.
- **To address regulatory and policy barriers**, which include limited standards in place amongst other aspects, the project supports the development of framework conditions for EE interventions, transfers experiences and knowledge and acts to enhance the MRV reporting system. This leads to the project strengthening the EE-enabling policy framework **(TC Output 4)**, and in turn, socio-economic transformation (GESI, job creation).

These efforts coalesce into enhancing the institutional structure and processes across municipalities, provinces and national government to support the identification, procurement and implementation of GHG mitigation projects and the monitoring of impacts **(Intermediate Outcome 2)**.

1.2 Focus of the Evaluation and Learning Exercise

In accordance with its Terms of Reference, this ELE seeks to address the following General ELE Questions (ELEQs):

- **Has the project been achieving its results?**
- **Has the project started to trigger transformational change?**
- **What was learnt from the project so far?**

In addition, the following specific questions were considered in this ELE:

- What is the effectiveness of the institutional development process?
- What is the effectiveness of the project's awareness-raising strategies?
- What is the effectiveness of the project's capacity-development activities?
- Assess the alignment with national policies and programmes:
 - Is there enough partner buy-in to enable the implementation? How has it evolved since the project's inception?
 - What are the effects of the delayed signature of the IPA?
 - Has the project amendment of the institutional change indeed increased the chances of success, or just "bought more time"?
- Assess the structure of the financial mechanism and proposed implementation process:
 - Is the project business model and financial mechanism still relevant, i.e. do the initial barriers to EE still exist, and would the project address them in an appropriate manner?
- What impact can the project realistically still achieve until its end, and how likely is it that the funding earmarked will be fully used?

The General ELEQs presented above were broken down and operationalised into Specific ELEQs that are answered in this report. In Table 1, the General and Specific ELEQs are mapped against the Organisation for Economic Co-operation and Development's Development Assistance Committee's

(OECD DAC) evaluation criteria², which are widely used as international standards for evaluations of development interventions. Reference to the relevant report section where each ELEQ / evaluation criterion is treated is also given. Finally, the specific ELEQs were broken down further into sub-questions, which are included in the official ELE Matrix approved by the MAF Technical Support Unit (TSU) and reported in Annex B.

Table 1. General and specific ELE questions and their link to the ELE Report sections

General ELE Question	Specific ELE Question	Evaluation (relevant ELE section)	criteria Report
Is the project achieving its planned results?	To what extent does the project address an identified need?	Relevance (Section 3.1)	
	To what extent has the project been achieving its intended intermediate outcomes (and unintended ones)?	Effectiveness (Section 3.2)	
	To what extent has the delivery of the outputs been timely and to expected quality standards?	Efficiency (Section 3.3)	
Is the project starting to trigger transformational change?	What evidence is there that the project is likely to contribute to the intended impact in the ToC (incl. transformational change)?	Impact (Section 3.4)	
	What is the likelihood that the outcomes will be sustained after the end of the project funding period?	Sustainability (Section 3.5)	
What has been learnt from the project so far?	What key lessons can be learnt to the benefit of this or other projects funded by the Mitigation Action Facility in achieving their results?	Learning (Section 5.1)	

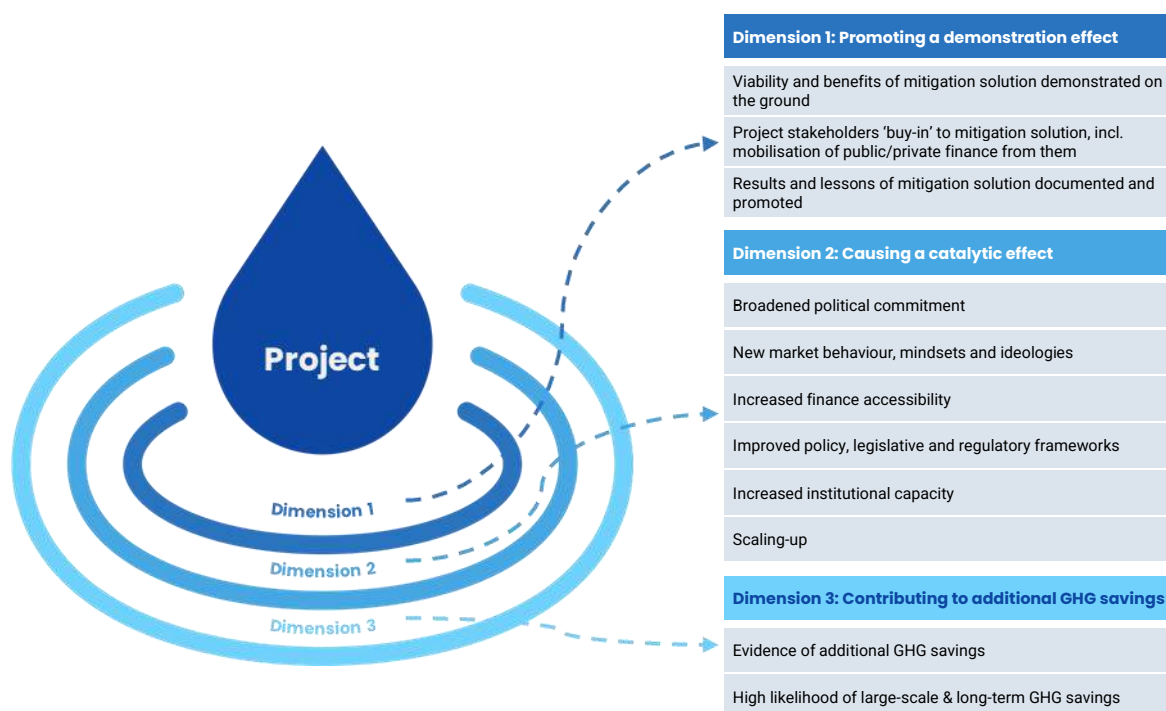
1.2.1 The MAF Transformational Change Measurement Framework

The concept of transformational change warrants exploration, which is included in the General and Specific ELEQs. The enabling of transformational change is one of the key aims of the MAF and, therefore, of projects. The MAF defines Transformational Change as “*Catalytic change in systems and behaviours resulting from disruptive climate actions that enable actors to shift to carbon-neutral pathways*”³. The MAF Theory of Change (ToC) explains how transformational change is expected to be achieved through its outputs and outcome. The ToC is broad, and there are different ways in which transformational change can be achieved through the projects. Figure 3 illustrates three dimensions that interact and reinforce each other to produce project-induced transformational change. Each project will work on different elements of the three dimensions to define its own pathway to or “recipe” for transformational change. A more detailed explanation of the ELEs’ Transformational Change Measurement Framework (TCMF) summarised in Figure 3 is presented in Annex A.

² Relevance, Effectiveness, Efficiency, Impact, Sustainability. The ELE Team added a 6th criteria, namely Learning.

³ https://mitigation-action.org/wp-content/uploads/Mitigation-Action-Facility_TC-factsheet.pdf

Figure 3. Transformational Change Measurement Framework



Transformational change is not expected within the lifetime of the project. Instead, there should be clear signs and evidence that it is likely in the mid- to long-term (e.g. 10 years). By the end of the project, Dimension 1 (demonstration effect) should be at an advanced stage, Dimension 2 (catalytic effect) at an interim stage, and Dimension 3 (additional GHG savings) at an early stage. Dimensions 1 and 2 'lock in' the pathway to achieving the additional GHG savings, meaning this looks inevitable, or at least very highly likely, in the future. Table 2 below summarises what is expected at the mid- and end-point of the project. **These have been used by the ELE Team to assess the project's progress towards its impact in Section 3.4.**

Table 2. Expectation of project-induced transformational change stages at mid-point and end-point

Dimension	Expectation at project's mid-point	Expectation at project's end-point
1: Promoting a demonstration effect	Interim stage: the project has made initial yet tangible progress in demonstrating the mitigation solution ; for instance, it shows strong buy-in from the project partners alongside evidence on the ground of the solution's applicability and effectiveness, although not at the scale expected by the end of the project.	Advanced stage: the concrete demonstration of the mitigation solution in the project context is in an advanced stage , with little doubt that it will be completed or has already been completed, and the full results and lessons of the solution's demonstration have been documented and disseminated.
2: Causing a catalytic effect	Early stage: the project has laid the foundations for causing a catalytic effect , for example, by engaging a broader group of stakeholders, setting	Interim stage: the project is starting to cause a catalytic effect in the project context, for example, by showing some evidence of shifts in

Dimension	Expectation at project's mid-point	Expectation at project's end-point
	up capacity-building activities, or assessing the key legislative or regulatory gaps in place for the broad uptake of the mitigation solution.	market behaviour, more favourable legal and regulatory frameworks, or scaling up of the mitigation solution.
3: Contributing to additional GHG savings	None: the project should have prepared a clear and realistic plan for achieving such transformation, but it would be too early to expect this to have yet resulted in any additional GHG savings.	Early stage: the project has laid the foundations for causing additional GHG savings , and this may have resulted in some actual savings (but not at a large scale), but more importantly, there should be clear evidence that points towards additional GHG savings happening in the mid to long term.

2 Methodological approach

The mid-term ELE comprises four main phases: inception, fieldwork, analysis, and reporting.

Inception phase (January-March 2025)

The inception phase involved the definition of the ELE matrix, including the ELE questions, data collection methods and identification of respondents among the three main groups: Project Team, stakeholders, and third parties. Project team respondents are those parties directly involved in the implementation of the project, such as the Implementation Organisation (GIZ) and the main Project Partner (DMRE). Project stakeholders are actors affected by project actions and can influence project Outputs and Outcomes. This group comprised important national government bodies influencing the regulatory process, public officials from the three pilot municipalities from Mahikeng, Nelson Mandela Bay, and eThekweni or other key stakeholders, including SANEDI, the National Business Initiative (NBI), the National Department of Public Works and Infrastructure (DPWI) as well as the financial institution Industrial Development Corporation of South Africa (IDC), which is directly involved in the FC Component's implementation. Third parties included associations like the South African Local Government Association (SALGA), the ESCO Association of South Africa (EASA), and the Southern African Energy Efficiency Confederation (SAEEC), several external consultants, representatives of similar sister projects, as well as other actors and Non-Governmental Organisations (NGOs) actively or passively involved in EEPBIP in South Africa.

Fieldwork (March 2025)

The fieldwork started with an online kick-off workshop involving the Project Team and was finalised with a mission debrief and validation workshops with the same actors. During the 11-day mission, the ELE Team conducted 23 qualitative, semi-structured interviews in Pretoria and Johannesburg.

Table 3. Overview of the number of interviews and interviewees by sampling category

	Project Team	Project Stakeholders	Third Parties	TOTAL
No. interviews	5 ⁴	11	7	23
No. interviewees	8	20	7	35

Analysis (April 2025)

The ELE Team consolidated its interview notes and documentary evidence in an evidence map table, extracting common themes and weighing the evidence using the scorecard presented in Table 4 to answer the evaluation questions, confirming the evidence or absence of evidence for the causal pathways of the project's ToC. The main steps undertaken during the analysis phase are summarised in Table 5.

⁴ Including the Kick-Off and Validation Workshop.

Table 4. Scorecard for assessing the strength of evidence

Quantity (number of sources reporting the evidence)	Variety (number of types of sources (TS) reporting the evidence)		
	1 TS only	2 TSs	3 TSs
1 interview only	Single source		
2 interviews	Weak evidence	Medium evidence	
3+ interviews	Medium evidence	Strong evidence	Very strong evidence

Table 5. Summary of the ELE Analysis Methodology

Integrating Primary & Secondary Data	Evaluating the Strength of Evidence	Draft Contribution Story
Tailor analytical tools	Assess strength of evidence of common themes	Draft contribution stories in the ELE report for each ELEQ and causal pathway
Tidy up notes	Identify concurrent / alternative explanations in ToC causal pathways	Final QC / QA
Data mining and evidence mapping from interviews and docs along ELEQs	Agreement on contribution of NSP vs Context	
Extract positive and negative common themes for each ELEQ	Perform process tracing formal tests of causal pathways	
Consolidate and cross-check common themes	Develop figure with RAG rating of causal pathways	
1st Quality Control (QC) / Quality Assurance (QA)		

Reporting (May-June 2025)

The ELE Team prepared a draft report during April 2025, which was submitted to the TSU in May 2025. The TSU, Project Team, and the Mitigation Action Facility Board provided comments to the report, which were used to prepare the final report.

2.1 Limitations

Despite requests, the ELE Team was not able to access and interview some institutions such as South African ESCOs, the non-profit organisation Sustainable Energy Africa (SEA), and the Private Office of the President (Presidency). Due to time constraints and to ensure efficiency, some interviews (e.g., with stakeholders from Durban or remote places in Johannesburg) were held online.

No field visits were undertaken to the three pilot municipalities (Mahikeng, Nelson Mandela Bay, and eThekweni Municipality) because the pilot projects for EE implementations had not yet been executed and were therefore not mature enough to provide evidence if a site visit had occurred. In addition,

the Project Team felt that a site visit to potential sample buildings in these municipalities could raise undesired expectations of the Project Partners, given that the pilot buildings were still in the selection process during the mid-term ELE. However, it is expected that during the final evaluation (proposed in 2026), it will be feasible to visit at least two of the three pilot municipalities and report on successfully implemented pilot EE projects.

3 Key Findings

In this section, the ELE Team presents the main findings of the ELE. These are structured according to the ELE Questions in Table 1. At the beginning of each section, a Red-Amber-Green (RAG) rating of the strength of the project's contribution story to the ToC and the OECD DAC criteria is included, following the scale: Good / Very good = Green; Problems = Amber; Serious deficiencies = Red; Not enough info to rate = Grey.

3.1 Relevance of the project

Relevance

1. To what extent does the project address an identified need (by national policy institutions, municipal government, and public sector institutions)?

EEPBIP is very well aligned with national policy documents such as the "national white paper", other national climate change adaptation and mitigation programmes, and the government priorities regarding GHG emissions from public sector institutions. **The project contributes to the mitigation efforts under the South African NDC on a project level.** The revised 2021 NDC emphasises programmes aimed at boosting efficiency and lowering emissions across the economy as essential measures. MAF's EEPBIP fits this description, with the project amendment, which mainly targeted changes in political partner structure, enhancing the likelihood of success. The amendment indicated potential shifts in political partnerships, increasing ownership and alleviating administrative hurdles in finalising agreements with previous partners. Specifically, the Office of the Presidency, acting as a political partner, ensured the EEPBIP's alignment with National Development Goals and supported its execution, particularly by addressing administrative and institutional impediments across various departments.

Given the ageing and inefficient building stock, **numerous programmes and interventions have been implemented across the public sector in recent years to reduce energy consumption and mitigate impacts caused by climate change.** There are several donor activities in the field of public sector energy efficiency, including support through the European Union, World Bank, USAID (till February 2025), and IKI projects, to name just a few. Such programmes and interventions include, for instance, the South Africa German Energy Programme (SAGEN) with its focus on Energy Transition, the Municipal Energy Efficiency and Demand Side Management (EEDSM) Programme with the aim to reduce electricity consumption through energy-efficient technologies, the General Budget Support Programme (GBS) with the objective to unlock growth through reform and investment, and the approved regulations for the mandatory display of energy performance certificates. **The integration and alignment of these energy efficiency initiatives in public sector buildings and infrastructure-related programmes has become an integral part of implementing EEPBIP,** which fills the niche by engaging with ESCOs and developing EnPC models (see also "The impact and outcomes of the project" in section 1.1). The DMRE has worked to ensure alignment and integration within the activities of the ongoing energy efficiency initiatives in the country, such as project preparation, co-funding and capacity building and awareness raising. In addition, alignment and integration of EEPBIP with the mandatory display of Energy Performance Certificates (EPCs) is ongoing. DMRE are rolling out energy audits in 200 buildings within the South African provincial portfolio to prepare EnPCs. The data

collection process of these energy audits is in alignment with the EEPBIP's project preparation activities and processed to develop the project pipeline. Furthermore, the public display of these certificates will drive positive behavioural changes and increased energy-efficient practices within buildings, with officials keen to avoid publicly displaying a certificate indicating inefficient energy usage. The implementation of EnPCs will go hand in hand with EEPBIP, which will encourage and support institutions under the project to also obtain EPCs timeously.

After the national elections in May 2024, the newly appointed Minister for Electricity and Energy recognised the project as valuable support with solid political endorsement, maintaining a direct communication line with the DMRE. In addition, the Deputy Director-General actively supports the project, giving **evidence of strong political backing. The earlier issue of the missing IPA signature appears to have had no lasting negative effects on the current collaboration**, as political support has actually improved in recent semesters. Nevertheless, the upcoming local administration elections next year could still influence the project, since the mayors and their committees might change, along with their local agendas and priorities.

A major challenge EEPBIP is helping to address is the mismatch between outdated laws and more recent EE policies and initiatives. For instance, it was noted that national policies, like the National Energy Efficiency Strategy of 2015, are somewhat outdated and require updates to better align with and enhance synergies with recent government policies. Another source highlighted a lack of financial resources needed for aligning and implementing national policies at the municipal level. While these policies exist in writing, their execution must also be prioritised, which may reveal some discrepancies. Nonetheless, EEPBIP is actively addressing this issue and is thus seen as a valuable contributor to strengthening and enhancing the alignment across different sectors.

In terms of institutionalisation, **EEPBIP continues to receive extensive buy-in on a technical level from the DMRE.** The Department is using EEPBIP as the overarching initiative for public sector EE activities, aligning existing and new initiatives such as the EEDSM programme. It contributes to the national "Portfolio of Buildings"⁵ and energy security, actively supports EPCs in the public sector, and operationalises the National Energy Efficiency Strategy (NEES). The project is providing technical assistance to DMRE and the other Project Partners to prepare public sector entities for the development and implementation of large-scale energy efficiency projects. This has been designed to complement and support initial project preparation activities under EEPBIP, although a certain complexity is perceived in aligning with legal, regulatory, and operational requirements (see section 3.2.2).

At the national level, the project is developing a Monitoring and Evaluation (M&E) Framework for Public Sector Energy Efficiency Projects, which intends to standardise and streamline M&E across the numerous national programmes underway at DMRE. The M&E framework aligns with existing approaches in the country (e.g., Renewable Energy Independent Power Producer Project (REIPPP); Department of Planning, Monitoring and Evaluation (DPME); Department of Trade and Industry (DTI)). In addition, the project aimed to incorporate its MAF mandatory core indicator reporting into the

⁵ The "Portfolio of Buildings" managed by DMRE refers to a government initiative aimed at improving energy efficiency in public and commercial buildings. It is part of South Africa's broader strategy to reduce energy consumption, lower carbon emissions, and promote sustainable building practices under the Energy Efficiency Demand-Side Management (EEDSM) programme.

existing national indicator system to align with and enhance the national reporting framework. For example, the M2 indicator reports on the number of jobs created in the ESCO sector through the EE project implementation. Job creation is also a key general indicator in South Africa, about which DMRE provides regular reports.

At the local level, there is a high project focus on the municipality level, to address their identified needs. For instance, the discussion on how municipalities can pitch their projects and how they can improve their procurement processes is seen as very important and aligns well with national policies.

In terms of Gender Equality and Social Inclusion (GESI), the project considers a gender-sensitive and social-inclusive approach (e.g., in procurement requirements and bid evaluations), and key elements will be incorporated in the M&E framework for the follow-up. A GESI service provider was appointed in late 2024 to carry out a comprehensive gender analysis, develop a **GESI Action Plan** with specific objectives and training needs, and integrate GESI considerations into project operations and procurement processes. Activities also include the development of a pilot GESI project. **It must be acknowledged that South Africa already has well-established policies to address human rights, gender, black people’s economic empowerment, and environmental standards.** The newly introduced project’s GESI Action Plan is therefore perceived as relevant and corresponds very well with national goals. In addition, local municipalities are already quite GESI-sensitive and responsive to equity and inclusion. **Under the TC Component, these standards are now monitored and addressed through the establishment of the Energy Efficiency Project Support Unit (EEPSU) under the Clean Energy Branch⁶ from DMRE.**

Despite EEPBIP’s attention to GESI, not all project partners and stakeholders were fully aware of the existence and scope of the GESI Action Plan⁷. The action plan is also not entirely implemented and rolled out on a broader scale. Further awareness campaigns and sensitisation measures will be required for its wider dissemination and roll-out.

In conclusion, based on the evidence found and presented above, the ELE Team considers the performance of the project in terms of relevance to national policies and public and private stakeholders’ needs, as well as complementarity and appropriateness, to be adequate. Consequently, it marks this evaluation criterion as green.

3.2 Effectiveness of the project

Effectiveness	2. To what extent has the project been achieving intended intermediate outcomes (and unintended ones)?
	Intermediate Outcome 1 (FC Component): Enhanced investment climate & growth of the ESCO market through financial risk mitigation for public sector energy efficiency interventions

⁶ The role of the Clean Energy Branch is to oversee policies and programmes for renewable energy (solar, wind, hydropower), green hydrogen, and just energy transition projects.

⁷ During the evaluation period in March 2025, a workshop on GESI was conducted, with participation from all key project stakeholders. However, some interviews took place before and some after the workshop’s capacitation and GESI sensitisation.

Intermediate Outcome 2 (TC Component): Institutional structure and processes are enhanced across municipalities, provinces & national government to support the identification procurement & implementation of GHG mitigation projects & monitoring of impacts

As explained in Section 1, **two** Intermediate Outcomes (IOs)⁸ have been crystallised by the ELE Team from the project's ToC, as shown in Figure 2. These help to group together the relevant aspects of the **five** Output statements and their related activities in an intermediate step, leading to the overall project Outcome and overarching expected Impact. The effectiveness of the project is therefore described against these two IOs.

3.2.1 Intermediate Outcome 1 (FC Component): Enhanced investment climate and growth of the ESCO market

Of the five project Outputs, FC Component's Output 1 (loans) and TC Component's Output 3 (project pipeline) most notably contribute to Intermediate Outcome (IO) 1. The effectiveness of the relevant project activities that contribute to this IO is discussed below.

Under FC Output 1, IDC provides loans to ESCOs backed by the Partial Credit Guarantee (PCG). The public sector entity will issue a tender for ESCOs to install energy-saving measures in public buildings under an EnPC on a shared savings basis (such that achieved savings are paid to the contracted ESCO, over the contracted period, including a return on investment). The loan is secured by the ESCO from the bank, i.e. IDC. Under EEPBIP, the PCG is provided to ESCOs by IDC (the bank), requiring finance (backed by a guarantee) to support the EE projects in the public buildings and infrastructure.

A central theme in this mid-term ELE is the significant delays experienced by the project, primarily stemming from the protracted process of finalising the IPA between the RSA and the German Government⁹ and the delay in signing the financing agreement with IDC for the FC Component. **This has had significant impacts on the FC Component, and as such, no projects have been financed or commissioned to date.**

To speed up the process, **technical activities which feed into the FC Component's Intermediate Outcome involve the provision of technical support in developing bankable EE investment projects for public buildings and infrastructure, resulting in the development of a pipeline of bankable projects (TC Output 3).** Although no projects have been implemented and commissioned to date, **extensive work has been carried out across the three municipalities** by the appointed transaction advisors, including reviews of site data, assessment of suitability for EE projects, and **a project pipeline of bankable EE projects has been identified.** The tender for the ESCOs has also been developed but not advertised to the market, and staff have been trained on how to evaluate the tenders and mobilise the contracts with ESCOs.

⁸ In the original ToC diagram from the Project Proposal and Amendment Request, the IOs were called "Project Components".

⁹ It should be noted that the 2023 project amendment explicitly permitted the project to proceed without a signed IPA, thereby eliminating this source of delays from that point onwards.

Sources noted that project delays have also led to delayed staff hiring, particularly at SANEDI to fill technical roles. However, in September 2024, the EEPSU was formally established at SANEDI to support public sector entities through several key activities. These include assisting with project preparation, identifying and implementing bankable EE projects and providing access to specialised advisors. **Despite evidence of strong progress in the appointment of EEPSU's team members, sources noted that the delays could still jeopardise the timeline, and EEPBIP might end before all foreseen EE projects are realised and implemented.** Other interviewees and project reports noted that no EnPCs are live yet and no ESCOs have been contracted, so it is still difficult to tell how successful the financial mechanism will be. These delays have acted as a bottleneck, impeding progress across various project components and hindering the achievement of progress toward Intermediate Outcome 1 at this stage.

The consequences of these delays are multifaceted, affecting project timelines, implementation pace, and the ability to demonstrate tangible results of the FC Component at this stage. Based on the factors explained above, combined with no tenders having been launched and no contracts being in place between ESCOs and municipalities to date, it is pertinent to flag a break in the causal relationship at this stage, assigning a red rating to the effectiveness of achieving Intermediate Outcome 1. However, with additional time (e.g. through a cost-neutral project extension), the Intermediate Outcome 1 can still be achieved and is likely to successfully contribute to the overarching Outcome.

3.2.2 Intermediate Outcome 2 (TC Component): Institutional structure and process are enhanced across municipalities, provinces and the national government

Several Outputs contribute to Intermediate Outcome 2, most notably TC Component's Outputs 1 (development and implementation of EE projects), Output 2 (capacity development), and Output 4 (policy framework strengthening). Activities related to the TC Component focus on addressing technical, capacity, policy, and regulatory barriers as identified in the ToC.

Technical barriers include, but are not limited to, procurement challenges, lack of data, and bureaucracy. There is evidence emerging that the project is providing effective technical support in developing bankable EE investment projects for public buildings and infrastructure and thus developing a robust pipeline of bankable projects contained within Annex D2 (this also relates to TC Output, which feeds the FC Component).

Under TC Output 1, the EE development has begun via the provision of a 'one-stop-shop' through the EEPSU, providing tailor-made support to identify, develop, and implement energy savings opportunities and projects. There is evidence of progress in this regard: the EEPSU has now been established, thus creating an enabling environment to effectively support EE project development and implementation. Although no implementation has commenced, no tenders have been released to ESCOs, and no projects are up and running, given the recent increase in project activity, both the ELE and Project Teams expect to see some rapid shifts in this regard prior to the end-line evaluation.

It should be noted that EEPBIP has a very complex project structure (see Figure 1), including the involvement of multiple stakeholders and complex processes and institutional arrangements, which can act as a hindrance to efficient implementation. Stakeholders observed that, compared to other

projects, this one has a very complex structure and a lack of clear mandates, such as overlapping roles among DMRE SANEDI, and NBI, which may have contributed to the delays.

Sources also noted that adapting procurement processes for EE projects can be both complex and time-consuming. An added constraint in this regard is the lack of baseline data within municipalities. Evidence of progress in addressing this issue was also identified, and both municipalities and technical experts confirmed that baselines across municipalities had now been constructed, providing a strong basis for measuring the effectiveness of EE projects.

Capacity barriers include limited resources and experience. The project seeks to address these barriers via activities toward TC Output 2. Interviewees noted that municipalities lack the necessary technical staff and expertise to effectively plan and implement EE projects. Specifically, smaller municipalities have limited technical staff and energy experts. Providing adequate support and capacity development to municipalities is essential in addressing these challenges and facilitating successful project implementation.

In contrast to the challenges in implementation of the FC Component, the project has made notable strides in capacity development and awareness raising, particularly at the municipal level. A number of sources commended the Project Team on their capacity development efforts on the financial aspects, such as developing business cases for municipalities and addressing challenges such as weak balance sheets, structuring financial products, and facilitating access to loans, profit shares, and structuring financial mechanisms such as PCGs. Sources noted the value of training provided by the project team on EnPCs, contracting for energy efficiency within the public sector, unpacking supply chain, finance and legal requirements processes, and building and mapping a streamlined procurement process. This included specific technical training on:

- Energy as a Service vs. Energy Performance Contract
- Maintenance and Integration
- Suspensive Conditions
- Risk
- Measurement and Verification
- Local Economic Development.

Municipalities have been able to directly utilise these trainings in the identification, management, and preparation for contracting ESCOs and the implementation of EE projects. They have also contributed directly to evidence against MAF indicator 4.2: Number of national and sub-national institutions that received technical assistance to implement transformational mitigation action and Project Indicator TI-3: Number of public entity officials trained on project identification, development, procurement, finance, implementation and monitoring. A full list of the capacity-development activities provided under this project can be found in Annex D. **Parallel evidence of progress toward TC Output 2 is that the EEPSU has a direct focus on capacity development and awareness raising, helping entities assess their strengths and weaknesses, access training, and create action plans.** Work is also underway under EEPSU to implement a comprehensive M&E system to capture essential data and guide energy savings verification.

Multiple sources expressed their appreciation for this support from the GIZ Project Team, specifically highlighting the technical and financial training, which included modules on gender mainstreaming

and M&E. **Interviewees across the project stated that they now have a high awareness of GESI issues and objectives.**

As a result of the activities under TC Output 2, **municipalities have significantly grown in awareness and technical capacity.** These efforts have contributed to increased knowledge and skills among stakeholders, which is crucial for the long-term success of energy efficiency initiatives.

The ELE has garnered strong results in the effectiveness of the project, strengthening both public and private sector capacity (TC Output 2). However, it is important to note that capacity development, while essential, is an intermediate milestone. The ultimate measure of effectiveness lies in the successful implementation of projects and the achievement of EE targets.

Finally, according to the ToC, barriers in South Africa include limited standards and policy frameworks in place. Through its TC Output 4, the project intends to support the development of an enabling policy and institutional framework for EE interventions, transfer experiences and knowledge, and enhance the MRV system.

Multiple sources emphasised the importance of effective collaboration and communication among diverse stakeholders, such as government agencies, municipalities, ESCOs, and financiers. Additionally, it was highlighted that a clear definition of roles and responsibilities among project partners is vital for preventing misunderstanding and ensuring accountability. ESCOs, municipalities, and financiers must have a clear understanding of their roles, responsibilities, and reporting mechanisms.

The ELE found significant achievements in putting in place an enabling institutional architecture and reporting frameworks for project delivery, M&E, and sustainability of the initiatives. This is evidenced by clear roles and mandates of all project partners within the complex structure illustrated in Figure 1. Specifically, the delivery partners SANEDI and DMRE demonstrate strong ownership: there is strong evidence that the project is country-led. On the organigram Figure 1, the consultants (a.o. AIA, Iroko, Ingula Yesive) all fall under EEPBIP support contracted by GIZ. NBI is running the 'Awareness Raising and Capacity Development' workstream and is covered by EEPBIP. DMRE leads on Project Preparation, and SANEDI has ownership of the M&E framework. Moreover, as part of EEPBIP activities, they will map out all of EEPBIP and EEPBIP processes to prepare Standard Operational Plans (SOPs) and carry out teambuilding, which will be helpful in the effective implementation and tracking of the projects once underway. The EEPBIP was newly established in September 2024 with mostly new personnel, including a Senior Technical Advisor, energy efficiency management staff, and coordinators. It is essential that they function as a strong, cohesive team. This demonstrates some progress toward strengthening the policy framework (TC Output 4).

Based on factors explained above and the strength of evidence, combined with the strong political buy-in, the ELE Team assigns an amber rating to the effectiveness of achieving Intermediate Outcome 2. Despite the strong work in capacity development, the rating is due to the 'interim assessment' constituting no evidence of 'physical' project implementation, even if there is ground work done.

3.2.3 How external factors impacted the project's effectiveness

Underpinning the major delay to project startup was the **missing signatures of FC Component's agreements**, which protracted the processes in finalising the IPA between RSA and the German Government. **This was outside the control of the Project Team.**

However, **the positive alignment of the project with national policy has been a strong external factor that has improved its ability to gain traction with a wide range of stakeholders**, including the Presidency, DMRE, SANEDI, municipalities, and ESCOs. As mentioned in Section 3.1, there are synergies with many policies on energy efficiency.

3.2.4 Unintended outcomes

The evaluation of the ELE revealed several positive unintended outcomes. Firstly, it highlighted the **potential applicability of lessons learned from Energy Performance Contracts to water savings initiatives within public sector buildings**, suggesting a broader impact beyond energy efficiency. Secondly, the **project has forced increased awareness and capacity even outside the targeted departments, leading to a spread of knowledge of energy efficiency to other public entities**. Finally, **the project has significant potential to contribute to the maturing of the ESCO market** and foster increased private sector development and engagement in the EE sector in South Africa.

3.2.5 Assessment of the overall effectiveness

To sum up, based on the above-mentioned evidence and analysis of Intermediate Outcomes, the project is showing strong signs of positive progress in line with the ToC causal pathways, and the underlying assumptions have been held as valid and accurate. Most notably, the capacity-development activities to date (technical and financial) have combined with the work towards clear roles and mandates within the complex implementation structure. There has also been progress in identifying bankable energy efficiency projects and the requirements for their implementation. **This work has created an enabling environment for the uptake and sustainability of the project. However, some uncertainties remain regarding the on-the-ground testing of the financial model.** A concern is the disparity between the progress in capacity development and the limited progress in achieving tangible outcomes. This implies a need for extended TC Component support beyond the original timeline. It should also be noted that the project's ability to adapt to changing circumstances and address emerging challenges is important for its success. This is yet to be tested.

There has been positive progress in establishing the EEPSU and associated institutional arrangements, as well as impressive results in building the technical and institutional capacity of key stakeholders, backed by strong political will and evidence of opportunities for the maturing of the ESCO market in South Africa. Most stakeholders praise the capacity development delivered by SANEDI, NBI, and GIZ. Municipal engineers, supply-chain managers, and finance officers now understand how to draft an EnPC and formulate its tender, how the PCG interacts with the Municipal Finance Management Act, and what metering data is needed to establish robust baselines. The modules delivered by the NBI for capacity building have been well structured, and delivered timeously, and several municipalities have already used the lessons to create cross-departmental energy management committees and live dashboards for monitoring consumption.

However, considering the time since the project's inception in 2018, and the fact that key deliverables such as tendered projects and operational ESCO contracts are still pending, the ELE Team assigns an **amber** rating to overall project effectiveness. This rating reflects the current stage of progress and the urgency needed to achieve the project's objectives within the remaining timeframe.

3.3 Efficiency of the project

Efficiency

3. To what extent is the relationship between inputs and outputs timely and to expected quality standards?

EEPBIIP has progressed far enough to allow an analysis of how efficiently it is converting its inputs, such as funding, staff time, expertise, and institutional effort, into concrete and timely outputs.

Interviews with implementing partners, government officials, and financial intermediaries revealed a consistent pattern: the "upstream" preparation work has been of high quality, yet the "downstream" implementation outputs remain outstanding because critical path items have not been completed. In other words, individual workstreams look effective, but the project as a whole is not yet efficient.

Parallel to this, the project's financial mechanism has been fully designed and signed off: the PCG sits at the IDC; **its coverage ratio, tenor, and pricing align with Treasury policy; and most market actors know how it will operate.** IDC's own contribution has been on time and to budget. Finally, the preparatory technical studies, investment-grade audits, GHG baselines, and GESI plans are considered robust and immediately usable once procurement starts.

These pockets of excellence are not yet translating into the signature results that matter, i.e. signed EnPCs, completed retrofits, verifiable energy savings, and reduced emissions. The major reason is the delay in the signing of the IPA. The implementation agreement was finalised a year later than scheduled, and the restructuring of the DMRE left key posts vacant just when decisions were needed. Because of the slippage, activities that were supposed to run sequentially now overlap in a compressed calendar. **A more realistic sequencing plan, incorporating a built-in buffer for the FC Component rollout, could have better aligned with the project's objectives and alleviated the current pressure on the TC Component to deliver within a compressed timeframe.**

No EnPC tender has reached the market, no ESCO has yet applied for the guarantee, and the ESCO market does show a level of concern about the public-sector payment risk.

The project stakeholder roles among SANEDI, NBI, IDC, and municipalities are now more clearly defined, as clear roles and mandates have been provided. Previously, their role and scope were blurred, which incurred issues and resulted in overlaps and a lack of distinction between roles. **Risk management is not yet well established.** There is no standard "project" risk register produced that is consulted during day-to-day project preparation. **Taken together, these findings lead to a low efficiency: the project has spent considerable time and funding on high-grade preparation, but until at least a first bundle of projects breaks ground, the return on those inputs remains low.** There is, however, still time for the possibility of implementing the pilot projects.

The project has made an effort to fast-track the process to start procurement for **three pilot municipalities that already have good baseline data and political buy-in**. The aim is to fast-track the project to convert intangible readiness into visible contracts within the next **six to nine** months. The acceleration plan should fast-track every task on the critical path to ensure it's implemented. **The IDC and GIZ are already in the preparatory process to convene a round table before tenders are issued to stress-test the PCG parameters; if potential bidders still find the coverage ratio or pricing unattractive, these can be adjusted before public procurement starts.**

In sum, the project has been rated **amber**, illustrating that whilst there is evidence of efficiency across project activities to date, the significant delays have hindered overall project efficiency. However, once the project physically starts, a full view of efficiency will be seen, and the ELE team expects the rating to be green. **Although there are no implemented projects yet, EEPBIP has produced valuable knowledge, strong financial implementation architecture, and improved municipal institutions.** The current challenge is to transform these inputs into tangible EE projects while the political opportunity and donor tolerance still exist. If the fast-track and tighter coordination are maintained immediately, **there is still potential that the project can meet its objectives of delivering verified energy savings, GHG reductions, and a maturing ESCO market within the current funding horizon.** The next nine months will therefore determine whether the high-quality groundwork laid to date translates into timely, high-impact outcomes.

3.4 Impact of the project

Impact	4. What evidence is there that the project is likely to contribute to the intended impact in the ToC (incl. transformational change)?
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This section uses the MAF transformational change measurement framework introduced in Section 1.2.1 and explained in more detail in Annex A to assess the project's likelihood to generate a long-term impact. The section is structured according to the three TCMF dimensions.

3.4.1 Dimension 1: Promoted a catalytic impact

Viability and benefits of mitigation solution demonstrated on the ground

EEPBIP has begun laying the foundation to demonstrate the viability and benefits of energy efficiency retrofits in public buildings and infrastructure by indirectly initiating processes to collect **credible baseline data, which will support the development of bankable projects.** The energy audits, installation of meters, and implementation of Energy Performance Certificates (EPC) across select municipalities have provided early examples of reliable baseline data, although done through the EEDSM grant, which will be used to carefully scope the operational improvements in buildings. In some cases, baseline and post-intervention data have shown reductions in electricity consumption because facility owners are aware and track consumption, particularly where smart metering or online building management systems (BMS) were installed. This does not necessarily imply declining additionality of the project. EEPBIP's additionality lies in its ability to transform the baseline to bankable EnPCs. Given the expectation by the midpoint for the demonstration effect to be at an interim **stage** (see Table 2), which requires **visible early implementation and some evidence of effectiveness**, the current

progress remains **below expectation**. There is strong institutional buy-in, but the absence of on-the-ground demonstration means the project has **not yet triggered the intended demonstration effect**.

Results and lessons of mitigation solution documented and promoted

The project has made efforts to document and communicate the value of energy efficiency, but these activities are still emerging, as there are no projects implemented. Some project-level knowledge products, such as case studies and technical guidelines, have been developed, and project partners have participated in conferences and stakeholder engagements to raise awareness of EEPBIP's work.

Yet, there is limited public dissemination of impact metrics, and strategic communication linking results to broader policy goals such as climate mitigation or cost savings in public sector budgets remains underdeveloped.

Project partners buy-in to the mitigation solution

There is evidence of increasing interest among public institutions in adopting EE interventions, particularly where procurement and implementation support is available. Some engagement with the Department of Public Works and Infrastructure (DPWI), DMRE, and the South African Local Government Association (SALGA) has resulted in interest in opportunities and some technical capacity development. **The commitment and buy-in from DMRE as the lead implementing partner are seen as very strong across all interview groups. Additionally, the pilot municipalities are regarded as actively engaged and dedicated.** There is significant buy-in for the project across the different levels of seniority, from technical officials through to the administrative and political leadership, as well as among other public service delivery sectors (water, wastewater, etc.), which strengthens the sustainability of the implementation measures and outputs. This seems to be a result of extensive consultation work by DMRE officials to brief the leadership over the years. These are favourable indications for the long-term sustainability of the project.

Key barriers include unclear mandates for energy efficiency in infrastructure, lack of internal budget flexibility for co-financing, and limited familiarity with performance-based contracting models such as ESCOs. While several ESCOs and technical partners have expressed willingness to engage, the absence of a project on the ground has built scepticism about the project. The project has initiated multi-stakeholder coordination platforms and contributed to shaping policy dialogues on public sector energy efficiency. However, **structural buy-in reflected through changes in budget allocation, procurement norms, and regulatory enforcement is not yet evident at this stage.**

Assessment of Dimension 1

EEPBIP is assessed to be still at an "Early Stage" in promoting a demonstration effect. While the project has launched foundational interventions, developed initial knowledge products, and established partnerships, its efforts remain fragmented as there is no implementation thus far. The lack of implementation demonstrates no projects on the ground, with no tangible demonstration effects, which would have equated to an interim stage. Demonstrated results are not implemented and yet documented. Strategic communication, financing instruments, and coordination across

government levels will be essential to move beyond early-stage to the interim stage demonstration towards scalable impact.

3.4.2 Dimension 2: Caused a Catalytic Effect

Broadened political commitment

EEPBIP has generated initial signals of political commitment, though they remain limited to the technical and departmental levels. The most visible traction has emerged within DPWI and select provincial departments, where alignment with green building and EE mandates has supported engagement. However, this commitment has not yet broadened into cross-ministerial coordination, legislative support, or integration into national climate financing strategies.

National Treasury and DMRE have participated in consultations, but no formal interdepartmental agreements or co-financing mandates have emerged. Energy efficiency remains peripheral in broader public investment and infrastructure planning agendas. No specific legislative reforms or executive mandates have been adopted to institutionalise EEPBIP's principles or compel energy performance contracting in the public sector. As such, political commitment remains largely technical and departmental, with limited strategic elevation or budgetary anchoring.

New market behaviours, mindsets, and ideologies

The project has not yet catalysed significant shifts in market behaviour among ESCOs, financial institutions, or public sector clients. While interest from ESCOs has been noted, particularly in them eagerly waiting to respond to the call for proposals (tenders) under the performance-based contracting model, this has not occurred, nor has it yet translated into new partnerships, contracts, or scalable commercial engagement.

Public entities continue to approach energy retrofits as donor-funded technical upgrades rather than value-generating investments. Procurement officers and infrastructure managers often lack exposure to lifecycle costing and remain risk-averse due to entrenched capital expenditure norms. Although capacity-development sessions have introduced the concepts of guaranteed savings and performance-based contracting, behavioural change remains nascent, and few public institutions have proactively sought to implement projects outside the EEPBIP framework (with the exception of DPWI's "Measurement and verification shared savings" project). On the supply side, ESCOs note the continued absence of bankable pipelines, project bundling mechanisms, and enabling procurement regulations as barriers to entry. **Overall, market perceptions have not yet evolved to view energy efficiency as a viable, replicable investment opportunity.**

Increased finance accessibility

Despite laying the groundwork, EEPBIP has not yet increased access to finance for EE investments. No performance-based contracts have been executed, and public and private finance mobilisation indicators remain at baseline levels. Engagements with Development Financial Institutions (DFIs) and commercial banks are ongoing, and preliminary frameworks for energy performance contracting and repayment mechanisms have been developed. However, these remain in the design phase. The absence of a national EE investment facility or revolving fund for the public sector has constrained

options for blended finance or risk mitigation. Without institutionalised financing mechanisms, the project has not yet catalysed financial accessibility at scale.

Increased institutional capacity

EEPBIIP has supported targeted institutional capacity development through workshops, training modules, and the development of knowledge products for both technical and procurement staff. Key partners, including the Independent Development Trust (IDT) and provincial infrastructure units, have begun integrating EE considerations into planning and project appraisal frameworks.

Scaling-Up

At this stage, there is limited evidence of spontaneous replication or jurisdictional scaling of EEPBIIP's approaches. No new provinces or sectors have independently launched energy performance contracting initiatives. While there is interest among certain departments to replicate pilot successes once implemented, the lack of standardised processes, bundled project pipelines, and co-financing instruments has inhibited organic scale-up.

Assessment of Dimension 2

EEPBIIP has laid important groundwork but has not yet achieved a catalytic effect at scale. Though energy efficiency is emerging within technical departments like DPWI and select provincial structures, EEPBIIP has not matured into cross-sectoral leadership, legislative reform, or budgetary mandates that would institutionalise energy efficiency at scale. The project's visibility and influence are still confined to operational levels without strategic uptake by National Treasury, DMRE, or Cabinet. Market behaviours and institutional mindsets have shown limited change, with energy efficiency still viewed as a donor-driven compliance issue rather than a strategic investment. While ESCO interest exists, structural barriers like weak procurement pathways and a lack of bankable project pipelines persist. Financial accessibility remains constrained, with no performance-based contracts executed. Although institutional capacity has improved through training, spontaneous replication and scaling have not occurred. **Therefore, based on the evidence available, the ELE Team considers Dimension 2 at the "Early stage", hence in line with the expectations of the TCMF.**

3.4.3 Dimension 3: Contributed to Additional GHG Savings

Currently, EEPBIIP has not yet delivered measurable indirect or long-term GHG emission reductions. While the project's ultimate mitigation ambition is significant, targeting scalable energy savings across South Africa's extensive public building stock, progress toward this goal remains largely preparatory. No verified emission reductions have been reported, and the project's core mitigation instruments, such as EnPCs and MRV systems, are not yet operational.

The project's mitigation potential remains conceptually strong, given the considerable energy inefficiency of many public facilities and the role that energy savings could play in achieving national decarbonisation and just transition objectives. Retrofitting South Africa's public infrastructure, particularly in education, health, and administrative sectors, has the potential to yield sustained GHG savings through decreased electricity and fuel consumption. However, the absence of implemented retrofits under EEPBIIP, as of mid-term, means that projected mitigation outcomes remain unrealised.

EEPBIP is rated “Early Stage” under Dimension 3: while the project has laid conceptual foundations, such as contracting models, these tools are not yet deployed or delivering results. As such, no direct or indirect GHG emission reductions can be attributed to the project at mid-term.

3.4.4 Assessment of the project’s impact

Based on the evaluation evidence reviewed so far, EEPBIP has generated only a limited verifiable impact. Where activities have been completed, it is often difficult to substantiate or clearly attribute the headline claims in project reports about “building robust project pipelines” and “mobilising investment opportunities.” Much of the pipeline preparation cited in the progress narratives would likely have taken place through municipalities’ routine EEDSM work, even without EEPBIP’s technical support.

That said, the project has delivered a handful of well-defined, high-value interventions where its contribution is clear. Examples include:

- Implementation of smart metering, energy audits and credible baseline data for the municipality through the EEDSM grants, which selected municipalities receive for the planning and implementing of energy efficient technologies ranging from traffic and street lighting to energy efficiency in buildings and water service infrastructure.
- Negotiating finance terms between Nelson Mandela Bay Municipality and the Industrial Development Corporation, which could unblock access to the partial-credit guarantee for a wastewater-treatment retrofit.
- Co-developing EnPC metering protocols with eThekweni Municipality, now adopted as the reference standard by the national Municipal EE Forum.

Project stakeholders such as the DMRE, National Treasury and several municipalities do acknowledge the high quality of the project advisory, and the guidance has informed elements of the emerging Public-Sector Net-Zero Building Strategy. However, the gap between outputs and outcomes remains wide. While the EEPBIP has met most of its output targets (training modules delivered, metering protocols drafted, partial-credit guarantee designed), it has not translated those outputs into the intended outcomes of contracted energy-performance projects, mobilised private finance or verified GHG reductions.

For these reasons, the evaluation team rates the overall impact as amber. The project has not triggered expected transformational change in totality and has captured little evidence of movement at the intermediate-outcome level. That said, several deliverables, such as the standard EnPC tender pack and the municipal metering toolkit, do lay a foundation that other initiatives can build on. Recent months have also seen the Ministry of Public Works adopt EEPBIP’s training materials for its own facilities-management cadre, suggesting that at least some capacity-building outputs are being put to use. In short, EEPBIP’s technical products are valued, but without capital to prove concepts in the field, they have not been able to shift practice or investment behaviour in a way that constitutes transformational change.

3.5 Sustainability of the project

Sustainability

5. What is the likelihood that the outcomes will be sustained after the end of the project funding period?

As mentioned already in Section 3.4.1, **all interview groups perceive the commitment and buy-in from DMRE as the lead implementing partner as very strong. Additionally, the pilot municipalities are viewed as engaged and dedicated.** There is significant buy-in for the project across the different levels of seniority, from technical officials through to the administrative and political leadership, as well as among other public service delivery sectors (water, wastewater, etc.), which strengthens the sustainability of the implementation measures and outputs. This seems to be a result of extensive consultation work by DMRE officials to brief the leadership over the years. These are favourable indications for the long-term sustainability of the project.

Despite the delays, **the project still has the potential to significantly contribute to the improvement of mitigation outcomes in South Africa**, in terms of reducing the risks in EE project development, procurement, and financing. In general, interviewed partners were confident that **if the pilot projects are implemented successfully and demonstrate that savings are tangible, they will show attractiveness and benefits and ensure continuity and replicability**, with strong potential for scale. Once projects are developed and achieve success, such as realising savings, ensuring public sector payments to ESCOs, and allowing ESCOs to sustain their loans, they possess significant sustainability potential.

Nonetheless, financial mechanisms could still raise potential concerns, and for the FC Component, there is a risk that the ESCO model may not perform as anticipated. During the rollout, tools or mechanisms might require adjustments to enhance sustainability. As one example, a single source reported that the African Development Bank is helping to transform the EEPSU into a Special Purpose Vehicle (SPV) within SANEDI to manage future EE investments. Additionally, the involvement of Public-Private Partnership (PPP) delivery models with access to bank loans (which are less likely to default) can further strengthen sustainability and mitigate any backsliding when the guarantee fund phases out.

In summary, there might be, to a limited extent, some risk of reversal of achievements, but the risk can be mitigated through adequate strategies. One source indicated that if the M&E system and the knowledge of its operations are not preserved, there is a risk of backsliding. It is essential to ensure that this knowledge is institutionalised. The presence of new EE infrastructure, such as smart meters, will enhance the existing efforts and strengthen institutional support. Another source pointed out that municipalities may face difficulties with preventive maintenance and monitoring systems. However, **the newly established institutional arrangements are unlikely to be undone.**

Besides, **some limited political risks concerning sustainability were reported**, as new priority settings of a changing government (e.g., a priority shift from energy efficiency to renewable energy) are unpredictable, and not only in recent times, a global phenomenon. **But no current concerns regarding the ongoing EEPBIP were registered**; only theoretical and latent risks were mentioned.

Overall, so far, capacity has been adequately developed to withstand any backsliding, and municipalities have been trained to continue the project without any future financial support from

international donors. There are indications for a successful project exit strategy, which sounds sensible at the current stage. **ESCOs are keen to move forward, participate and contribute to successful implementations.** Nonetheless, some lack of capacity from smaller ESCOs, especially regarding energy performance, and limited overall engagement were observed as of mid-term.

In conclusion, it is difficult to assess project sustainability at this early stage, as the EnPC model has not been applied and pilots implemented yet, and therefore, no hard evidence is provided about the actual success of the approach. However, it is assumed that the project components are likely to be sustained after the project's end, provided sufficient time is granted for implementing the pilots in the municipalities. The evidence gathered indicates a rather low risk of backsliding or reversing of the institutional structures when compared to other projects, and adequate mitigation measures are in place. The public sector shows solid evidence of continuing its policy and investment in EE measures after the project timeline. Evidence confirms that the project achievements are at the levels expected towards mid-term, and therefore, the project's sustainability has been assessed as green.

3.6 Gender equality and social inclusion (GESI)

While GESI has gained prominence as a cross-cutting theme within the project, the implementation status remains varied across workstreams.

EEPBIIP has demonstrated a clear commitment to GESI principles, which are reflected in its planning processes and training modules. Capacity-development workshops have included sessions on gender mainstreaming and awareness-raising. Encouragingly, women are well represented within the Project Team, which is expected to aid in embedding GESI principles into decision-making processes. However, despite the presence of GESI in planning and training, there is limited evidence of concrete, on-the-ground implementation due to the delay in the project implementation. While one of the workstreams, particularly the “Skills Development and Awareness” component led by NBI, has focused on inclusion and participation, its outputs are still in early developmental stages.

EEBIP committed to the development of a dedicated GESI Action Plan in 2024, which includes a gender and social analysis, the creation of training materials, and training delivery for the Project Team and stakeholders. The plan is expected to provide strategic guidance on how to integrate gender and intersectionality into the operational DNA of the EEPSU and across the energy efficiency ecosystem. According to the project team, the GESI Action Plan is due to be in place by July 2025.

Prior to the formal development of the GESI Action Plan, gender and social inclusion considerations were indirectly integrated into EEPBIIP's design through national frameworks, stakeholder awareness, and initial engagement activities. Moreover, procurement aligned with the Broad-Based Black Economic Empowerment (BBBEE) framework, which supported broader inclusion goals. However, there was no unified or comprehensive approach to GESI, and implementation varied across workstreams.

The project has contributed to increased awareness and capacity for gender inclusion among public sector officials. Women involved in the Project Team have reported increased influence over project

decisions. There is growing interest among women- and youth-owned ESCOs, although many still require technical and financial support to compete effectively in tenders. While there is no large-scale employment data available yet, **early indications suggest that the project is creating income-generating opportunities for women and marginalised groups, particularly in training-related components.**

There is emerging evidence of a positive shift in values and mindset. Gender is no longer viewed as a compliance item but is increasingly seen as integral to sustainable energy systems (evident among provincial departments and **South Africa's** six metropolitan municipalities (**metros**) namely, the City of Cape Town, City of Johannesburg, City of Tshwane, Ekurhuleni, eThekweni and Nelson Mandela Bay that have embedded gender-sensitive criteria into project evaluation tools).

Indirect successes have been noted through the application of the BBBEE model within procurement frameworks, which supports youth, women, and socially excluded groups in procurement systems. Municipal stakeholders have shown interest in aligning procurement with GESI, and a few have already embedded GESI principles into their processes.

It is worth noting that there is strong political will and enabling national policy supporting gender transformation in the energy sector. The DMRE's Women Empowerment and Gender Equality Strategy sets ambitious targets, including 50% female employment in energy programmes, which EEPBIP is aligning with, despite challenges in reaching them. Still, practical challenges remain. Gender representation is stronger in the public sector than in the private sector, especially among ESCOs. There is a noted need to strengthen support for women-owned and black-owned ESCOs, many of which require enhanced access to finance and capacity development to fully participate in the project.

One of the long-term objectives of the EEPBIP is to support financial risk mitigation, so that eventually EnPC projects with public sector institutions can be attractive for lending by commercial banks (one of the indicators is participation by two commercial banks). The key risk (perceived and actual) is the payment risk by the institutions to the ESCOs. Risk mitigation measures are being developed by the project to address this, including high-level agreements between DEE DDG and senior officials at the institutions (e.g., City Managers). It is possible that if risks are mitigated effectively at an early stage, commercial banks could participate, with ESCOs bypassing IDC and the PCG – this would primarily be due to high interest rates at IDC. Although this would negate the need for the PCG as an instrument, the participation by the commercial banking sector would represent a “win” for the project by addressing financial risks.

In conclusion, EEPBIP stands at a pivotal moment, having laid essential groundwork for both GESI integration and financing readiness. However, the gap between planning and implementation needs to be urgently addressed. The EEBIP has recognised the following to accelerate GESI actions:

- Accelerate the development and implementation of the GESI Action Plan, ensuring meaningful engagement of women- and youth-led ESCOs.
- Enhance support mechanisms for small ESCOs, including access to financial instruments, technical assistance, and preferential procurement pathways.

- Monitor gender-disaggregated indicators to track progress on inclusion targets and inform adaptive management.

4 Conclusions

Now that the evidence collected and analysed by the ELE has been explored, this section goes back to the project’s Theory of Change to test to what extent the original causal pathways and assumptions behind them (see Section 1.1) have held.

Figure 4. Overview of Project Causal Pathways Assessment at Mid-Term

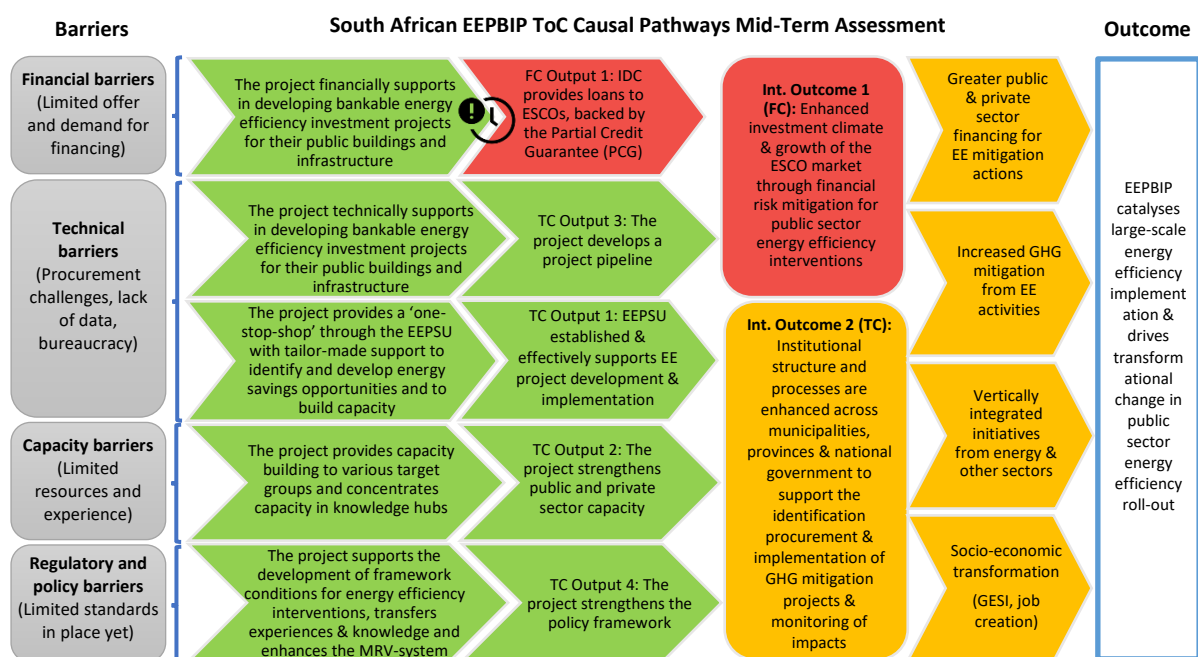


Figure 4 presents an overview of the progress of the project along its ToC causal pathways towards its intended outcomes. The RAG rating uses the same scale as the previous section (i.e. Good / Very Good = Green; Problems = Amber; Serious deficiencies = Red; Not enough info to rate = Grey), and the colours of the Intermediate Outcomes’ shapes are the same colours used in Section 3.2 to rate the project’s achievements for each Intermediate Outcome. This is to be read as an assessment of the project’s situation at this point in time, i.e. at mid-term.

What transpires from Figure 4 is that the causal pathway sustaining IO1, which relates to the FC Component, encountered some delays, while the one contributing to IO2, which relates to the TC Component, appears to be more solid.

Given the delays in the financial mechanism and the current situation where no EE projects have been tendered yet or ESCOs contracted, there is considerable uncertainty about the success of the FC Component’s mechanism. **For now, the causal pathway link under the financial mechanism can be considered delayed rather than broken** (hence the clock icon in the figure). The ELE Team believes there should be significant progress on this front in the coming months, but note the interim assessment process.

On the other hand, the project has demonstrated significant success in capacity development and awareness raising, particularly at the municipal level. Compelling evidence indicates that the GIZ

EEPBIP Project Team and carefully selected partners have effectively delivered a comprehensive range of relevant and targeted capacity-development initiatives to critical project partners and key stakeholders. Multiple sources expressed the value of this support, noting the inclusion of gender mainstreaming modules in workshops and technical training, resulting in a heightened GESI awareness. Furthermore, the capacity development and awareness-raising component has successfully achieved all intended targets across its three modules. Municipalities have experienced a notable increase in awareness and technical capacity through these training workshops. **These endeavours have contributed to enhanced knowledge and skills among stakeholders, which is considered essential for the sustained success of EE initiatives.**

The project aims to foster an enabling environment for energy efficiency by supporting the development of institutional frameworks, facilitating knowledge transfer, and improving MRV. Initial findings suggest progress in all these areas. The project has made significant strides in establishing a robust institutional architecture and reporting frameworks for project delivery, monitoring and evaluation, and the sustainability of initiatives. Notably, delivery partners SANEDI and DMRE exhibit strong ownership, and the EEPSU has been established, indicating a country-led approach.

Process tracing was applied as an additional test to check the validity of the project ToC and assess the strength of the evidence collected by the ELE. The results of the process tracing test did not contradict the findings presented in the body of the report. In summary, process tracing confirmed that, at mid-term, causal pathways for Intermediate Outcomes 1 and 2 are likely to be correct, while highlighting some uncertainty for the former due to the delays experienced. **In most cases, there is strong evidence that the project activities are leading towards successful outcomes, which will, in turn, achieve the Intermediate Outcomes. However, evidence is still limited given the project delays described in this document.**

5 Lessons and recommendations

5.1 Key lessons

The evidence gathered during the ELE, along with the key findings presented in Section 3 and the conclusions in Section 4, have been used by the ELE Team to draw some of the key lessons described below. The ELE Team has worked to distil and prioritise key lessons (based on the number of occurrences from data sources) and arranged them under their respective key target groups, i.e. lessons for the Project Team, lessons for Project Partners, lessons for the Mitigation Action Facility and lessons for future project applicants. It should be noted that all lessons are interdependent and relevant across multiple categories because they are relevant to different aspects of project management and all key factors to ensure project success.

5.1.1 Lessons for the Project Team to achieve the goal of the project

- **Lesson 1: It has been imperative to prioritise setting clear roles, mandates, decision-making functions and communication channels across all project partners. A robust framework is essential, including clear governance structures and timely processes.** EEPBIP has a complex structure and multiple partners. Almost all interviewees flagged that the complexity of the project and lack of clarity across roles and decision-making functions have impacted the ability of the project to operate both efficiently and effectively from the outset. The financing agreements have been in place (as of 2024); therefore, the Project Team has now been able to define clear roles and responsibilities when operationalising activities under each workstream. This has acted to foster early and continuous engagement and ensure alignment. Continued coordination within EEPBIP and across Project Partners in the coming months will be key (clearly defining who holds decision-making powers, coordination arrangements, meeting frequency, in other words, who is responsible for what and when
- **Lesson 2: Linked to the above, ensure that clear (and live) risk reporting processes are established across all partners.** It was identified during the evaluation that whilst risks are captured at workstream level, there is not currently a live, project-wide, risk register that can be viewed across project partners. Risks must be proactively managed and logged, considering both internal and external factors.
- **Lesson 3: In order to ‘hit the ground running’ once the ESCOs are in place, it has been essential to focus on capacity development and project management skills.** Given the complex nature of EEPBIP and often highly technical reporting requirements (and financial acumen required for project delivery), sufficient capacity within implementing entities (especially smaller municipalities) is critical. Thus, establishing dedicated Project Management Units (PMUs) and providing necessary resources and tools has been necessary. In 2024, there has been both a strong focus and marked progress in capacity development and awareness raising on critical technical and financial elements for project delivery, particularly at the municipal level. This has been effectively led by the GIZ EEPBIP Project Team. These efforts have contributed to increased knowledge and skills among stakeholders, which is crucial for the long-term success of energy

efficiency initiatives. The full list of capacity development activities by the Project Team is provided in Annex D.1.

- **Lesson 4: Ensure focus on long-term sustainability and country ownership.** Capacity development is a critical element in preparation for successful project delivery. However, to ensure long-term sustainability and country ownership, it is critical to address behavioural change alongside technical aspects. This includes but is not limited to implementing changes in maintenance schedules (e.g., putting preventative maintenance in place), establishing energy management systems operated (and owned by) site staff. Developing capacity in the key institutions, such as SANEDI and IDC, is also critical for the long-term sustainability of the project.
- **Lesson 5: Mainstream GESI into processes from project initiation.** Whilst there was evidence from the majority of interviewees that GESI was a strong theme within the project, institutional and municipality objectives, they were not aware that a coordinated, project-wide GESI Action Plan was under development. A clear GESI plan that is understood by all parties and monitored by the SANEDI team will ensure GESI is mainstreamed throughout project operations. Lessons for the Project Partners for supporting the success of the project
- **Lesson 6: Securing political and institutional buy-in is critical in all aspects of the work and has a strong linkage to sustainability.** Obtaining early and sustained buy-in at all levels is critical, addressing potential political sensitivity, and ensuring cross-departmental collaboration have been key aspects in the project to date. It is the responsibility of the Project Team to initiate (and secure) political buy-in and support from relevant institutions.
- **Lesson 7: All Project Partners must understand the economic drivers alongside energy efficiency to ensure team alignment.** Several sources highlighted the need to focus on additional drivers like economic development, advancing the ESCO market, and job creation, which are secondary to energy efficiency within EEPBIP. Furthermore, it was emphasised that the local supply chain for energy-efficient products and services needs to be fortified.
- **Lesson 8: Foster the exchange of knowledge, teamwork, and the creation of communities of practice.** This approach has been effective in capturing insights throughout the project, which are subsequently integrated into the decision-making process by the project team and essential partners like SANEDI and DMRE. Furthermore, it is important to leverage synergies with related initiatives and projects such as Municipal Energy Management Systems (MEMS) to maximise impact.
- **Lesson 9: EEPBIP might serve as a “best practice” when it comes to the alignment of MAF indicators with an existing national M&E framework.** The Project Team effectively integrated the required monitoring indicators into the DMRE's overall M&E system. This enables the counterparts to utilise and report on their established system, eliminating the need for a separate monitoring process that would only last for the duration of the project. Consequently, all necessary data for the Annual Reports for MAF can be obtained from DMRE's overarching system.

5.1.2 Lessons for future project applicants and the Mitigation Action Facility for the review, approval, and management of future interventions and improving project design and implementation

- **Lesson 10: MAF to select projects designed with a clear and manageable scope, involving an optimal number of key stakeholders to streamline implementation and reduce complexity.** For future EE projects, reduce complexity by having fewer stakeholders and entities involved to streamline the project and develop lean processes.
- **Lesson 11: When designing new EE projects, consider a stronger emphasis on ‘key drivers’ in project set-up and how these can be realised.** For instance, prioritising local economic development, such as job creation, the maturation of the ESCO market, and private sector engagement, could be beneficial. In this context, it may be wise to choose a less complex and lower-risk sector as a ‘testing bed’ instead of municipalities. One potential candidate is the telecom sector, which offers the chance for energy savings and has fewer variables affecting the adoption of abatement measures, thus reducing risk. This approach could yield clearer and faster results for testing both the technological and financial models. Nonetheless, the ELE Team recognises the importance of collaborating with public sector entities and is aware of the current operational goals.

5.2 Recommendations

These recommendations are for the overall project, including cross-cutting themes like governance, implementation efficiency, and sustainability. The recommendations are grouped by target audience, as required.

5.2.1 Recommendations to the Project Team to achieve the goal of the project.

Recommendation 1: Strengthen institutional coordination and clarify mandates and actionable activities - Although the EEPBIP has successfully engaged multiple stakeholders, there is still fragmentation in institutional roles and coordination based on each institution's mandate, role and capacity. Clearer definition of mandates, shared targets, and the establishment of formal coordination mechanisms are needed to align with operational delivery. This should be facilitated by the GIZ technical team.

Recommendation 2: Fast-track delayed activities and unlock implementation blockages - Delays in procurement and pilot execution risk compromising the project's momentum and outcomes. The Project Team should intensify outreach to the Market as soon as possible. Additionally, follow-ups on bottlenecks related to procurement, legal reviews, and inter-agency approvals need to be prioritised.

Recommendation 3: Embed Gender Equality and Social Inclusion (GESI) principles into national energy policy and procurement frameworks - The GESI Action Plan is a positive development, but its influence can be amplified by ensuring that gender-responsive procurement, budgeting, and policy design become standard practice. National partners should review relevant policy instruments and

explore revisions that introduce binding GESI requirements, such as in procurement scorecards, reporting frameworks, and audit tools, to ensure equitable access and benefit distribution in future energy projects.

Recommendation 4: Strengthen engagement with ESCOs through the ESCO Foundation and refine the procurement process to support scalable energy efficiency implementation - To enhance the participation of Energy Service Companies (ESCOs) in the EEBIP, the Project Team should leverage the existing platform of the ESCO Foundation to facilitate structured engagement to test the market interest in the project. This includes convening dialogues to understand ESCOs' constraints, share project pipelines, and co-develop solutions to barriers such as creditworthiness concerns and lengthy procurement cycles. In parallel, the procurement process should be reviewed and sounded with both ESCOs and public procurement entities to align contractual models with performance-based Recommendations to the Project Partners for supporting the success of the project.

Recommendation 5: Developing Project Pipeline. In developing the EE project pipeline, focus on prioritising the 'low-hanging fruit' in pilot projects. Ensure buildings and infrastructure selected for EE projects have clear baselines and effective energy management systems in place. A number of sources flagged the value of preventative maintenance across operations in maintaining EE approaches and maximising savings (this can be labour-intensive but is fruitful). Actions: At the municipality level, enhance mandates to provide smart metering. Ensure energy data availability and quality, i.e., data that are fit for purpose to inform energy auditing, investments and performance tracking. Conduct an exercise to identify (and plot) high-value and low-effort projects, and prioritise on this basis.

5.2.2 Recommendations to project partners for supporting the success of the project

Recommendation 6: Develop and implement a centralised project dashboard to track progress across all workstreams - To enhance coordination, transparency, and timely decision-making, the Project Team should design and implement a digital project dashboard that consolidates data and progress indicators from all workstreams of EEBIP. This dashboard should track key performance indicators (KPIs), milestones, financial disbursements, procurement timelines, GESI integration, training activities, and pilot project performance in real time.

Recommendation 7: Facilitate a more enabling regulatory environment for ESCO market development - The current lack of regulatory certainty, particularly around energy performance contracting and municipal procurement, limits private sector participation. Project partners should lead efforts to harmonise national policy frameworks, standardise contracting templates, and develop model by-laws or procurement guidelines to support ESCO growth, particularly in under-resourced municipalities.

5.2.3 Recommendations to the Mitigation Action Facility for supporting the success of this project

Recommendation 8 (for MAF): Provide at least 3-6 months of market testing phase of the EnPC Model - The EnPC model should at least be tested with the market to evaluate its feasibility, operational impact and possible scalability to other public sector facilities. This would evaluate contractual, technical and financial effectiveness in a real operational setting. This could provide

positive feedback from ESCO's government departments and other stakeholders and could create a benchmark for EnPC in the energy efficiency space in South Africa. Even with the significant project delays, reaching the end of the project without testing EnPCs poses a risk of losing an opportunity to test the real impact.

5.2.4 Recommendations to the Mitigation Action Facility for the review, approval, and management of future interventions

Recommendation 9: Limit number of stakeholders during the Project Design and Development - The Mitigation Action Facility (MAF) should consider limiting stakeholder participation during the project proposal and design phase to a small group of core stakeholders (Key Project Team) who have a clear understanding of the project's objectives, institutional context, and intended impact. This focused engagement will streamline the design process, ensure accountability, and foster stronger ownership of key roles and responsibilities. Once the implementation phase begins, broader stakeholder involvement, including technical partners, supporting institutions, and implementation agents, can be introduced to ensure inclusive participation and effective delivery across workstreams.

Recommendation 10: Prioritise strong GESI outcomes and transformational potential - The Facility should prioritise GESI as a project outcome, and offer pathways for systemic change such as workforce transformation, policy reform, and financial sector engagement. Strong GESI integration, political commitment, and potential for catalytic impact should be key selection criteria.

Annex A Capturing Project-induced Transformational Change

Introduction

This is a brief guidance document developed by Dorsch Impact/OPM outlining a framework for consistently evaluating the progress of MAF-funded projects towards bringing about transformational change.

Transformational change is embedded in the Mitigation Action Facility's goals and Theory of Change (ToC), and projects are the main way through which the Facility will achieve this transformational change. Therefore, projects need to aim to achieve this level of change, and ELEs of such projects should evaluate their progress accordingly.

Transformational change features in three different programme management tools of the Mitigation Action Facility. Firstly, the transformational change potential is a key selection criterion for projects. Secondly, during implementation, projects report on progress in supporting different aspects of transformational change using the Mandatory Core Indicators (particularly the M3 indicator)¹⁰. Thirdly, the Evaluation and Learning Exercises (ELEs) provide an independent assessment at the mid- and end-point of the project on to what extent there are signals or evidence of project-induced transformational change.

This brief document clarifies how transformational change is expected in projects and provides guidance to both project and ELE teams on how to characterise the elements and evidence of project-induced transformational change.

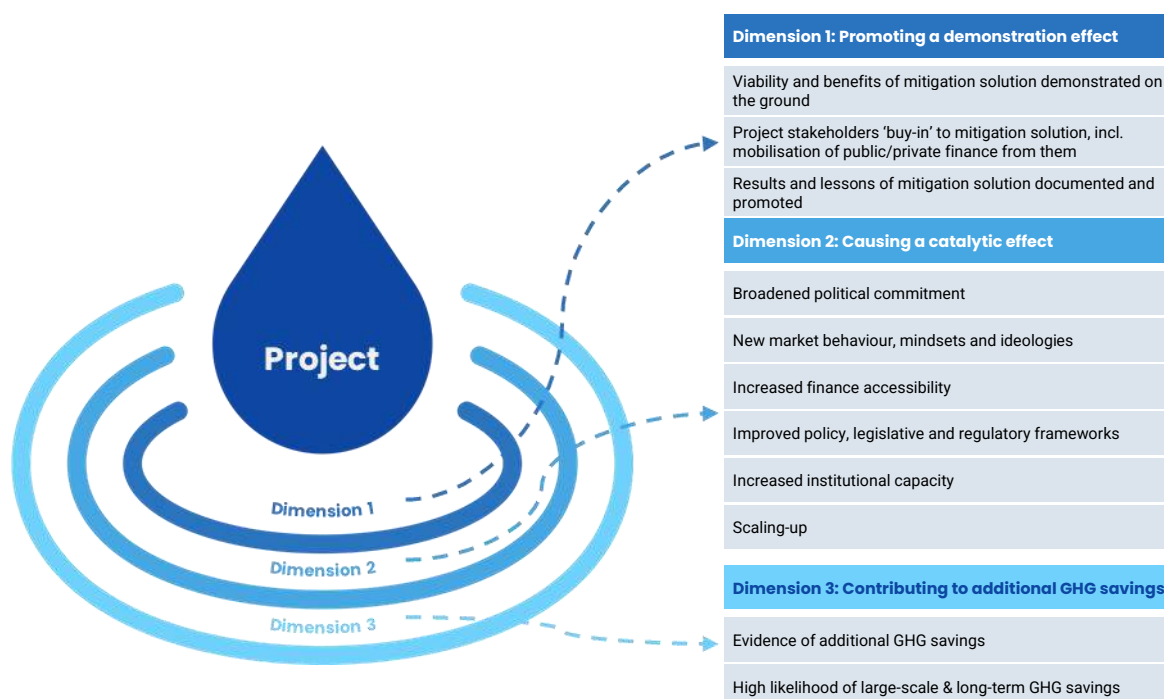
Breaking down project-induced transformational change

The [Mitigation Action Facility's ToC](#) outlines in broad terms how transformational change is expected to be achieved through its outputs and outcome. It defines transformational change as "*Catalytic change in systems and behaviours resulting from disruptive climate actions that enable actors to shift to carbon-neutral pathways*"¹¹.

To better define and measure projects' progress in inducing transformational change, ELEs use a bespoke Transformational Change Measurement Framework (TCMF), which aligns with the Facility's ToC. According to the TCMF, projects contribute to enabling transformational change across three key dimensions (see Figure 5): Promoting a demonstration effect; Causing a catalytic effect; and Contributing to additional greenhouse gas (GHG) emission savings.

¹⁰ <https://mitigation-action.org/our-approach/monitoring-evaluation-learning/>

¹¹ https://mitigation-action.org/wp-content/uploads/Mitigation-Action-Facility_transformational_change-factsheet.pdf.

Figure 5. Dimensions of project-induced transformational change

These dimensions interact and reinforce each other, driving transformational change through the projects. The following section describes each dimension, with examples from the Facility's three priority sectors: Energy, Transport and Industry.

Dimension 1: Promoting a demonstration effect. The most direct way in which a project contributes to transformational change is by demonstrating or proving the viability and benefits of a specific mitigation solution.

There are three main elements of the demonstration effect:

- **Proving the viability and benefits of the mitigation solution** by the project supporting a sample of target users to adopt the solution (i.e. the project providing technical and/or financial support for the implementation of the solution). This also leads directly to GHG emission reductions.
- **Securing buy-in from key public/private sector stakeholders for the demonstration of the solution.** These are stakeholders who have the resources and mandate to support the solution's implementation (and potentially scale it in the future). For example, their buy-in could be shown by them committing public or private finance or their political influence to support the project in demonstrating the solution.
- **Documenting and promoting the benefits of the mitigation solution** through knowledge-sharing and communication products, reaching target users and other stakeholders.

Dimension 2: Causing a catalytic effect. To amplify the impact of the demonstration effect (Dimension 1), the project must trigger a virtuous catalytic effect, leading to broader, systemic change within the country or region. The Mitigation Action Facility assesses a project's potential to cause a catalytic effect through its Mandatory Core Indicator M3. In the M3 methodology, the Facility identifies six possible project outcomes or 'results categories' that are considered to deliver these changes:

1. **Broadened political commitment** – Decision-makers or decision-making entities in the implementing country (e.g., parliament, business associations) make landmark decisions

aimed at moving the country towards a carbon-neutral development pathway. Supported by the project's activities, these decisions alter the behaviour of or incentives for more individuals or institutions. These decisions could be announced in speeches of politicians, new targets or commitments, or even informal discussions and comments of key individuals. In most cases, broadened political commitment is a precursor to another result category; for example, the government may change its position on a subject and communicate this publicly before it adopts a law or policy that formally institutionalises this position.

2. ***New market behaviours, mindsets and ideologies*** – Lock-in effects or path dependencies that incentivise or firmly establish carbon-intensive, non-sustainable patterns of behaviour over a long period are broken up or avoided due to the project's activities. Alternatively, new path dependencies that incentivise or firmly establish carbon-neutral and sustainable patterns of behaviour are established due to the project's activities.
3. ***Increased finance accessibility*** – Replicable, scalable and/or long-lasting financial instruments for a carbon-neutral development pathway (e.g., technologies, business models) have been established due to the project's activities. These instruments are developed through the project but are not limited to leveraging public or private funds under the Financial Cooperation (FC) Component. Instead, their impact lies in creating lasting financial access for a wider range of actors (e.g., SMEs, smallholder farmers, households). These instruments or incentives should also be accessible to the stakeholders not directly targeted by the project, ensuring the long-term affordability and adoption of mitigation solutions across the system.
4. ***Improved policy, legislative and regulatory frameworks*** – As a result of the project's activities, climate change mitigation aspects are integrated and mainstreamed into one or more of the following: major policies, plans, strategies, or curricula of different educational institutions. In other words, the project contributed to improving the policy, legal and/or regulatory enabling environment for the large-scale deployment of the mitigation solution.
5. ***Increased institutional capacity*** – As a result of the project, an organisation, institution, or committee (e.g., a climate change authority) committed to a carbon-neutral development pathway is established or significantly strengthened and is lobbying for the changes needed to deliver this kind of development.
6. ***Scaling-up*** – Carbon-neutral, sustainable approaches or instruments (e.g., business models, market mechanisms, financing solutions) that have been tested or piloted within or independent of the project are scaled up due to the project. In line with the Mitigation Action Facility's Indicator 4.3, the Facility identifies three distinct pathways to successful scaling:
 - a. ***Geographical expansion*** – The scope of this scaling pathway pertains to expanding the geographical scope of activities by including new regions, districts, provinces, or states within the country beyond those targeted in the project proposal.
 - b. ***Target group extension*** – The scope of this scaling pathway pertains to targeting a wider beneficiary group, encompassing an enlarged segment of the project's intended recipients beyond those targeted in the project proposal.

- c. **Additional financial leverage** – The scope of this scaling pathway pertains to targeting the additional allocation or mobilisation of funds towards measures associated with the project’s intervention outcomes, including, but not limited to, carbon finance stemming from the sale of carbon credits issued for the 'scaled-up mitigation'. These funds need to be additional to those planned in the project proposal. For example, the project partners’ public or private finance mobilised for the necessary work of the FC Component counts as part of the ‘demonstration effect’ (Dimension 1) but not as project scaling up (Dimension 2).

Dimension 3: Contributing to additional GHG savings. As a result of contributing to Dimension 1 and Dimension 2, the project will influence *additional, large-scale and sustained GHG savings*:

- **Additional:** the GHG savings achieved are in addition to those achieved by the direct implementation of the project (i.e. additional to the direct and indirect emissions being targeted and reported on under Mandatory Core Indicator 1).
- **Large-scale:** the additional GHG savings will have a significant impact on overall GHG savings in the geography/sector.
- **Sustained:** there is no chance of the GHG savings being reversed.

What is the difference between contributing to ‘direct’ vs ‘indirect’ vs ‘additional’ GHG emissions savings?

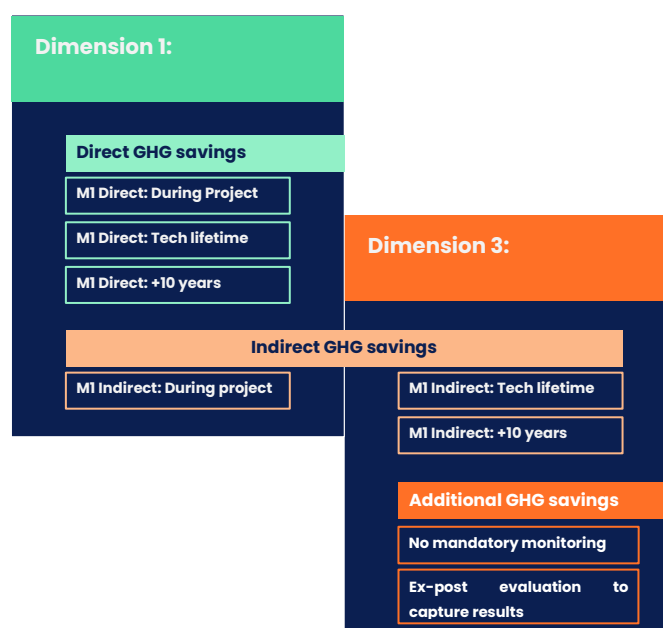
The Mitigation Action Facility has released guidelines for projects which contain the definitions of direct and indirect GHG emission reductions¹². Projects will contribute to both direct and indirect emission reductions as a result of the activities they deliver and the outcomes they achieve. These are different from the additional GHG emission savings referred to by Dimension 3 (see Figure 6):

- **Direct GHG emission savings** achieved by project investments and discrete investments financed or leveraged during the project’s implementation period (throughout the entire lifetime of the project and for a period of 10 years after the project ends). This definition implies that the emission reductions are achieved directly as a result of the demonstration of the mitigation solutions, as included in Dimension 1. For example, direct GHG emissions saving would result from the project paying for the installation of a solar energy system in lieu of a diesel generator (i.e. the avoided emissions from burning the diesel).
- **Indirect GHG emission savings** capture those achieved beyond those related to direct investments, e.g., resulting from technical assistance. These emission reductions are indirectly linked to the results of the demonstration of the mitigation solutions. For instance, indirect GHG emission savings would be those achieved by an SME applying certain energy efficiency measures taught by the project but paid for with own funds. Indirect GHG emission savings should also be accounted for in Dimension 1.

¹² https://mitigation-action.org/wp-content/uploads/Mitigation-Action-Facility_Mitigation-Guideline_CfP23.pdf.

- In contrast, **additional GHG emission savings** are not a direct result of the project’s interventions, but instead, they are due to the influence of the project in terms of its demonstration and catalytic effects.

Figure 6. How different types of GHG emission savings fit with transformational change



When is transformational change expected in projects?

Transformational change is not expected within the lifetime of the project. Instead, there should be clear signs and evidence that it is likely in the mid- to long-term (e.g. 10 years). By the end of the project, Dimension 1 (demonstration effect) should be at an advanced stage, Dimension 2 (catalytic effect) at an interim stage and Dimension 3 (additional GHG savings) at an early stage. Dimensions 1 and 2 ‘lock in’ the pathway to achieving the additional GHG savings, meaning this looks inevitable, or at least very highly likely, in the future. Table 6 below summarises what is expected at the mid- and end-point of the project.

Table 6. Expectation of project-induced transformational change stages at mid- and end-point

Dimension	Expectation at project’s mid-point	Expectation at project’s end-point
1: Promoting a demonstration effect	Interim stage: the project has made initial yet tangible progress in demonstrating the mitigation solution ; for instance, it shows strong buy-in from the project partners alongside evidence on the ground of the solution’s applicability and effectiveness, although not at the scale expected by the end of the project.	Advanced stage: the concrete demonstration of the mitigation solution in the project context is in an advanced stage , with little doubt that it will be completed or has already been completed, and the full results and lessons of the solution’s demonstration have been documented and disseminated.
2: Causing a catalytic effect	Early stage: the project has laid the foundations for causing a catalytic effect , for example, by engaging a broader group of stakeholders, setting up capacity-building activities, or assessing the key legislative or	Interim stage: the project is starting to cause a catalytic effect in the project context, for example, by showing some evidence of shifts in market behaviour, more favourable legal and

Dimension	Expectation at project's mid-point	Expectation at project's end-point
	regulatory gaps in place for the broad uptake of the mitigation solution.	regulatory frameworks, or scaling up of the mitigation solution.
3: Contributing to additional GHG savings	None: the project should have prepared a clear and realistic plan for achieving such transformation, but it would be too early to expect this to have yet resulted in any additional GHG savings.	Early stage: the project has laid the foundations for causing additional GHG savings , and this may have resulted in some actual savings (but not at a large scale), but more importantly, there should be clear evidence that points towards additional GHG savings happening in the mid to long term.

How can transformational change feature in the design and monitoring of projects?

Projects are expected to align with the overarching ToC of the Mitigation Action Facility. Consequently, the project design, including the project's ToC and M&E plan, should clearly articulate how the project will contribute to transformational change. Table 7 provides generic guidance on how the transformational change dimensions can be reflected in these documents.

Transformational change in the ToC: Following the Mitigation Action Facility's guidance on developing a ToC, as outlined in the M&E Framework¹³, should result in causal pathways that describe how the project will enable transformational change. The table below shows how the three dimensions of transformational change could be integrated into the project's ToC, although not all elements of dimensions 1 and 2 may be referenced in the ToC. For example, the documentation of results may not appear in the ToC itself but might be addressed in the project's knowledge management or communication strategies and reinforce underlying causal pathways

Transformational change in the M&E plan: The M&E plan complements the ToC by adding performance indicators for each of the ToC elements (outputs, outcomes, etc.). It includes project-specific indicators and five Mandatory Core Indicators.

Projects use their M&E Plan to measure progress in enabling transformational change, while the ELE teams carry out independent evaluations at the mid- and end-points. Setting measurable indicators will facilitate tracking progress against the three dimensions of transformational change. Table 7 below also provides examples of indicators and the type of evidence or information that can help to measure progress.

How does Mandatory Core Indicator M3 measure transformational change?

While several Mitigation Action Facility indicators cover parts of transformational change, the M3 indicator is centred around it. This Mandatory Core Indicator looks at the "Degree to which the supported activities are likely to catalyse impacts beyond the projects (potential for scaling-up, replication and transformation)".

¹³ <https://mitigation-action.org/wp-content/uploads/ME-Framework- Oct2023.pdf>.

Following the M3 methodology described in the MAF M&E Plan, by identifying the relevant targets related to the six results categories and measuring them through specific sub-indicators, projects can gather crucial evidence of their contribution to transformational change. Such evidence, which in the TCMF refers to the project’s catalytic effect in Dimension 2 (see Table 7), is then used to determine the overall value of the M3 indicator.

The M3 value provides an assessment of the likelihood that the project contributes to transformational change. It is expressed on a scale from 0 to 4, from “Transformation judged unlikely” to “Clear evidence of change – transformation judged very likely”. Considering that evidence of additional GHG emission savings is difficult to materialise during the project lifetime, the overall M3 value represents for the Mitigation Action Facility the best prediction of whether a project is likely to contribute to the TCMF’s Dimension 3. Therefore, project teams must plan and monitor the M3 indicator carefully throughout the implementation.

Table 7. Guidelines for including transformational change dimensions in ToCs and M&E plans

Dimension		How it should feature in the project ToC	How it should feature in the project’s M&E plan	Examples of indicators	Example of evidence of progress
1: Promoting a demonstration effect	Viability and benefits of mitigation solution demonstrated on the ground	The ToC should include Outputs and/or Intermediate Outcomes that reflect the scale of uptake needed to prove the solution’s effectiveness across diverse contexts, delivering the anticipated economic, social, and climate benefits.	Aligns with Mandatory Core Indicators: M1 (Direct and Indirect during project lifetime) and M2 . Project- and sector-specific indicators should measure the scale of uptake needed to demonstrate the solution’s viability.	<p>Mandatory Core Indicators</p> <ul style="list-style-type: none"> M1: Volume of direct GHG emissions reduced during the project, up to 10 years after the project end, and for the duration of the technology lifetime M1: Volume of indirect GHG emissions reduced during the project’s lifetime M2: Number of people directly benefiting from the project <p>Project- and sector- specific indicators</p> <ul style="list-style-type: none"> # target users (e.g. cities/ companies/ consumers) adopting the mitigation solution in the pilot location EUR equity contributions from target group % of overall market penetrated by mitigation solution 	The Brazil PotenzializEE project is at the early stages of demonstrating the viability of the supply and demand of energy efficiency audits, practices and technologies by industrial SMEs. By the end of the project, they are aiming for 675 SMEs in the pilot region to be implementing the measures, resulting in over 460,000 tCO2e of GHG emission savings, which will provide the scale required to demonstrate the benefits and kick-start the scaling process.

Dimension		How it should feature in the project ToC	How it should feature in the project's M&E plan	Examples of indicators	Example of evidence of progress
	Results of mitigation solution documented and promoted	The ToC should include Outputs that focus on producing knowledge and learning materials and engaging with key stakeholders to share insights. .	Project-specific indicators should track the number and type of target users who should receive the documented results.	Project-specific indicators <ul style="list-style-type: none"> # target users (or wider stakeholders) participating in results-sharing events # target users (or wider stakeholders) expressing interest in replicating or adopting project results 	In China, a project promoting an integrated waste management model demonstrated its viability in three cities. However, through knowledge sharing and training activities, a further 11 cities submitted written commitment/interest to replicate the model.
	Project stakeholders 'buy-in' to mitigation solution	The ToC should capture Outputs and/or Intermediate Outcomes related to the volume of finance expected to be mobilised and/or other forms of stakeholder commitment (e.g. policy endorsements).	This aligns with Mandatory Core Indicators: M4 and M5 . Project-specific indicators should measure the scale of finance and/or the nature of other types of buy-in required. .	Mandatory Core Indicators <ul style="list-style-type: none"> M4-5: volume of EUR of public finance and EUR of private finance mobilised Project-specific indicators <ul style="list-style-type: none"> # adopted policy/financial mechanisms proposed / updated by the project # target public and/or private stakeholders adopting a project mechanism (e.g. finance mechanism) 	In India, a project promoting circular economy elements in Municipal Solid Waste Management (MSWM) set up a Risk Sharing Facility (RSF) to provide loan guarantees to MSWM operators with a focus on establishing composting, bimethanation, and refuse-derived fuel plants. Due to the successful demonstration of the viability of the financial scheme through loans from a local development bank, the government decided to fund a similar RSF with a planned investment of EUR 75 million.
2: Causing a catalytic effect	1. Broadened political commitment	The ToC should specify Intermediate Outcomes and/or Outcomes that indicate specifically the changes needed within the enabling environment for the	The TCMF Dimension 2 is aligned with the Mandatory Core Indicator M3 . The monitoring of M3 allows the identification of evidence towards one or more of the results categories Dimension 2.	Mandatory Core Indicators <ul style="list-style-type: none"> M3 – Sub-indicators for Results Categories 1-5. M4-5: volume of EUR of public finance and EUR of private finance mobilised beyond the project duration. Sector indicators	A project promoting solar rooftop systems in Tunisia has successfully influenced policy and financial measures to encourage and sustain the uptake of clean energy in middle-income households. The project significantly contributed to the drafting and promulgation of a ministerial decree for
	2. New market behaviour, mindsets and ideologies				

Dimension		How it should feature in the project ToC	How it should feature in the project's M&E plan	Examples of indicators	Example of evidence of progress
	3. Increased finance accessibility	project to be catalytic of broader systemic change.	Additional sector and project-specific indicators could also capture other key elements of systemic change required.	<ul style="list-style-type: none"> New market behaviour: % of increase in credit approval for mitigation projects, e.g. for SSRE installations in SMEs. Shift in values and ideologies: % of increase in using the mitigation solution compared to business-as-usual solution, e.g. % of increase in EV sales. Or amount of EUR of fossil-fuel subsidies redirected to renewable energy subsidies. Increased finance accessibility: % of SMEs accessing project finance for Renewable Energy developments <p>Project-specific indicators</p> <ul style="list-style-type: none"> Broadened political support: # coalitions of public and private actors established to promote the mitigation solution. Improved policy framework: # adopted new laws/regulations supported by the project. Increased institutional capacity: # or % of target beneficiaries with increased capacity to apply the mitigation solution, e.g. manufacturers of mitigation solution have required skills, resources and technology. 	implementing the national pilot project for the equipment of middle-income families connected to the low-voltage network by solar PV systems (RC 4). A new mechanism was designed to encourage middle-income households to install Solar PV systems in their homes, i.e. PROSOL ELEC <i>Economique</i> (RC 3). In addition, it has shifted public opinion in favour of the new energy supply model using different communication channels, demonstrated by the number of enquiries from the public that the PROSOL ELEC <i>Economique</i> has received (RC 2).
	4. Improved policy, legislative and regulatory frameworks				
	5. Increased institutional capacity				
	6. Scaling-up				

Dimension		How it should feature in the project ToC	How it should feature in the project's M&E plan	Examples of indicators	Example of evidence of progress
			M3 Results Category 6 – Scaling-up.	<ul style="list-style-type: none"> ○ # users in additional sectors applying the mitigation solution due to project scaling ○ # cities/regions applying the mitigation solution due to project scaling ○ EUR of additional private finance mobilised due to the project scaling ○ EUR of additional finance public mobilised due to the project scaling 	
3: Contributing to additional GHG savings	Influences additional, large-scale and sustained GHG savings	The project's impact statement should describe the scale of GHG emission savings required for sector-wide decarbonisation and the total contribution of the project to these savings.	This aligns with Mandatory Core Indicators: the overall score of M3, M1 (Indirect, beyond the project end) . Project-specific indicators should measure the scale of the GHG emission savings required and the project's contribution.	<p>Mandatory Core Indicators</p> <ul style="list-style-type: none"> ● M3: Overall M3 result, i.e. overall potential for transformational change ● M1: Volume of indirect GHG emissions reduced after the project's lifetime (up to 10 years after the project end and for the duration of the technology lifetime) <p>Project-specific indicators</p> <p>Volume of additional GHG emissions reduced because of the project's influence, for example, the contribution to a national target for sector-wide emission reductions</p>	The China Integrated Waste Management (IWM) project has used the results from five pilot cities to scale up to a further 11, and through policy changes and increased awareness, this is expected to have a sector-wide influence on emission reductions.

Annex B Evaluation and Learning Exercise Matrix

This evaluation and learning exercise matrix is based on the Theoretical Framework provided (version November 2023). It is a working tool that allows the evaluators to focus on a feasible target and assemble information for each question that can be synthesised in the final report, hence creating an integrative overview of the project at large.

ELEQ No.	Evaluation Question	Evaluation criteria	Original hypotheses	Who can answer this question	Source of information Data gaps
1 RELEVANCE					
1	To what extent does the Project address an identified need (by national policy institutions, municipal government, and public sector institutions)?	<ul style="list-style-type: none"> ▪ The Project design responds to the beneficiaries' needs and strategic priorities of the public sector institutions at the time of adoption and continues to respond to priorities given the evolving challenges and priorities in the sector. ▪ The Project is aligned with the needs of selected municipalities in South Africa, the national and sub-national government sector institutions, the National Energy Efficiency Strategy (NEES), and the National Climate Change Response Policy (NCCRP). 	<ul style="list-style-type: none"> ▪ The project will improve information and access to funds for EE measures in public sector institutions. ▪ The pilot municipalities will show the national government level how EE measures benefit the public sector institutions, can be implemented sustainably, and reduce their GHG emissions. 	<ul style="list-style-type: none"> ▪ Direct beneficiaries (government sector institutions) and their proxies ▪ Municipal governments ▪ GIZ Project Team ▪ Implementing partners ▪ National government policy-making and regulatory bodies ▪ Independent verifiers (like ESCOs) 	<ul style="list-style-type: none"> ▪ Semi-structured key informant interviews ▪ Document review (Project concepts (logical framework matrix) and progress reports) ▪ National plans, strategies and other policy instruments such as norms, standards, etc. ▪ Field visit to pilot municipalities
Sub-Questions					

ELEQ No.	Evaluation Question	Evaluation criteria	Original hypotheses	Who can answer this question	Source of information Data gaps
1.1	How well does the project align with national policy & programmes and government & agency priorities regarding GHG emissions from public sector institutions?	<ul style="list-style-type: none"> ▪ The project is in line with government policy and targets on public sector-related emissions (incl. NDC, sectoral plans, etc.) and energy efficiency goals. ▪ Partner buy-in to enable the implementation and evolution since the project's inception ▪ Effects of the missing signature of the "exchange of notes" ▪ Project amendment impact of the institutional change 	<ul style="list-style-type: none"> ▪ The project approaches respond to climate aspects of national and urban policy and programmes, and the overall emission reduction targets for public sector institutions (climate and energy components) 	<ul style="list-style-type: none"> ▪ Direct beneficiaries ▪ Municipal governments ▪ GIZ Project Team ▪ Implementing partners ▪ Independent verifiers (like ESCOs) ▪ Building, environment and energy NGOs 	<ul style="list-style-type: none"> ▪ Semi-structured key informant interviews ▪ Document review (Data from monitoring system and progress reports) ▪ South African NDC strategy
1.2	To what extent is the GESI Action Plan relevant and being used by the project? Prior to developing the GESI Action Plan, to what extent were GESI considerations integrated into the design and delivery of the project?	<ul style="list-style-type: none"> ▪ The Project has an active and robust project-level GESI policy/ plan ▪ Partner buy-in to enable GESI mainstreaming since the project's inception 	<ul style="list-style-type: none"> ▪ Project approaches adequately respond to the requisite criteria for GESI approaches as set out in the project-level GESI action plan 	<ul style="list-style-type: none"> ▪ Direct beneficiaries ▪ Municipal governments ▪ GIZ Project Team ▪ Implementing partners ▪ Independent verifiers (like ESCOs) ▪ Building, environment and energy NGOs 	<ul style="list-style-type: none"> ▪ Semi-structured key informant interviews ▪ Document review (Data from monitoring system and progress reports) ▪ Field visit to pilot municipalities
2 EFFECTIVENESS					
2	To what extent has the implementation of the Project been achieving intended outcomes in the short, medium, and long term?	<p>The degree to which there is evidence of the expected results / interim outcomes in the ToC:</p> <ul style="list-style-type: none"> ▪ Enhanced investment climate & growth of the ESCO market through 	<ul style="list-style-type: none"> ▪ The project will facilitate the progressive incorporation of EE measures in public sector institutions. ▪ Project activities in pilot municipalities will 	<ul style="list-style-type: none"> ▪ Direct beneficiaries ▪ Municipal governments ▪ GIZ Project Team ▪ Implementing partners ▪ Independent verifiers (like ESCOs) 	<ul style="list-style-type: none"> ▪ Semi-structured key informant interviews ▪ Document review (Project proposal, Baseline documents, Progress reports, Data

ELEQ No.	Evaluation Question	Evaluation criteria	Original hypotheses	Who can answer this question	Source of information Data gaps
		financial risk mitigation for public sector EE interventions <ul style="list-style-type: none"> ▪ Institutional structures and processes are enhanced across municipalities, provinces & national government to support the identification, procurement & implementation of GHG mitigation projects & monitoring of impacts ▪ For each of the outcomes, consider the major constraints and opportunities experienced (success and hindering factors) 	directly contribute to speeding up the modernisation process, making the public sector institutions more efficient, climate-friendly, and financially sustainable.	<ul style="list-style-type: none"> ▪ Building, environment and energy NGOs 	from Project monitoring system / Logframe) <ul style="list-style-type: none"> ▪ Field visit to pilot municipalities
Sub-Questions					
2.1	For each output area, what were the major constraints and opportunities experienced in implementing the activities, and particular features of the Project and context that made a difference in achieving these outputs? Are they on track for producing the anticipated results?	<ul style="list-style-type: none"> ▪ Effectiveness of the institutional development process, the project awareness raising strategies, and the project capacity development activities ▪ Evidence of the delivery of intended outputs ▪ The strength of the Project's contribution to the delivery of those outcomes 	<ul style="list-style-type: none"> ▪ Implementing the intended activities (as per ToC) will deliver the expected outputs ▪ The Project is the main factor in the delivery of the outputs 	<ul style="list-style-type: none"> ▪ Direct beneficiaries ▪ Municipal governments ▪ GIZ Project Team ▪ Implementing partners 	<ul style="list-style-type: none"> ▪ Semi-structured key informant interviews ▪ Document review (Project proposal, Baseline documents, Progress reports, Data from Project monitoring system / Logframe) ▪ Field visit to pilot municipalities

ELEQ No.	Evaluation Question	Evaluation criteria	Original hypotheses	Who can answer this question	Source of information Data gaps
		<ul style="list-style-type: none"> ▪ For each of the outputs, consider the major constraints and opportunities experienced (success and hindering factors) 			
2.2	<p>To what extent did the project achieve the goals and targets set out in the GESI Action Plan, and why?</p> <p>Did the project achieve [other/unintended] outcomes [i.e. not specifically included in the GESI Action Plan] addressing the needs of women and socially excluded groups?</p>	<ul style="list-style-type: none"> ▪ Adherence to the goals and targets set out in the project-level GESI Action plan (and reasoning) ▪ Evidence of any additional GESI-focused outcomes 	<ul style="list-style-type: none"> ▪ The project is adhering to the goals set out in the project-level GESI action plan, in accordance with the specified milestones ▪ Noting any specific targets as set out in the plan that have been achieved by mid-term (please note specific elements as set out in project-level GESI Plan) 	<ul style="list-style-type: none"> ▪ Direct beneficiaries ▪ Municipal governments ▪ GIZ Project Team ▪ Implementing partners 	<ul style="list-style-type: none"> ▪ Semi-structured key informant interviews ▪ Document review (Project proposal, Baseline documents, Progress reports, Data from Project monitoring system / Logframe) ▪ Field visit to pilot municipalities
3. EFFICIENCY					
3	<p>To what extent is the relationship between inputs and outputs timely and to the expected quality?</p>	<ul style="list-style-type: none"> ▪ Timeliness of the delivery of outputs and outcomes (incl. budget spending) ▪ If there are delays in the implementation, what have caused them (Project-specific or external factors), and how seriously have they affected the Project implementation? ▪ The presence and effectiveness of the measures adopted to 	<ul style="list-style-type: none"> ▪ Technical Component activities run smoothly on time (and on budget). ▪ Co-ordination with counterpart and other national policymakers and municipality officials is frequent and effective ▪ The cooperation with private sector entities (e.g. ESCOs) and representative groups efficiently supports 	<ul style="list-style-type: none"> ▪ Direct beneficiaries ▪ Municipal governments ▪ GIZ Project Team ▪ Implementing partners ▪ Independent verifiers (like ESCOs) 	<ul style="list-style-type: none"> ▪ Semi-structured key informant interviews ▪ Document review (Project proposal, Baseline documents, Progress reports, Data from Project monitoring system / Logframe) ▪ Field visit to pilot municipalities

ELEQ No.	Evaluation Question	Evaluation criteria	Original hypotheses	Who can answer this question	Source of information Data gaps
		reduce the initial delays in project implementation. <ul style="list-style-type: none"> ▪ The level of satisfaction of the Project's direct beneficiaries or their proxies 	information and dissemination.		
Sub-Questions					
3.1	Structure & steering: Has the Project been managed, coordinated, and implemented effectively regarding the financial mechanism and proposed implementation process?	<ul style="list-style-type: none"> ▪ Efficiency and relevance of the project business model and financial mechanism (i.e. do the initial barriers to EE still exist, and would the project address them in an appropriate manner) ▪ The chosen implementation mechanism is conducive to achieving the expected outcomes ▪ The technical and financial components are tailor-made for achieving the planned outputs ▪ Stakeholders are invited into the process and are participating and collaborating actively in the intervention. ▪ Efficiency, relevance and evidence of active use (and regular updates) of the project's risk management strategy. 	<ul style="list-style-type: none"> ▪ The Project team has the right and relevant governance structure to effectively coordinate with key stakeholders ▪ The technical and financial components activities are well aligned and reinforce each other. ▪ Key stakeholders fully own and commit to their role in the Project. ▪ Coordination with other projects at the national or local tiers of government has been positive. 	<ul style="list-style-type: none"> ▪ Direct beneficiaries ▪ Municipal governments ▪ GIZ Project Team ▪ Implementing partners 	<ul style="list-style-type: none"> ▪ Semi-structured key informant interviews ▪ Document review (Project proposal, Progress reports) ▪ Field visit to pilot municipalities
4 IMPACT					
4	What evidence is there that the Project is likely to contribute to the	<ul style="list-style-type: none"> ▪ The strength of the evidence that key outcomes and impacts are going to be achieved. 	<ul style="list-style-type: none"> ▪ The Project is showing interim stages of producing 	<ul style="list-style-type: none"> ▪ Direct beneficiaries ▪ Municipal governments ▪ GIZ Project Team 	<ul style="list-style-type: none"> ▪ Semi-structured key informant interviews

	intended impact in the ToC (incl. transformational change), as well as any unintended or unexpected ones?	<ul style="list-style-type: none"> ▪ The robustness of the causal links/pathways to the intended impact (namely, increase in demand for EE measures in public sector institutions). ▪ The availability of metrics and a tradition of reporting that can indicate or verify the causal links ▪ The disbursement and application of the earmarked funding 	<p>a demonstration effect (Dimension 1)</p> <ul style="list-style-type: none"> ▪ The project is laying the foundations for causing a catalytic effect, for example, by engaging a broader group of stakeholders, setting up capacity-building activities, or assessing the key legislative or regulatory gaps in place for the broad uptake of the mitigation solution. ▪ The Project has a reasonable plan to contribute to additional, large-scale, and sustained GHG emission savings (Dimension 3) 	<ul style="list-style-type: none"> ▪ Implementing partners ▪ Independent verifiers (like ESCOs) 	<ul style="list-style-type: none"> ▪ Document review (Project proposal, Baseline documents, Progress reports, Data from Project monitoring system / Logframe) ▪ Field visit to pilot municipalities ▪ Press and media
Sub-Questions					
4.1	Has the project enabled better gender-balanced access to financial products? (This could be part of the demonstration effect and/or catalytic effect)	<ul style="list-style-type: none"> ▪ Increased capacity of female and/or socially excluded beneficiaries (D1) ▪ Positive shifts in values, ideology and mindset regarding gender equality in mitigation action (D2) ▪ Improved GESI policy and legislative framework (D2) ▪ increased income opportunities or, ideally, stable and/or formal employment for women and marginalised groups (D2) 	<ul style="list-style-type: none"> ▪ Project demonstrates some evidence (mid-term) of actions to enable enhanced gender-balanced access to financial products. ▪ (Could be against Dimension 1 and/or Dimension 2.) 	<ul style="list-style-type: none"> ▪ Direct beneficiaries ▪ Municipal governments ▪ GIZ Project Team ▪ Implementing partners ▪ Independent verifiers (like ESCOs) 	<ul style="list-style-type: none"> ▪ Semi-structured key informant interviews ▪ Document review (Project proposal, Baseline documents, Progress reports, Data from Project monitoring system / Logframe) ▪ Field visit to pilot municipalities
5 SUSTAINABILITY					
5	What is the likelihood that the outcomes will be sustained after the	<ul style="list-style-type: none"> ▪ The extent of the evidence supporting the project sustainability (e.g. evidence of self- 	<ul style="list-style-type: none"> ▪ Technical and Financial Component activities will help strengthen the public 	<ul style="list-style-type: none"> ▪ Direct beneficiaries ▪ Municipal governments ▪ GIZ Project Team 	<ul style="list-style-type: none"> ▪ Semi-structured key informant interviews

	end of the Project funding period?	<p>sustaining institutional structures, official standards and political and financial commitment of key stakeholders)</p> <ul style="list-style-type: none"> There is little or no risk of backsliding or reversing Other municipalities asking to join as second-tier implementers of the project approach. 	<p>sector institutions, enhance participation in EE practices and connect EE outcomes with reduced GHG emissions.</p> <ul style="list-style-type: none"> The project will help build political will to scale up the models of support and implementation of EE measures in public sector institutions. 	<ul style="list-style-type: none"> Implementing partners Independent verifiers (like ESCOs) Building, environment and energy NGOs 	<ul style="list-style-type: none"> Document review (Project proposal, Baseline documents, Progress reports, Data from Project monitoring system / Logframe) Field visit to pilot municipalities Literature review, press and media
6 LEARNING					
6	What key lessons can be learnt to the benefit of this Project in achieving their results?	<ul style="list-style-type: none"> The project's generation of important lessons for: 1) its legacy; 2) other similar MAF projects; 3) the MAF as a whole. The understanding of causal pathways and the plausibility of "diffusing up" from local pilots to national policy. 	<ul style="list-style-type: none"> The project will generate important lessons for sustain its legacy, other MAF EE projects, and the MAF Facility as a whole. Climate impacts become a required element in planning, financing, and operating EE measures in South Africa. 	<ul style="list-style-type: none"> Direct beneficiaries Municipal governments GIZ Project Team Implementing partners Independent verifiers (like ESCOs) Building, environment and energy NGOs 	<ul style="list-style-type: none"> Semi-structured key informant interviews Document review (Project proposal, Progress reports) Field visit to pilot municipalities Literature review, press and media

Annex C List of ELE sources

C.1 Internal documents (Project Documents)

1. Project Proposal NSP South Africa EEPBIP final and Annexures
2. TSU recommendation Amendment No. 73_South Africa
3. NSP annual report of 2019, 2020, 2021, 2022 and annexures
4. Semi-annual report of 2019, 2020, 2021, 2022 and annexures

C.2 Public documents

- “Guidelines and Protocol for the Monitoring and Evaluation of Energy Efficiency in Public Buildings and Infrastructure (M&E-EEPBI)”, DMRE Pretoria/SA, First edition June 2020.
- Fundamentals on financing projects under the energy efficiency in public buildings and infrastructure projects: A simple guide to financing projects in public sector institutions under the energy performance contracting model with ESCO’s.
- TOC EEBIP M&E 09-07-2020. (Diagram)

C.3 List of organisations interviewed

Institution	Position
Project Team	
Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH	Project and Technical Advisors
Department of Mineral Resources and Energy (DMRE)	Chief Director
	Workstream Leader Project Preparation
Project Stakeholder	
South African National Energy Development Institute (SANEDI)	GM: Energy Efficiency
	Workstream Leader M&E
	EEPSU Coordinator
National Business Institute (NBI)	Workstream Leader Capacity Building
Industrial Development Corporation of South Africa (IDC)	Senior Account Manager
Department of Public Works and Infrastructure (DPWI)	Green Building Director
eThekweni Municipality	Energy Office and Mechanical Engineer
Mahikeng Municipality	Energy Office and Electrical Engineer
Nelson Mandela Municipality	Project Manager
	Consultant
Independent Consultant	Consultant
Third Party	
Africa International Advisors (AIA)	Associate Partner
Iroko	Transaction Advisory
South African Local Government Association (SALGA)	Director
Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH	Cluster Coordinator
	GIZ-MEMS Technical Advisor
ESCO association	President
Urban Earth – ESCO	Project Manager

Annex D Evidence of key outputs delivered to date

D1. Capacity Development Initiatives

Activity	Brief Description	Relevance to project output/outcome	Status
Project Participation & Project Conceptualisation -Day 1	Project Participation & Project	MAF indicator 4.2: Number of national and sub-national institutions received technical assistance to implement transformational mitigation action	Training provided on 22 June 2023
Project Participation & Project Conceptualisation -Day 2	Project Participation & Project	MAF indicator 4.2: Number of national and sub-national institutions received technical assistance to implement transformational mitigation action	Training provided on 22 June 2023
EnPC Training Workshop- GP region	EnPC Training	MAF indicator 4.2: Number of national and sub-national institutions received technical assistance to implement transformational mitigation action	Training provided on 05 September 2023
EnPC Training Workshop- KZN region	EnPC Training	MAF indicator 4.2: Number of national and sub-national institutions received technical assistance to implement transformational mitigation action	Training provided on 07 September 2025
EnPC Training Workshop- WC region	EnPC Training	MAF indicator 4.2: Number of national and sub-national institutions received technical assistance to implement transformational mitigation action	Training provided on 13 September 2023

Activity	Brief Description	Relevance to project output/outcome	Status
EnPC Training Workshop- EC region	EnPC Training	MAF indicator 4.2: Number of national and sub-national institutions received technical assistance to implement transformational mitigation action	Training provided on 20 September 2023
EnPC Training Workshop- NW region	EnPC Training	MAF indicator 4.2: Number of national and sub-national institutions received technical assistance to implement transformational mitigation action	Training provided on 28 September 2023
EEDSM & EEPBIP Training Workshop	EEDSM & EEPBIP Training	MAF indicator 4.2: Number of national and sub-national institutions received technical assistance to implement transformational mitigation action	Training provided on 15 February 2024
EEDSM & EEPBIP Training Workshop	EEDSM & EEPBIP Training	MAF indicator 4.2: Number of national and sub-national institutions received technical assistance to implement transformational mitigation action	Training provided on 16 February 2024
EEPBIP Supply Chain Management Workshop 1	Contracting for Energy Efficiency within the Public Sector – Unpacking Supply Chain, Finance and Legal Requirements Processes	MAF indicator 4.2: Number of national and sub-national institutions received technical assistance to implement transformational mitigation action Project Indicator TI-3: No of public entity officials trained on project identification, development, procurement, finance, implementation & monitoring	Training provided on 23 January 2025

Activity	Brief Description	Relevance to project output/outcome	Status
<p>EEPBIP Supply Chain Management Workshop 2</p>	<p>Building & Mapping a Streamlined Procurement Process:</p> <ul style="list-style-type: none"> • Energy as a Service vs. Energy Performance Contract • Maintenance & Integration • Suspensive Conditions • Risk • Measurement and Verification • Local Economic Development 	<p>MAF indicator 4.2: Number of national and sub-national institutions received technical assistance to implement transformational mitigation action</p> <p>Project Indicator TI-3: No of public entity officials trained on project identification, development, procurement, finance, implementation & monitoring</p>	<p>Training provided on 24 January 2025</p>
<p>EEPBIP Supply Chain Management Workshop 3</p>	<p>The workshop expanded on the following topics:</p> <ul style="list-style-type: none"> • Reviewing Major Risks Identified by the Team • Process Flow for the Development Stage • Energy Performance Contracts (EnPC) Options • Navigating Must-Have Contract Clauses • Key Documents that Must form part of the Contract • Bids Evaluation Criteria: Moving from Qualitative to Quantitative • Integrating Social Development into Contracts: Suggestions 	<p>MAF indicator 4.2: Number of national and sub-national institutions received technical assistance to implement transformational mitigation action</p> <p>Project Indicator TI-3: No of public entity officials trained on project identification, development, procurement, finance, implementation & monitoring</p>	<p>Training provided on 24 February 2025</p>

Activity	Brief Description	Relevance to project output/outcome	Status
	<ul style="list-style-type: none"> From Monthly Savings to Budget Line: Problem Statement and Ways to Overcome it Next Steps: Turning Plans into Action 		
EEPBP Supply Chain Management Workshop 4*	Ongoing review of key procurement and contracting issues	<p>MAF indicator 4.2: Number of national and sub-national institutions received technical assistance to implement transformational mitigation action</p> <p>Project Indicator TI-3: No of public entity officials trained on project identification, development, procurement, finance, implementation & monitoring</p>	Training provided on 06 March 2025

D2. EEDSM/EEPBP project pipeline (May 2025)

No	Province	Institution	Type	Project Type	Status	Est. Cost (ZAR)	Est. Cost (EUR)
1	Western Cape	University of Cape Town	University	Buildings	Project scoping	40,000,000	2,000,000
2	Western Cape	WC Provincial Public Works	Province	Buildings	Project scoping	TBC	
3	Gauteng	Central Energy Fund (CEF) House	State Owned Entity	Buildings	Project scoping	10,000,000	500,000

No	Province	Institution	Type	Project Type	Status	Est. Cost (ZAR)	Est. Cost (EUR)
4	Mpumalanga	Emalahleni Local Municipality	EEDSM grant	Water pumping	Project scoping	40,000,000	2,000,000
				Buildings	Project scoping	35,000,000	1,750,000
				WWTW	Project scoping	35,000,000	1,750,000
5	Northern Cape	Francis Baard District Municipality	EEDSM grant	Buildings	Project scoping	15,000,000	750,000
6	Limpopo Province	Bela Bela Local Municipality	EEDSM grant	Buildings	Project scoping	TBC	
7	Gauteng	Ekurhuleni Municipality	Metro	Buildings	Project scoping	20,000,000	1,000,000
				WWTW	Project scoping	25,000,000	1,250,000
8	Gauteng	University of Johannesburg	University	Buildings	Project scoping	TBC	
9	All	Transnet	State Owned Entity	Buildings	Project scoping	TBC	
10	All	SASSA	State Owned Entity	Buildings	Project scoping	TBC	
11	Gauteng	THE Innovation Hub	State Owned Entity	Buildings	Project scoping	TBC	
12	All	PRASA	State Owned Entity	Buildings	Project scoping	TBC	

No	Province	Institution	Type	Project Type	Status	Est. Cost (ZAR)	Est. Cost (EUR)
13	All	SA Tourism	State Owned Entity	Buildings	Project scoping	TBC	
14	Kwazulu-Natal	eThekweni Municipality	EEDSM grant	Buildings	Detailed preparation	35,000,000	1,750,000
15	Kwazulu-Natal	KZN Provincial Public Works	Province	Buildings	Project scoping	TBC	
16	Free State	Thabo Mofutsanyane Municipality District	EEDSM grant	Buildings	Project scoping	25,000,000	1,250,000
				WWTW	Project scoping	45,000,000	2,250,000
17	Eastern Cape	Nelson Mandela Bay Metro	EEDSM grant	WWTW	Detailed preparation	70,000,000	3,500,000
18	North West Province	Mahikeng Local Municipality	EEDSM grant	Buildings	Detailed preparation	TBC	
19	Mphumalanga	City of Mbombela	EEDSM grant	Buildings	Project scoping	TBC	
20	Mphumalanga	MP Provincial	Province	Buildings	Project scoping	TBC	
Total						395,000,000	19,750,000