Stimulating EE uptake in the South African Public Sector

The Energy Efficiency in Public Buildings & Infrastructure Programme (EEPBIP)

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Status Quo of Public Sector EE in RSA

Multifaceted challenges
and diverse actors

Reality is Public Sector entities are a wealth of poorly realised EE opportunities, and facing severe pressure

- Public sector entities are under major pressure to provide quality service delivery to their constituents
- Simultaneously they are under significant pressure to find efficiencies in their operational expenditure
- Energy efficiency in public infrastructure and buildings is a **high potential opportunity to free up resources** but requires the aptitude to implement EE, as well as upfront capex
- Whilst there has been progress through existing programmes financial and technical support programme, **overall implementation progress has been limited and slow**

It's worth recapping the diverse and interactive challenges….

The sector is marked by constrained capital and lacking appetite to finance projects and ESCos

National Treasury's **current financial support to municipalities for energy efficiency* is insufficient to achieve material savings**, and may be cut further due to fiscal constraints

* The *Energy Efficiency Demand Side Management Programme* (EEDSM) provides a framework for municipalities to carry out baseline energy audits and identify potential energy efficiency interventions, for which grants are provided to municipalities for qualifying projects (approximately € 13 million per year); the programme requires pre- and post-implementation M&V

Many ESCOs have limited track records and relatively small balance sheets, increasing their credit risk, **limiting access to the required financing**

Department of Public Works' existing national and provincial **Shared Energy Savings Programme** is limited by the contracted ESCOs' financial constraints and private ESCOs' perception of public sector payment risks**

** The *energy efficiency in public buildings* programme includes a range of projects, including support for establishing energy efficiency institutional arrangements, developing a system for performance certification in public buildings, and has undertaken a targeted programme for retrofitting projects through shared savings contracts with ESCos receive 50% of the financial savings

There is a **lack of confidence among commercial banks to lend to ESCOs for public sector projects**, also due to perceived liquidity and credit risk

Low awareness of potential for EE savings, coupled with procurement challenges, limits development interest

For many municipalities, there is limited awareness on the potential savings and therefore it has not been a priority – translating to **absent demand for financing and services**

Most projects primarily focus on short-payback lighting projects, avoiding the longer payback and higher capex interventions; so missing significant savings opportunities

ESCOs perceive the municipal procurement processes to be overly complicated and believe that the probability of success is low, relative to the effort and cost of responding to tenders

Long-term contracting is a serious concern for many municipalities and provinces. **Contracting for periods greater than three years adds greater regulatory compliance complexity**

Regulatory framework for energy efficiency and monetary and non-monetary incentives are in place for public buildings, but have not implemented, coupled with a lack of EE standards for public infrastructure

Significant technical, capacity and pipeline challenges create implementation dilemmas; make for slow progress

Significant lack of data across public entities, in terms of up to date asset registers, functioning and accurate metering and reliable energy consumption data, **hence a limited foundation for a credible baseline**

Quantitative effects of energy efficiency interventions not yet systematically measured, reported and verified – **no standardised MRV systems in public buildings**

Many municipalities and provinces do not have the necessary capacity or structures for the identification and development of bankable projects; especially constrained are smaller municipalities

Due to the **low quality of many public sector project proposals, project implementation issues** and **intrinsic conflicts between cost efficiency and capital** availability, there have been challenges disbursing public funds

There is limited experience and technical understanding in financing and contracting projects which are centred on energy-savings based lending models, both by municipalities and financiers

Due diligence and transaction costs associated with the issuance of loans to ESCOs is extremely high, relative to size of the loans required to implement typical municipal projects

High up-front fixed costs for the evaluation and implementation of public sector EE projects, result in a favouring of larger projects in order to achieve economies of scale but this is comes against the existing financial constraints

The multifaceted EEPBIP response

The objectives and
structure of a cooperative
and catalytic model

Performance-based ESCos, provided support, can play a major role in addressing some of these challenges

Energy Efficiency in Public Buildings and Infrastructure Programme (EEPBIP) is a comprehensive and replicable framework to promote, identify, finance and implement EE measures. **It sets out to**;

- **use the Public Sector's procurement potential to strengthen the ESCos market**
- **establish a critical mass of projects that yield financial benefit for the public sector**
- **incorporate existing expertise identifying energy efficiency potentials in public buildings**
- **improve ESCos' risk profiles and access to financial services by the banking sector**
- **mitigate public sector investment risks and provide necessary technical support**
- **scale up support for implementing existing public sector support programmes**

catalyse an energy efficiency transformation within the public-sector environment

stimulate the overall energy efficiency market transformation in South Africa

government spheres contribute meaningfully to GHG mitigation and energy security

EEPBIP is a multi-agency coordination effort

Funder ***Lead Partner*** ***Delivery Organisation***

NAMA Facility

energy
Department: Energy
REPUBLIC OF SOUTH AFRICA

giz

Implementing Partners

IDC
Industrial Development Corporation

environmental affairs
Department: Environmental Affairs
REPUBLIC OF SOUTH AFRICA

public works
Department: Public Works
REPUBLIC OF SOUTH AFRICA

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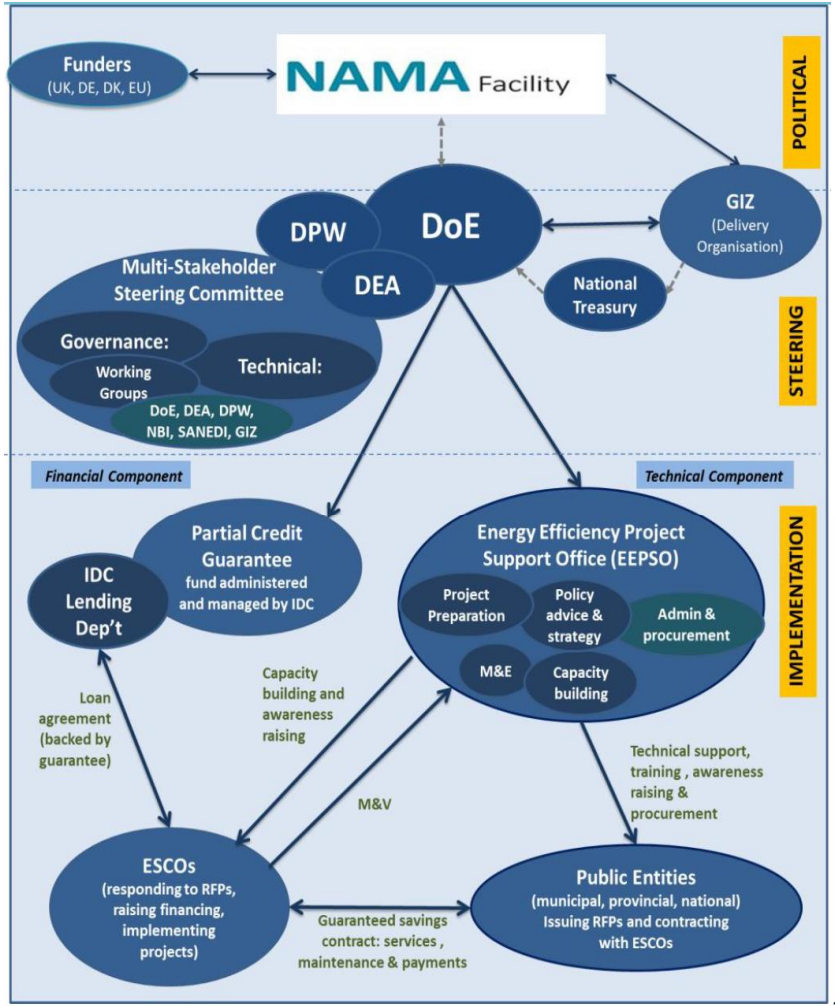
Beneficiaries / cooperating agents

Municipal, provincial and national government	**ESCos**	**Commercial banks**



Both financial and technical building blocks are needed to achieve change

Inputs

NAMA Facility Support

- DoE's EEDSM programme for municipalities
- Provincial & municipal government funds
- DPW EE funding

Private and public finance

- IDC green credit line
- ESCOs
- Private banks

Others

- Int'l and local technical assistance
- Other funds and programmes

to undertake

Activities

Partial Credit Guarantee Fund

- Partial Credit Guarantee Fund
- Procurement support
- ESCO credit risk review
- Issuance of guarantees
- Loan award
- M&E

Energy Efficiency Project Support Office (EEPSO)

- Setup and Operationalisation
- Project Preparation
- Capacity Building
- Policy & Strategy
- M&E

that will achieve

Outputs

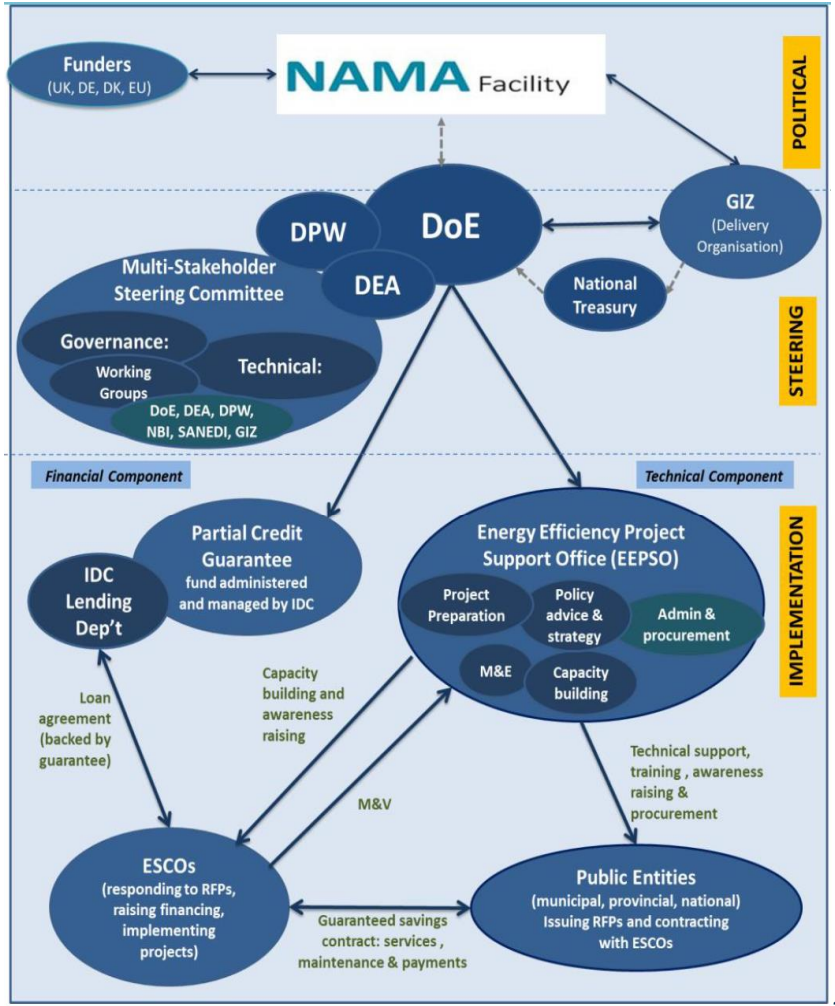
- IDC provides loans to ESCos, backed by the Partial Credit Guarantee
- EEPSO effectively supports the public sector to develop and implement energy efficiency projects
- Public sector capacity is strengthened
- Project pipeline is developed
- Policy framework is strengthened

A targeted TA programme, building on existing structures, will tackle ecosystem and capacity challenges

Work stream 1: **EEPSO Establishment**	• Resource the unit with recruited full time personnel • Develop and implement the unit's processes and procedures • Develop the standardised legal documents and other supporting templates required
Work stream 2: **Capacity Building & Training**	• Awareness raising, promotion and outreach • Public entity training programme (municipalities, provincial departments, national departments) • ESCO training programme • Resource and materials development and knowledge management (e.g. website, helpdesk, etc.)
Work stream 3: **Project Preparation**	• Develop implementation-orientated energy efficiency plans for public buildings and infrastructure • Project prioritisation, selection and packaging • Project procurement and implementation support • ESCO Register maintenance
Work stream 4: **Policy Advice and Strategy**	• Conduct a comprehensive policy gap analysis and strengthening programme • Provide policy advice to municipalities and provinces to strengthen own institutional arrangements • Develop and embed an EEPBIP Long-Term Operational Strategy and Funding Model
Work stream 5: **Monitoring and Evaluation**	• Develop and implement the programme M&V and reporting (overall programme; socio-economic impacts; financial flows) • Establish the Project MRV processes for project energy savings and GHG emission reductions

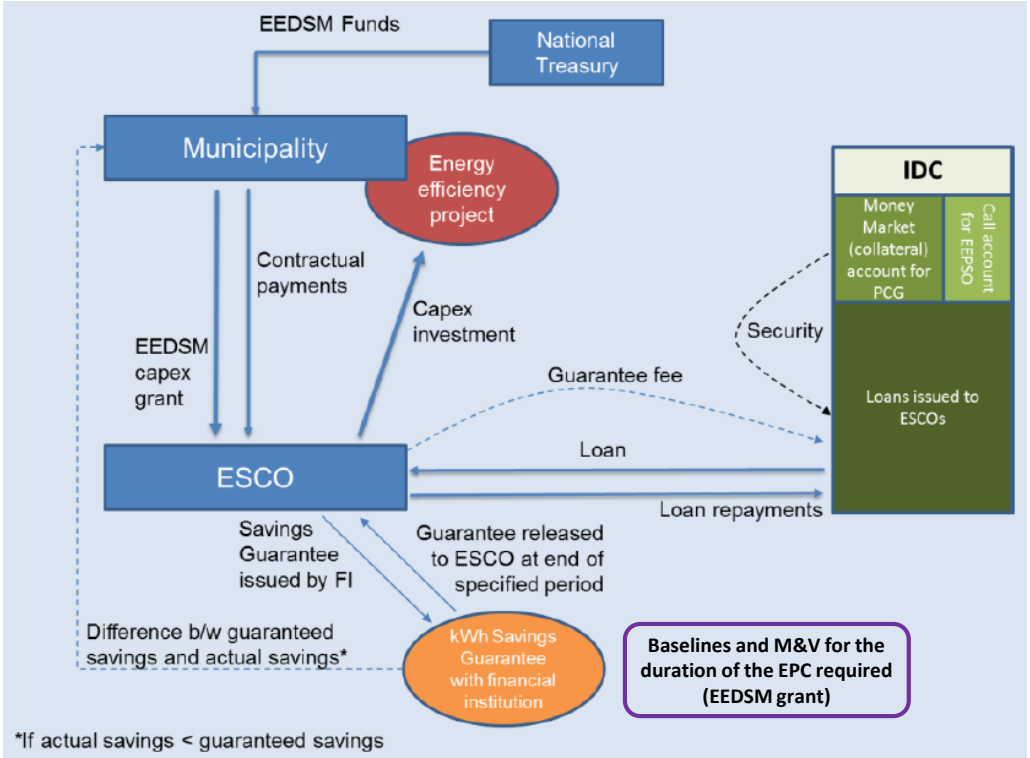
A PCG unblocks multiple financial and risk obstacles

- The **innovation lies in the mutual enablement of and benefit for end users, financiers and ESCos**
- **A Guarantee Fund** will be established within the Industrial Development Corporation (IDC) which **will unlock access to credit lines for ESCos to contract with public sector institutions**, by providing a Partial Credit Guarantee against defaults or payment delays

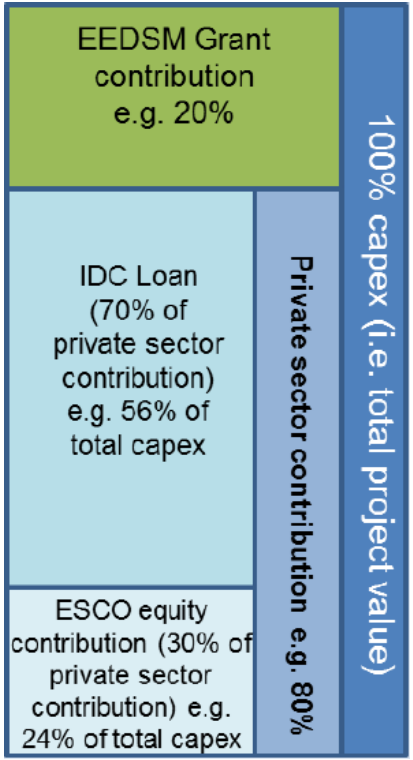


Private public co-financing model creates 1:3.3 leverage*, but there is no free lunch

Energy efficiency project cash flows under EEPBIP

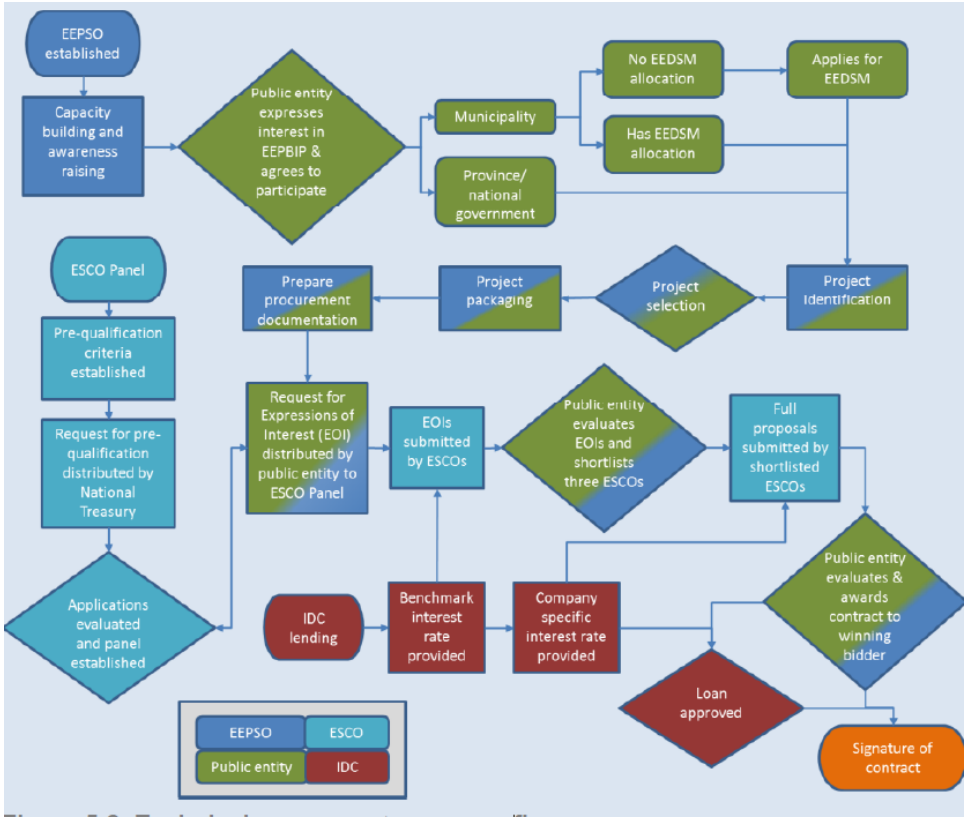


Typical project funding structure proposed

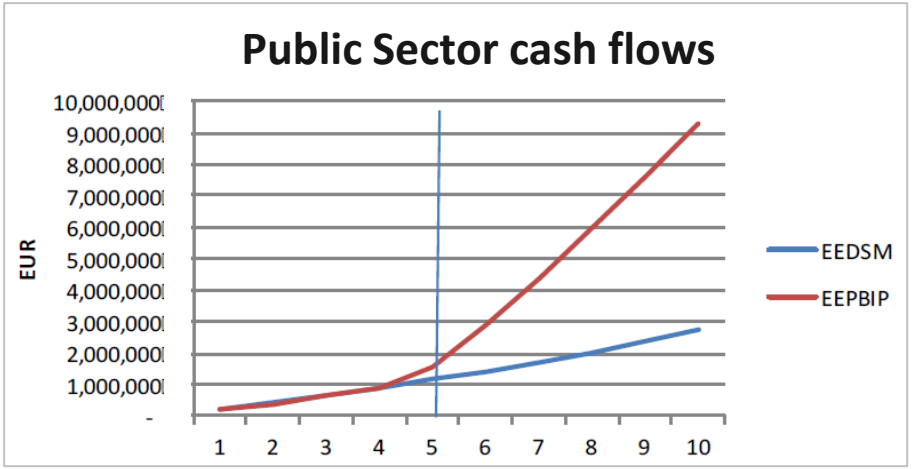


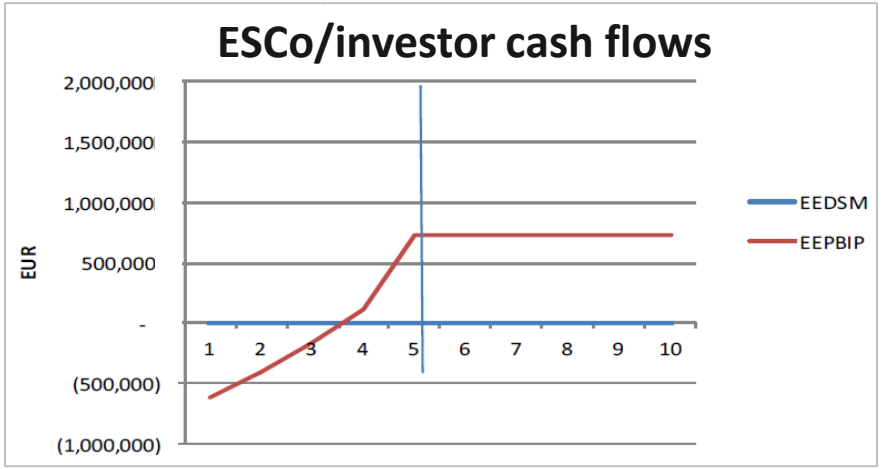
* Overall NAMA Facility contribution in relation to loans for energy efficiency measures issued by the end of the project. By end of year 10, this will have increased to 1:7.7

Technical support from Efficiency Project Support Office (EEPSO) will coordinate with the financial package



Financial benefit is substantial for the ESCo and the Public Sector, where savings continue beyond the Guarantee





- Project MRV activity will focus on actual energy savings and GHG emission reductions.
- This will be led by SANEDI (with strong existing mandate for ESCo support and EE MRV establishment and incentives management).
- The component will oversee the MRV of the energy efficiency interventions and will be aligned to other national energy efficiency programmes and the respective reporting standards.

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