

The header features a dark teal background with white line-art icons representing energy (solar panel, sun with lightning bolt, factory, calculator, tax document, euro coin, gauge, and tools). A light blue diagonal shape is on the left, and a large yellow triangle is on the right.

GUIDE

KENYA

Regulatory Framework and Financing Guide for C&I Energy Efficiency Projects in Kenya

TABLE OF CONTENTS

List of figures	3
Currency units	3
Technical units	3
Abbreviations/acronyms	3

Energy solutions – made in Germany	
The German Energy Solutions Initiative	4
Summary/Zusammenfassung	5
1. Background	11
2. Energy management regulatory framework in Kenya	14
2.1 Existing regulatory and policy framework	15
2.2 Future regulatory framework	16
3. Insights from the Kenyan C&I sector on implementation of EE projects	18
3.1 Experiences of C&I companies with EE projects	19
3.2 Challenges facing implementation of EE projects and opportunities for faster uptake	21

4. Financing of EE projects in the Kenyan C&I sector	24
4.1 Currently available financing models in Kenya	25
4.2 Financing models applied in other jurisdictions	29
4.3 Stance of C&I sector towards different financing models	30
4.4 Stance of banks and other financial service providers towards financing EE	30
5. Recommendations	32
5.1 Recommendations for the legal-administrative framework	33
5.2 Recommendations for the C&I sector	34
5.3 Recommendations for suppliers of energy efficiency equipment and services	35
6. References	36

List of figures

FIGURE 1. Envisioned Super ESCO model	17
FIGURE 2. Main energy consuming equipment and systems in Kenya's C&I sector	19
FIGURE 3. Energy efficiency pyramid	21
FIGURE 4. Guaranteed savings model	25
FIGURE 5. Shared savings model	26
FIGURE 6. Chauffage model	27
FIGURE 7. Financing EE - A ladder of options	29

Currency units

KES	Kenya shilling
USD	United States dollar

Conversion rate as of 03.03.2025

USD 1 = KES 129.14

Source: <https://www.exchange-rates.org>

Technical units

kWH	Kilowatt hour
-----	---------------

Abbreviations/acronyms

BMS	Building management system
CEEC	Centre for Energy Efficiency and Conservation
C&I	Commercial and industrial
EAC	East African Community
ECM	Energy conservation measure
EE	Energy efficiency
EERF	Energy Efficiency Revolving Fund
EMA	Energy Management Awards
EPC	Energy Performance Contracting
EPI	Energy performance indicator
EPRA	Energy and Petroleum Regulatory Authority
ESCO	Energy service company
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
GoK	Government of Kenya
GDP	Gross domestic product
HVAC	Heating, ventilation and air conditioning
KAM	Kenya Association of Manufacturers
KNBS	Kenya National Bureau of Statistics
KPLC	Kenya Power and Lighting Company
MEPS	Minimum Energy Performance Standards
M&V	Measurement and verification
NBFC	Non-banking financial company
OEM	Original equipment manufacturer
SME	Small and medium-sized enterprise
UNEPCCC	UNEP Copenhagen Climate Centre
VAT	Value-added tax

ENERGY SOLUTIONS – MADE IN GERMANY

The German Energy Solutions Initiative

The German Energy Solutions Initiative of the German Federal Ministry for Economic Affairs and Climate Action (BMWK) aims to globalise German and European technologies and expertise in climate-friendly energy solutions.

Years of promoting smart and sustainable energy solutions in Germany have led to a thriving industry known for world-class technologies. Thousands of specialised small and medium-sized enterprises (SMEs) focus on developing renewable energy systems, energy efficiency solutions, smart grids, and storage technologies. Cutting-edge energy solutions

are also built on emerging technologies such as power-to-gas, fuel cells, and green hydrogen. The initiative's strategy is shaped around ongoing collaboration with the German business community.

The initiative creates benefits for Germany and the partner countries by:

- boosting global interest in sustainable energy solutions
- encouraging the use of renewables, energy efficiency technologies, smart grids, and storage technologies, while facilitating knowledge exchange and capacity building
- enhancing economic, technical and business cooperation between Germany and partner countries

THE PROJECT DEVELOPMENT PROGRAMME (PDP)

PDP is a key pillar of the German Energy Solutions Initiative and is implemented by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH. It connects development cooperation with private-sector engagement and supports climate-friendly energy solutions in selected developing and emerging countries, enabling local businesses to adopt solutions in energy efficiency, electricity and heat supply, and hydrogen, while facilitating market access for German solution providers.

Developing and emerging economies offer promising business potential for climate-friendly energy solutions but also pose challenges for international business partners. The PDP team works closely with local industries to develop financially viable projects by providing technical expertise, financial guidance, and networking opportunities.

It identifies project leads, collects and analyses energy consumption data, and assesses projects from both a technical and economic perspective. This includes outlining the business case, calculating payback periods, and evaluating profitability. Companies can then choose to finance projects using their own funds or explore leasing and other financing options. PDP provides cost-free advice to local companies and connects them with German solution providers for project implementation.

Additionally, by offering training, organising reference project visits, and publishing studies on the potential of climate-friendly solutions and on navigating regulatory frameworks, the programme supports market development and fosters private-sector cooperation.

Executive summary

REGULATORY SITUATION

Energy efficiency (EE) is a critical component of sustainable development in Kenya, particularly given the country's rising energy demands and commitment to mitigating climate change. Kenya has a comprehensive policy and regulatory framework for EE, anchored in the Energy Act of 2019 and supplemented by specific regulations for energy management and appliance performance. The Energy Act of 2019 (replacing the earlier version of 2006) is the foundation for the Energy (Energy Management) Regulations of 2025 and the Energy (Appliances' Energy Performance and Labelling) Regulations of 2016. Facilities are classified according to the total amount of energy (thermal and electrical) they use each year. They are classified as low, medium, and high consumers. The medium and high energy-consuming facilities, consuming more than 180,000 kWh of energy annually, must have an energy audit of their facility done every four years by a licensed energy auditor. The facilities must also put the identified and recommended energy conservation measures into place to achieve at least 50% of the anticipated energy savings within four years. Failure to adhere to the regulations attracts a jail term and fines.

Zusammenfassung

POLITISCHER UND RECHTLICHER RAHMEN FÜR ENEFF

Insbesondere wegen des steigenden Energiebedarfs und des Bekenntnisses Kenias zur Eindämmung des Klimawandels ist Energieeffizienz (EnEff) ein entscheidender Teil der Nachhaltigkeitsentwicklung des Landes. Kenia verfügt über einen umfassenden politischen und rechtlichen Rahmen für EnEff. Dieser Rahmen ist verankert im Energy Act 2019, der die Version von 2006 ersetzt; für das Energiemanagement und die Geräteleistung wurden spezifische Vorschriften ergänzt. Der Energy Act 2019 bildet die Grundlage der Energy (Energy Management) Regulations 2025 und der Energy (Appliances' Energy Performance and Labeling) Regulations 2016. Dies sind die wichtigsten Vorschriften.

Standorte (von industriellen und kommerziellen Unternehmen sowie Institutionen) werden nach ihrem jährlichen Gesamtenergieverbrauch – Wärme und Strom – eingestuft, und zwar als niedrige, mittlere und hohe Verbraucher. Standorte mit mittlerem und hohem Energieverbrauch, die jährlich mehr als 180.000 kWh Energie verbrauchen, müssen alle vier Jahre durch einen zugelassenen Energieauditor ein Energieaudit ihrer Einrichtung durchführen lassen. Außerdem müssen sie die ermittelten und empfohlenen Energiesparmaßnahmen umsetzen, damit sie innerhalb vier Jahren mindestens 50 Prozent der erwarteten Energieeinsparungen erzielen. Halten sie die Vorschriften nicht ein, drohen Gefängnisstrafen und Geldbußen.

ENERGY EFFICIENCY OPPORTUNITIES IN KENYA

The C&I sector, consuming over half of Kenya's electricity, is a prime target for EE initiatives. This sector is diverse, encompassing industries like manufacturing, construction, and various commercial entities such as hotels and office buildings.

The top energy-consuming equipment and systems utilised by C&I facilities are lighting, motors and drives, pumps, and compressed air systems. Although lighting is used everywhere, it might not be the primary energy consumer in many industrial facilities, but it can be significant in some commercial structures, including office buildings and retail spaces like malls. The nation still does not often use building management systems (BMS), which creates a business opportunity.

IMPLEMENTATION STATUS

Key stakeholders, including the Ministry of Energy and Petroleum and the Kenya Association of Manufacturers, have championed the EE cause since the early 2000s. However, a shortage of skilled professionals in the local market, a lack of affordable financing, and insufficient regulatory enforcement have resulted in only a fraction of the targeted energy savings being realised. Presently, compliance with mandatory energy audits is insufficient, with approximately one third of high-consumption facilities not conducting these assessments as prescribed.

OPPORTUNITÄTEN FÜR ENERGIEEFFIZIENZ IN KENIA

Der Industrie- und Gewerbesektor verbraucht mehr als die Hälfte des kenianischen Stroms und ist daher ein Schwerpunkt für EnEff-Initiativen. Der Sektor ist breit aufgestellt: Er umfasst Branchen wie die verarbeitende Industrie, aber auch das Baugewerbe und gewerbliche Standorte wie Hotels und Bürogebäude.

Die wichtigsten energieverbrauchenden Geräte und Systeme in Industrie und Gewerbe sind Beleuchtung, Motoren und Antriebe, Pumpen und Druckluftsysteme. Beleuchtung ist zwar fast überall im Einsatz, in Industrieanlagen aber eher nicht die Hauptverbraucherin für Energie. Im Gewerbe, beispielsweise in Bürogebäuden und Einzelhandelsflächen, zum Beispiel Einkaufszentren, kann sie jedoch einen signifikanten Anteil haben. Gebäudemanagementsysteme werden in Kenia selten eingesetzt, sodass sich auch hier Opportunities finden.

STAND DER UMSETZUNG VON ENEFF

Seit Anfang der 2000er Jahre setzen sich wichtige Interessengruppen für EnEff ein, darunter das Ministerium für Energie und Erdöl und der kenianische Herstellerverband. Jedoch führten der Mangel an qualifizierten Fachkräften auf dem lokalen Markt, die fehlenden erschwinglichen Finanzierungen und die unzureichende Durchsetzung der Vorschriften dazu, dass nur ein Bruchteil der angestrebten Energieeinsparungen realisiert wurde. So werden Energieaudits gegenwärtig nur unzureichend abgehalten: Etwa ein Drittel der Einrichtungen, die einen hohen Energieverbrauch haben, führen die vorgeschriebenen Audits nicht durch.

This creates a persistent gap between the existing energy-saving potential and actual performance in the C&I sector. Currently, facilities are left to implement the energy conservation opportunities identified during energy audits on their own. This presents an opportunity for Energy Service Companies (ESCOs) to support the C&I sector and in turn benefit from the implementation of EE measures. The ESCOs need to come up with innovative business models that will be acceptable to the facilities.

ESCOs IN KENYA

The ESCO market in Kenya is in its infancy. New ESCOs lack credibility with facilities owing to their limited track record and (perceived) limited technical capabilities. Additionally, their limited assets and weak balance sheets make it difficult for them to credibly back up customer financing with performance guarantees. The perception among commercial lenders that ESCO projects involve high risk and unfamiliarity with and lack of technical capacity among lenders to properly appraise ESCO projects also poses challenges that need to be overcome.

Es herrscht eine Kluft zwischen dem Energiesparpotenzial und der tatsächlichen Leistung im Industrie- und Gewerbesektor. Unternehmen und Institutionen müssen Möglichkeiten der Energieeinsparung, die bei Energieaudits ermittelt wurden, selbst umzusetzen. Nun sollten Energiedienstleistungsunternehmen (ESCOs) die Gelegenheit nutzen und den Industrie- und Gewerbesektor unterstützen, damit sie ihrerseits von der Umsetzung von EnEff-Maßnahmen profitieren – mit Geschäftsmodellen, die innovativ und für die Unternehmen bzw. Institutionen akzeptabel sind.

ENERGIEDIENSTLEISTUNGSUNTERNEHMEN IN KENIA

Der Markt für ESCOs in Kenia steckt noch in den Kinderschuhen. Neue ESCOs vermitteln Kunden zu wenig Glaubwürdigkeit. Grund dafür ist ihre überschaubare Erfolgsbilanz und ihre aus Kundensicht begrenzten technischen Fähigkeiten. Darüber hinaus erschweren ihre geringen Vermögenswerte und schwache Bilanzen die glaubwürdige Absicherung der Kundenfinanzierung durch Leistungsgarantien. Ebenfalls als Herausforderungen stellen sich dar a) der Eindruck kommerzieller Kreditgeber, dass ESCO-Projekte mit hohen Risiken verbunden sind, und b) die Unkenntnis und das mangelnde technische Vermögen von Kreditgebern, ESCO-Projekte richtig zu bewerten. Diese Herausforderungen gilt es zu überwinden.

ESCOs also experience challenges during the contract period including

- breach of payment terms,
- disruptions due to changes in ownership of client facilities,
- changes in facility operations such as downsizing operations,
- and disruptions in energy intensity due to the introduction of other energy sources such as captive renewable energy.

Some of these challenges can be addressed by employing thorough energy consumption and activity monitoring. However, building trust and educating the facilities on the changes that need to be brought to the attention of the ESCO would help in dealing with some of the challenges. Furthermore, unpredictable energy prices that are the basis for contract pricing pose a challenge. Most of the fuels used by the facilities are imported. Fluctuations in the foreign exchange rate and the international market price of oil lead to fuel price fluctuation, hence fuel prices are announced every month. In addition, the unregulated component of the electricity tariff (fuel energy cost, forex adjustment, and inflation adjustment) may also fluctuate from one month to another. All these call for upskilling in contract design so that the parties involved are adequately remunerated.

Während Vertragslaufzeiten sehen sich ESCOs mit Herausforderungen konfrontiert, zum Beispiel mit

- der Nichteinhaltung von Zahlungsbedingungen;
- Unterbrechungen aufgrund von Eigentümerwechseln bei Kundenanlagen;
- Änderungen im Anlagenbetrieb, zum Beispiel die Verkleinerung des Betriebs;
- Unterbrechungen der Energieintensität aufgrund der Einführung anderer Energiequellen, zum Beispiel erneuerbare Energien für den Eigenbedarf.

Einige dieser Herausforderungen können ESCOs durch die gründliche Überwachung des Energieverbrauchs und der Aktivitäten bewältigen. Auch der Aufbau von Vertrauen und die Aufklärung von Kunden über Veränderungen, die dem Energiedienstleister mitgeteilt werden müssen, helfen bei der Bewältigung der Herausforderungen.

Eine weitere Herausforderung sind die unvorhersehbaren Energiepreise. Sie bilden die Grundlage der Vertragspreise. Die meisten Brennstoffe, die Kunden verwenden, werden importiert. Schwankungen bei den Brennstoffpreisen entstehen durch Schwankungen des Wechselkurses und/oder des internationalen Marktpreises für Öl; deshalb werden Brennstoffpreise jeden Monat bekannt gegeben. Darüber hinaus kann der nicht regulierte Teil des Stromtarifs (Brennstoffenergiekosten, die Devisenanpassung und der Inflationsausgleich von Monat zu Monat schwanken. All dies erfordert eine Verbesserung der Vertragsgestaltung, damit die beteiligten Parteien angemessen vergütet werden.

NEED FOR CHANGE

To enhance the implementation of energy efficiency (EE) projects in Kenya, many stakeholders particularly recommend the enforcement of the recently enacted Energy (Energy Management) Regulations, 2025, to solidify the institutional framework necessary for robust energy management practices including ESCOs. The establishment of a Super ESCO model could catalyse the further growth of the sector, serving as an intermediary that facilitates project development and assists private ESCOs in financing and implementing EE projects. Such a model has proven successful in other jurisdictions by nurturing a local market for energy services, enabling public institutions, and advancing private sector engagement.

Beyond ESCOs, affordable EE financing through government-backed schemes or green credit lines, along with the offer of concessional result-based financing, could mitigate the perceived risks and enhance the attractiveness of EE projects. This includes the promotion of third-party financing models that reduce the upfront capital requirement for EE projects while fostering favourable lending terms that can better accommodate the specificities of the energy efficiency market. Furthermore, policies such as a carbon credits framework and certification of EE facilities could encourage EE growth and provide alternative revenue streams to the facilities.

VERÄNDERUNGSBEDARF

Um die Umsetzung von EnEff-Projekten in Kenia zu unterstützen, empfehlen viele Akteure insbesondere die Durchsetzung der kürzlich verabschiedeten Energieverordnung (Energiemanagement) 2025, um den institutionellen Rahmen zu stärken, der für robuste Energiemanagementpraktiken, einschließlich ESCOs, erforderlich ist. Die Einrichtung eines Super-ESCO-Modells könnte das weitere Wachstum des Sektors beschleunigen: Als Vermittler erleichtert das Modell die Projektentwicklung und unterstützt private ESCOs bei der Finanzierung und Umsetzung von EnEff-Projekten. Es erwies sich bereits in anderen Ländern als erfolgreich: der lokale Markt für Energiedienstleistungen wurde vorangebracht, öffentliche Einrichtungen wurden unterstützt und das Engagement des Privatsektors wurde gefördert.

Über ESCOs hinaus könnten erschwingliche EnEff-Finanzierungen durch staatlich unterstützte Programme oder grüne Kreditlinien zusammen mit dem Angebot konzessionärer ergebnisbasierter Finanzierungen die wahrgenommenen Risiken mindern und die Attraktivität von EnEff-Projekten erhöhen. Dazu gehört die Förderung von Drittfinanzierungsmodellen, die den Vorlaufkapitalbedarf für EE-Projekte verringern und gleichzeitig günstige Kreditkonditionen fördern, die den Besonderheiten des EnEff-Marktes besser gerecht werden können. Zudem könnten politische Maßnahmen, zum Beispiel, Rahmenbedingungen für Emissionsgutschriften, die Vergabe und Zertifizierung von EE-Anlagen und das EE-Wachstum fördern und somit eine alternative Einnahmequelle für die Anlagen sein.

RECOMMENDATIONS

For many facilities, energy efficiency measures offer substantial potential for saving energy and therefore cost. To achieve this, facilities need to

- a) prioritise capacity building,
- b) ensure compliance with existing regulation (e.g. by using licensed auditors and consulting EPRA's site for rated equipment),
- c) and assess available financing options.

For suppliers of energy efficiency equipment and services, Kenya is an interesting market with likely rising demand due to increasingly stringent regulation and rising awareness. However, to be successful in this market, suppliers need to familiarise themselves with the policy framework in Kenya, for example through EPRA's website (<https://www.epra.go.ke/energy-efficiency-registers>). Suppliers new to the market are also recommended to engage and partner with industry associations whose membership are potential EE clients. This will help them to understand the dynamics in the Kenyan market and contextualise the EE solutions. Innovative financing solutions, technical assistance, and comprehensive after-sales service could encourage more C&I facilities to implement EE projects.

EMPFEHLUNGEN

EnEff-Maßnahmen bieten vielen Einrichtungen ein erhebliches Energie- und damit Kosteneinsparungspotenzial. Dafür müssen Standorte

- a) ihre Kapazitäten verbessern,
- b) die Einhaltung von Vorschriften sicherstellen, zum Beispiel durch Inanspruchnahme lizenzierter Prüfer*innen und die Konsultation der EPRA-Website für reglementierte Geräte,
- c) und verfügbare Finanzierungsmöglichkeiten prüfen.

Für Anbieter energieeffizienter Geräte und Dienstleistungen ist Kenia ein interessanter Markt mit voraussichtlich steigender Nachfrage aufgrund immer strengerer Vorschriften und wachsenden Bewusstseins für Energieeffizienz. Um auf diesem Markt erfolgreich zu sein, müssen sich die Anbieter mit den politischen Rahmenbedingungen in Kenia vertraut machen, zum Beispiel über die EPRA-Website (<https://www.epra.go.ke/energy-efficiency-registers>).

Neuen Anbietern auf dem Markt wird empfohlen, mit Industrieverbänden zusammenzuarbeiten, deren Mitglieder potenzielle EnEff-Kunden sind. Mit ihnen sollten die Anbieter Partnerschaften aufbauen. Dies kann helfen, die Dynamik auf dem kenianischen Markt zu verstehen und EnEff-Lösungen in den richtigen Kontext zu stellen. Innovative Finanzierungslösungen, technische Unterstützung und ein umfassender Kundendienst könnten weitere Kunden in Industrie und Gewerbe ermutigen, EE-Projekte durchzuführen.



1

Background

Energy efficiency and conservation is one of the key pillars of sustainable development in Kenya. The government has placed it as one of the priority areas of improvement in its efforts to enhance the quality of life of its citizens. Increasing energy demand, driven by expanding industrial and service sectors, necessitates a proactive approach to ensure energy is utilised efficiently. Efficient energy use offers significant benefits, including reduced production costs for businesses, enhanced competitiveness, and lower prices for consumers, as well as stimulating economic activity. Furthermore, reduced reliance on imported fossil fuels enhances energy independence, while lower energy consumption mitigates environmental impacts (EPRA, 2021). Kenya also projects that energy will be the leading contributor to greenhouse gas emissions by 2030 and has identified clean energy and energy efficiency (EE) as part of the priority mitigation strategies (GoK, 2020).

The Ministry of Energy and Petroleum, Kenya Association of Manufacturers (KAM), and other stakeholders have championed energy efficiency in Kenya since the early 2000s. However, there have been suboptimal gains due to limited information, motivation, expertise, and finances required to adopt emerging energy efficiency and conservation technologies and innovations. It is against this background that the country developed a National Energy Efficiency

and Conservation Strategy (Ministry of Energy, 2020) that identified industries, buildings, transport, utilities, and households as priority target areas. The strategy aimed to increase the number of energy audits carried out in the industry and agriculture sector from 1,800 to 4,000 and to implement the recommended energy conservation measures (ECMs) to save 100 MW of power demand, 250 million litres of heavy fuel oil, and 9 million litres of industrial diesel oil by 2025. The strategy espouses that the country should develop Minimum Energy Performance Standards (MEPS) for new buildings and improve the energy performance of existing buildings in Kenya through retrofits. Further, the strategy acknowledges the need to improve the acceptance of energy audits and implementation of energy audit recommendations through strengthening the competence and number of audit professionals and to improve industry confidence in implementation processes through the availability of stronger measurement and verification (M&V) and facilitation skills. In addition, the importance of improving access to finance based on reduced energy expenses and the need to enhance capacity building of local financial institutions in implementing the energy service company (ESCO) models are also highlighted.

The establishment of ESCOs is still in the nascent stage. There is no clear structure or operational

requirements for the ESCOs. Some of the few that exist were previously private energy audit firms. The ESCOs provide energy solutions including energy supply (captive electricity generation and steam), compressed air supply, implementation of EE and retrofitting projects, and energy management services (energy audits, real-time monitoring of energy consumption, and energy management solutions). Most of the ESCOs have operating leases with the facilities to which they provide energy services, with contracts ranging from 3 to 10 years.

The commercial & industrial (C&I) sector in Kenya accounts for more than half (52% in 2024) of the country's electricity consumption (Kenya Power, 2024). The sector consists of commercial buildings, industrial, and institutional facilities. Kenya's industrial market segment, contributing approximately 16% to the nation's GDP, encompasses key sectors such as manufacturing, construction, mining, and quarrying (KNBS, 2023).

The KAM groups the industrial sector into various categories, summarised as follows (KAM, 2024):

- **Food and Beverages:** Encompasses a wide range of sub-sectors, including beverages, dairy products, edible oils, meat products, processed cereals, confectionery, and salt.

- **Agro-processing:** This sector focuses on processing agricultural products, including food processing (sugar production, grain milling, tea and coffee processing), floriculture, and the production of agricultural inputs (fertilisers, farm equipment). Cut flowers, tea and coffee are Kenya's top exports.
- **Building, Mining, and Construction:** This sector includes construction materials (cement, concrete products, clay roofing tiles, and construction accessories) and mining (extraction of quarry products and other minerals). This sector is a key driver of Kenya's economic growth, contributing around 8% to Kenya's GDP in 2021, fuelled by ongoing infrastructure development.
- **Chemical and Allied:** Encompasses agrochemicals, paints, resins, cosmetics, personal care products, and chemical processing.
- **Energy, Electrical, and Electronics:** This sector includes energy production (petroleum products, lubricants, and renewable energy sources) and the manufacturing of electrical equipment, electronics, and accessories.
- **Metal and Allied:** This sector focuses on the production and processing of metals, including steel and aluminium products.

- **Plastics and Rubber:** Includes the production of plastic packaging materials, other plastic products, and the recycling of plastic waste.
- **Automotive:** Comprises vehicle and motorcycle assemblers, commercial vehicle body builders, and manufacturers of various vehicle parts.

The commercial sector comprises various sub-sectors including hospitality, retail, offices, and institutions. Commercial buildings comprise about 32% of Kenya's built market. Office buildings and educational institutions have the largest share of the commercial sector at 27% each, while warehouses account for 19%, and the hotels and retail sectors 8% each (IFC, 2017).

In 2020, about 3,383 facilities were classified as medium and high energy consumers (EPRA, 2020) and thus were obliged to conduct energy audits once every three years. However, only about 43% of the facilities had conducted energy audits between 2013 and 2019. The compliance rate might not have changed much since then, especially given that there was a slump during the COVID-19 pandemic. Furthermore, only about 25-50% of audited facilities are able to achieve at least 50% of the identified and recommended energy savings in the three years stipulated in the energy management regulations. This means there is much

room for improvement, which presents opportunities for EE technology suppliers and other players to help the facilities implement the ECMs.

The high cost of energy is the primary force driving the implementation of EE. It is worth noting that electricity tariffs in Kenya are cost reflective, i.e. there are no subsidies. As long as demand for electricity keeps growing, the expansion of energy infrastructure will need to continue. These costs are included in the tariffs, and are unlikely to go down. Other factors that motivate facilities to implement EE projects include:

- market requirement to reduce carbon footprint (e.g. in the flower industry)
- peer-to-peer learning through information and knowledge sharing that results in peer pressure among the facilities
- facilities eyeing carbon markets (especially exporters)
- participating in the annual Energy Management Awards (EMA), and ideally receiving an award, allows facilities to showcase their success

Energy efficiency will therefore remain relevant for the foreseeable future.



2

Energy management regulatory
framework in Kenya

2.1 Existing regulatory and policy framework

Kenya has a well-established energy efficiency and conservation policy and regulatory framework, with the newly enacted Energy (Energy Management) Regulations, 2025 and the Energy (Appliances' Energy Performance and Labelling) Regulations, 2016 being the main regulations, anchored in the Energy Act, 2019. Facilities are designated according to their total (thermal and electrical) annual energy consumption. They are designated as low (102,500 – 180,000 kWh), medium (180,001 – 1,200,000 kWh), and high (more than 1,200,000 kWh) consumers; facilities that consume less than 102,500 kWh equivalent annually are not designated. The medium and high energy consuming facilities are obliged to have an energy audit of their facility conducted once every four (4) years by a licensed energy auditor; most C&I facilities fall under the medium or high consumer category. Further, the facilities are required to implement the identified and recommended ECMs to realise at least fifty percent (50%) of the projected energy savings by the end of four years (GoK, 2025). A facility is liable to a fine not exceeding KES one million or a jail term of at most six months upon conviction, for failing to submit an audit report to the Energy and Petroleum Regulatory Authority (EPRA) as required (GoK, 2025).

Manufacture and importation of the following appliances is regulated to meet the set MEPS: self-ballasted lamps, double capped fluorescent lamps, ballasts for fluorescent lamps, refrigeration appliances, non-ducted air conditioners, and three-phase cage induction motors. A manufacturer or importer of any of the six appliances is required to submit a sample of the appliance to an accredited laboratory for testing. If the appliance model satisfies the set MEPS, a test report and test certificate are issued, and the manufacturer or importer applies to EPRA to register the appliance model. The appliance importer is required to affix an energy label that EPRA approves for every registered appliance (GoK, 2016). These regulations have assisted in avoiding the import of inefficient second-hand appliances to Kenya.

Enforcement of the energy management regulations remains a challenge. The subjects of the regulations are defined on the basis of both thermal and electrical energy consumption. The data on electricity consumption can be obtained from the distribution utility company. However, the thermal energy consumption of facilities remains unknown, and thus it is not known which facilities are subjects of the regulations. It is important to note that some facilities implement energy efficiency measures to comply with the regulations. This highlights the importance of a regulatory framework in achieving the country's goals.



2.2 Future regulatory framework

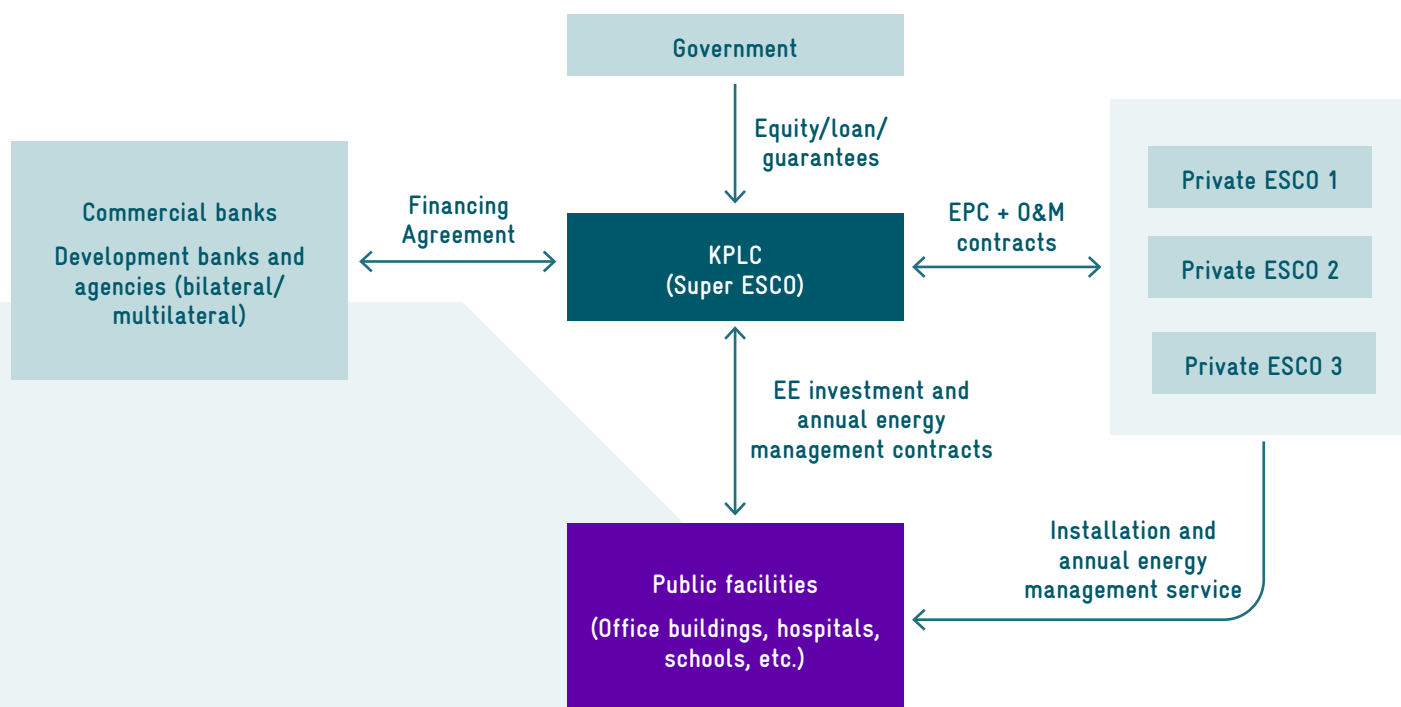
The newly enacted Energy (Energy Management) Regulations, 2025 have succeeded the Energy (Energy Management) Regulations, 2012. The salient features in the 2025 regulations that are different from the 2012 regulations include the designation of an accredited energy manager for every facility that is obligated to conduct energy audits, the accreditation of ESCOs, the establishment of sector-based energy performance indicators (EPI), and the issuance of energy savings certificates by EPRA. A facility may be issued with a certificate if its EPI meets the published best indicator for the sector. The certificate should indicate the number of tradable energy savings credits in kWh determined from the annual energy saved from the implementation of energy saving measures. Where a facility is consuming energy above the set benchmark, the facility can purchase energy savings credits from a designated facility with an energy savings certificate for purposes of meeting the minimum energy benchmarks (GoK, 2025).

An energy performance benchmarking study was concluded in June 2024, in readiness for implementation of the regulations. The study developed energy benchmarks for seven sectors in Kenya, namely: cement, sugar, tea, dairy, flower farms, fast-moving consumer goods, and hotels. The benchmarks for

other sectors will be developed in due course (EPRA, 2024). The purpose of the benchmarks is to set energy performance standards for facilities in various sectors. This allows the facilities in the C&I sector to compare their energy performance with the standards and identify any inefficiencies in their processes. The benchmarks are also useful for identifying energy inefficiencies in the production processes and estimating the potential for energy savings.

The 2025 regulations provide that no person shall engage in business as an ESCO without accreditation by the Authority (EPRA). An ESCO applying for accreditation must have in its employment an energy auditor with an EMVP licence from EPRA. Any accredited ESCO shall be entitled to undertake general and investment grade energy audits of designated facilities, and develop, design, finance, and build or manage energy conservation projects whose compensation is directly linked to actual energy savings. Further, a facility and an ESCO are required to enter an energy performance contract to govern their relationship and set out the obligations of each party prior to the commencement of work; the regulations have set out guidelines on the minimum contents of the contract. Additionally, the ESCO should send a copy of the contract to EPRA for review.

Kenya is embracing the Super ESCO model as a key strategy to advance EE first within the public sector and later to expand to the private sector. The approach will involve establishing a government-backed entity, which is Kenya Power and Lighting Company (KPLC), functioning as the Super ESCO as shown in Figure 1. The Super ESCO will identify, develop, and finance financially viable EE projects for public facilities like public buildings, hospitals, and schools. It will then contract private ESCOs to implement the EE projects and perform annual energy management at the beneficiary institutions during the duration of the ESCO contract (SEFA, 2021).

FIGURE 1. Envisioned Super ESCO model

The Super ESCO initiative is expected to catalyse the growth of the local ESCO market by demonstrating successful implementation and building technical capacity within the sector. This will in turn unlock the much-needed EE financing from financial institutions, which have often been hesitant to invest in this sector due to perceived risks. The Super ESCO, leveraging on the experience in public sector ESCO projects, will later facilitate the expansion of EE services to private-sector clients. It is expected that this model will accelerate the adoption of EE in Kenya, demonstrate its viability, and attract further investment.

3

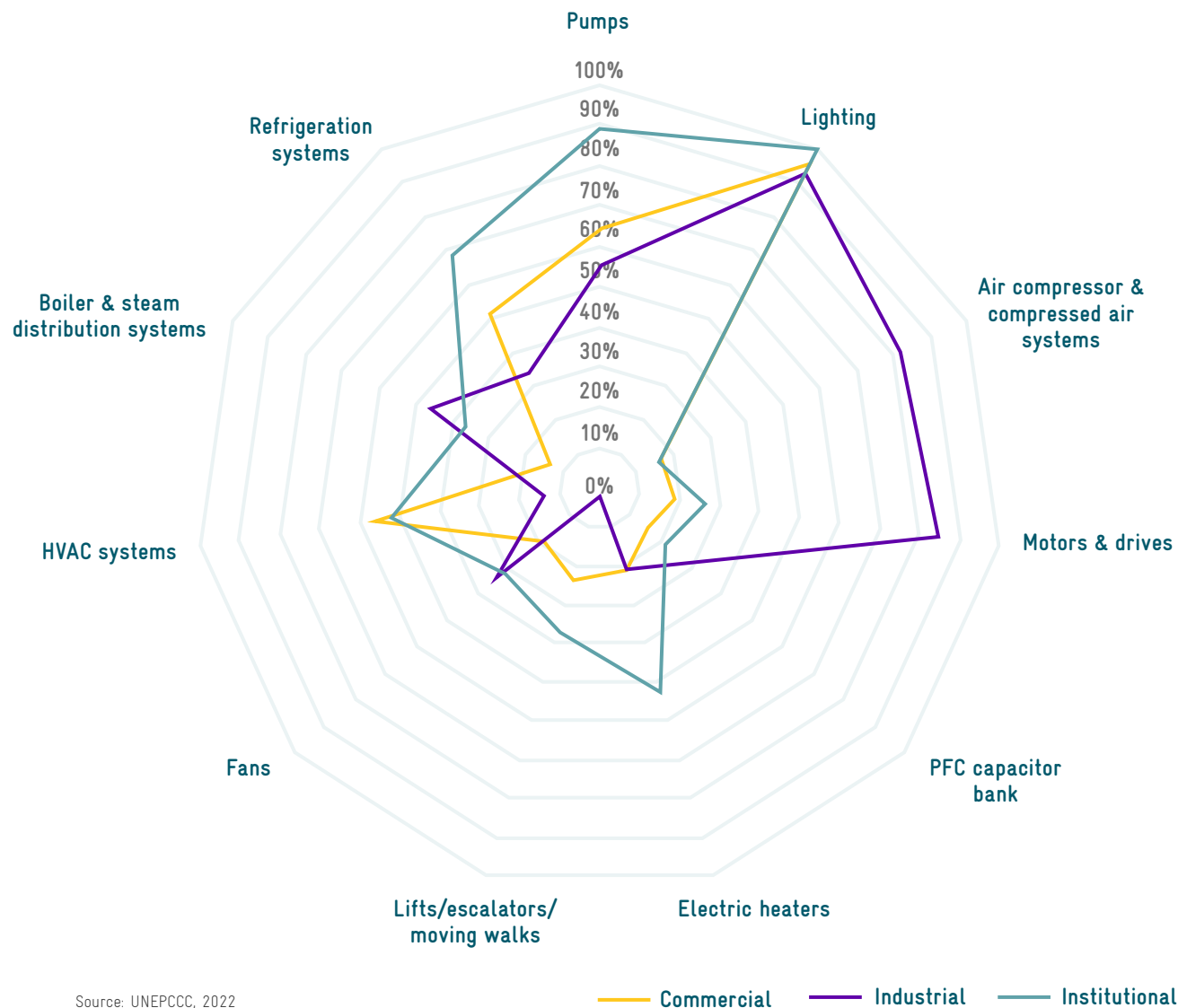
Insights from the Kenyan C&I
sector on implementation of
EE projects

There were several key stakeholders who provided useful insights in this study. Kenya's energy regulator, the Energy and Petroleum Regulatory Authority (EPRA), and industry associations including Kenya Association of Manufacturers (KAM) not only provided the insights but also assisted in identifying facilities with exemplary energy efficiency projects. Energy service companies (ESCOs) and original equipment manufacturers (OEMs) also participated in the study.

3.1 Experiences of C&I companies with EE projects

The EE market in Kenya is active. A review of the energy audit reports submitted to EPRA revealed that the top energy consuming equipment and systems used by facilities are lighting, motors and drives, pumps, and compressed air systems, as summarised in Figure 2 (UNEPCCC, 2022).

FIGURE 2. Main energy consuming equipment and systems in Kenya's C&I sector



Source: UNEPCCC, 2022

The UNEPCCC report provides the policy and market outlook for energy efficiency in Kenya's C&I sector, focusing on technologies such as pumps, motors, compressed air systems, HVAC, and waste heat recovery/heat exchangers. Whereas lighting is ubiquitous across all facilities, it may not be the most significant energy consumer in many industrial facilities but can be significant in some commercial facilities, for instance office buildings, and business premises such as malls. The application of building management systems (BMS) is still not common in Kenya. This presents a business opportunity.

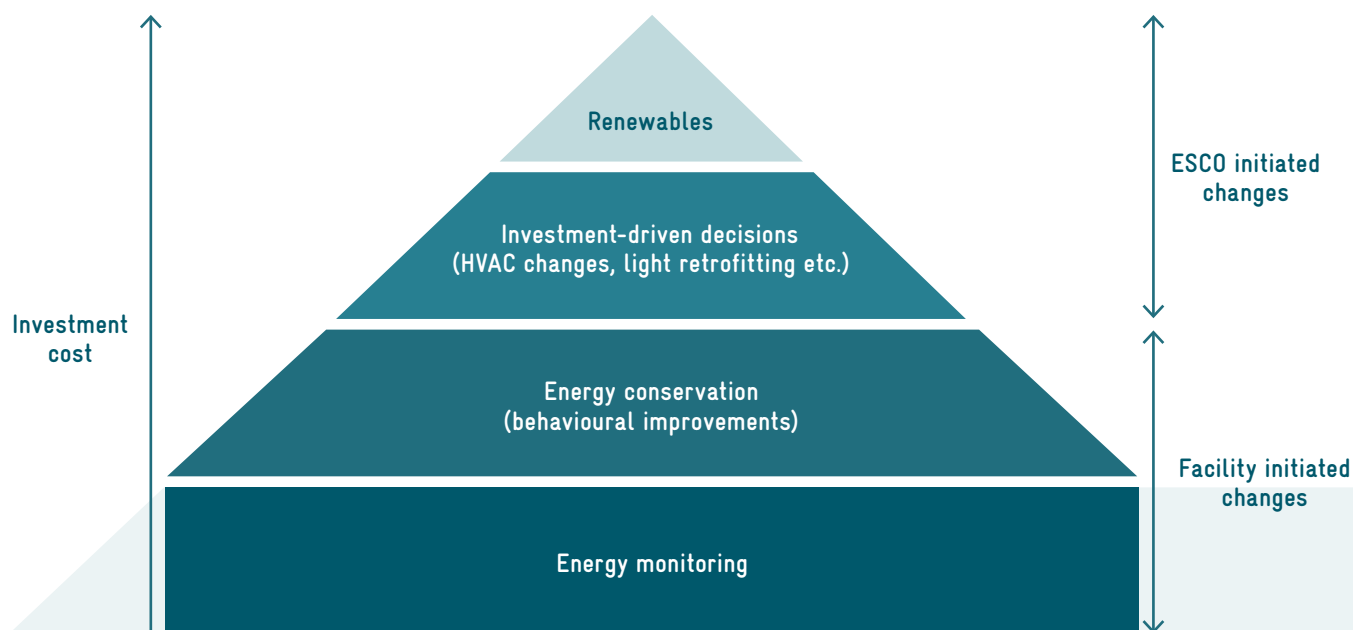
In industrial facilities, motors and drives are the second most common equipment type, as seen in Figure 2. Most of the motors in use have standard efficiency. Most facilities import whole process equipment, thus making it difficult to enforce the appliances' energy performance and labelling regulations. Some facilities tend to rewind their motors multiple times after failure, which impacts on their efficiency. The UNEPCCC report highlights that there is little focus on the motor systems (motors, belts/chains/gears) including power transmission systems. In addition, it is noted in the report that there are few ECMs for pumping systems (pumps, motor/prime mover, end-use equipment) even though pumps were documented as main energy consumers in more than 50% of each category of facilities.

Across the board, implementation of HVAC EE technologies is rare. This is despite the fact that they are used by more than 50% of commercial and institutional facilities, as can be seen in Figure 2. Initially, HVAC systems were more common in the coast region, which is a key tourist destination, and where temperatures are relatively higher than in Nairobi. With the changing weather and climatic conditions, more and more facilities in Nairobi, Kisumu, and other cities are installing the systems, particularly for cooling. Thus, there is an opportunity to drive EE for HVAC systems. It is worth noting that non-ducted air conditioners are subject to MEPS as per the Energy (Appliances' Energy Performance and Labelling) Regulations, 2016.

3.2 Challenges facing implementation of EE projects and opportunities for faster uptake

The implementation of EE in Kenya's C&I sector faces multifaceted challenges. The most common challenges experienced by the facilities include high equipment costs, high cost of finance, and high consultancy costs. Most facilities that have been conducting energy audits as required have implemented the low-cost low hanging fruits. For further savings, they now need to move to the next level of ECMs that require higher expertise and result in more energy savings but are more capital intensive, as illustrated in Figure 3.

FIGURE 3. Energy efficiency pyramid



The facilities need sources of affordable financing and alternative financing models that will incentivise them to implement EE measures. There is a limited number of EE and renewable energy project financiers in the country. The terms and conditions for financing, long and complex due diligence processes and creditworthiness assessment all hinder the implementation of EE projects. This is possibly due to knowledge gaps in financial institutions on the unique nature of EE projects – the benefits and risks of financing EE projects and the opportunities – and calls for measures to be put in place to close the gaps. There is need to build adequate and sufficient capacity for the evaluation of EE projects in these institutions to increase the flow of funds to the EE sector. In addition, financial incentives such as grants and tax breaks for EE equipment could help to offset initial implementation costs.

The EE sector in Kenya was initially promoted by the government and its development partners through the Centre for Energy Efficiency and Conservation (CEEC), domiciled at KAM. The Centre primarily financed energy audits and was also involved in human capacity development, and advocacy. The energy audit fees were highly subsidised for audits conducted through CEEC – KAM, which accounted for most of the audits carried out in the Kenyan market. However, the subsidies were withdrawn and currently the

facilities have to pay market rates. After the energy audit, the facilities are left to implement the recommended ECMs but can consult the energy auditor at an extra fee. This presents an opportunity for ESCOs to support the C&I sector and in turn benefit from the implementation of EE measures. The ESCOs need to come up with innovative business models that will be acceptable to the facilities. These barriers are an opportunity for innovative business models, for instance where energy could be provided as a service so that facilities do not have to invest or maintain the EE systems but only pay for the energy they consume. There is also an opportunity for EE equipment suppliers to come up with innovative financing options that are palatable to the facilities.

New ESCOs lack credibility with facilities owing to their limited track record and (perceived) limited technical capabilities. Additionally, their limited assets and weak balance sheets make it difficult for them to credibly back up customer financing with performance guarantees. The perception among commercial lenders that ESCO projects involve high risk and unfamiliarity with and lack of technical capacity among lenders to properly appraise ESCO projects also poses challenges that need to be overcome. ESCOs also experience challenges during the contract period including breach of payment terms, disruptions due to changes in ownership of client

facilities, changes in facility operations such as downsizing operations, and disruptions in energy intensity due to the introduction of other energy sources such as captive renewable energy. Some of these challenges can be addressed with thorough monitoring of energy consumption and activity. However, building trust and educating the facilities on the changes that need to be brought to the attention of the ESCO would help deal with some of the challenges. Furthermore, unpredictable energy prices, which are the basis for contract pricing, pose a challenge. Most of the fuels used by the facilities are imported. Fluctuations in the foreign exchange rate or the international market price of oil result in fuel price fluctuation, hence fuel prices are announced every month. In addition, the unregulated component of the electricity tariff (fuel energy cost, forex adjustment, and inflation adjustment) may also fluctuate from one month to another. All these call for upskilling in contract design so that the parties involved are adequately remunerated.

Several key initiatives could encourage facilities in Kenya to implement more EE measures. For example, incentivising compliance exceedance (incentives for facilities that achieve more than the mandatory 50% energy savings) could encourage other facilities to prioritise and implement EE projects. This is envisioned and provided for in the energy management regulations by way of allowing for trading in energy saving credits. Additionally, access to affordable financing with favourable terms such as low-interest loans, longer repayment periods, and lending against the projected energy cost savings cash flows could also improve the uptake of EE projects. Capacity-building initiatives, including training programmes for facility managers, top managers, and financial institutions, are essential to promote awareness and build expertise. Having a working framework for carbon credit mechanisms and creating awareness on how the framework would benefit facilities implementing EE would also be a positive step. This could provide the facilities with extra revenue and incentivise them to implement EE projects.



4

Financing of EE projects in
the Kenyan C&I sector

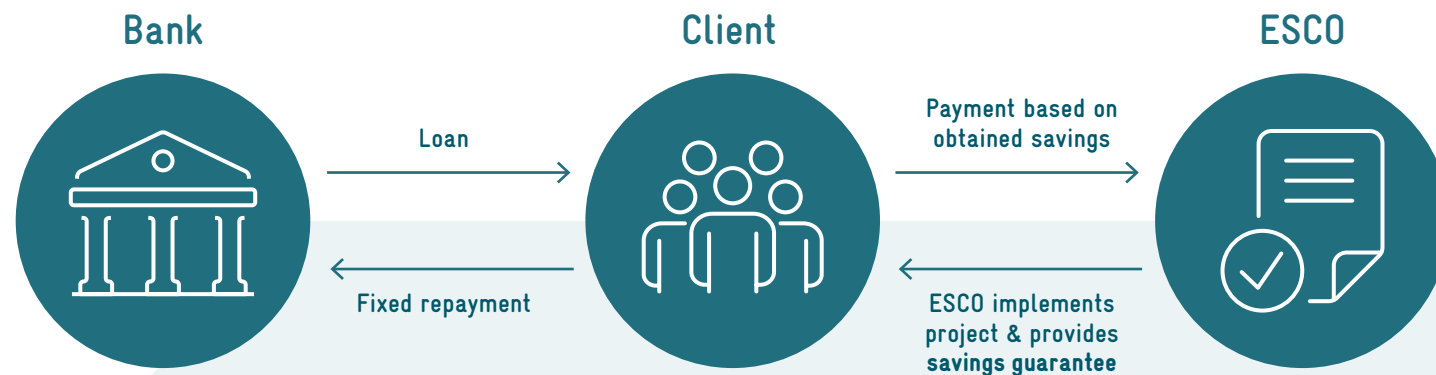
4.1 Currently available financing models in Kenya

Generally, most facilities finance their EE projects from internal sources only, where EE projects are included in the organisation's annual budget. This puts a strain on their finances and adds competition. Some facilities supplement financing from third-party sources including ESCOs and loans from financial institutions where they are required to provide collateral to secure financing. The facilities own the EE equipment but normally need the requisite expertise to deploy and maintain the EE equipment.

Once they identify an EE project, some ESCOs assist clients in arranging for financing. They play various roles including acting as project developers and being a direct link to EE project financiers. Additionally, they sometimes conduct due diligence on the client's credit status to gauge their ability to make the required payments and solicit financiers whose terms are favourable to the client. Some ESCOs also develop and finance EE projects based on suitable energy performance and contracting (EPC) business models. The ESCOs' sources of finance include private equity, bank loans, bank overdrafts, internal funds, and partnerships with financial institutions.

The three EE project financing models that are used include guaranteed savings, shared-savings, and chauffage. The guaranteed savings model involves the ESCO guaranteeing a certain amount of savings on the client's energy bill. The client can then obtain a bank loan or use their own equity to pay contractually determined fees to the ESCO and the bank (Figure 4).

FIGURE 4. Guaranteed savings model



The shared savings model allows clients to reduce their upfront financial commitment, as the ESCO typically shoulders the initial project costs and recovers its investment through a share of the savings as depicted in Figure 5 (IEA, 2018). This financial flexibility can be particularly appealing in markets with limited access to affordable financing and lacking trust in EPC models, as is the case in Kenya.

FIGURE 5. Shared savings model



The chauffage model requires an ESCO to take full responsibility for the provision of an agreed set of energy services such as space heating and lighting to the client (Figure 6). The model is attractive to clients who prefer a more hands-off approach and want to ensure consistent energy service without worrying about performance fluctuations (SECCCA, 2024).

FIGURE 6. Chauffage model



According to both the ESCOs and the facilities, the preferred duration of EPCs ranges between five and ten years. The contract duration depends on multiple factors, among them the source of finance, the loan duration where applicable, the capital intensity of the project, and the annual energy savings (cash inflow). The more capital-intensive projects may have longer contract durations than the ones that require less finance. Some facilities may prefer to repay loans associated with the EE projects from the energy cost savings so that they can free the money to meet other competing needs. Most of the contracts provide for transfer of the EE equipment to the facility at the end of the contract term. The project payback period is therefore an important parameter in such situations. However, some of the contracts do not specify what will happen to the equipment at the end of the contract. These are some of the grey areas that need to be addressed so that the contracts are comprehensive.

Some ESCOs take out energy savings insurance for EE projects. Of these, some take out a technical package that covers the ESCO or technology provider in the event that the projected energy savings are not achieved, while others take out both a technical and a credit package that ensures repayments owed to the ESCO continue to be made in case of customer credit default. This demonstrates a high level of understanding of the risks of EE projects. However, there is still room for improvement as many ESCOs do not yet take these points into consideration.

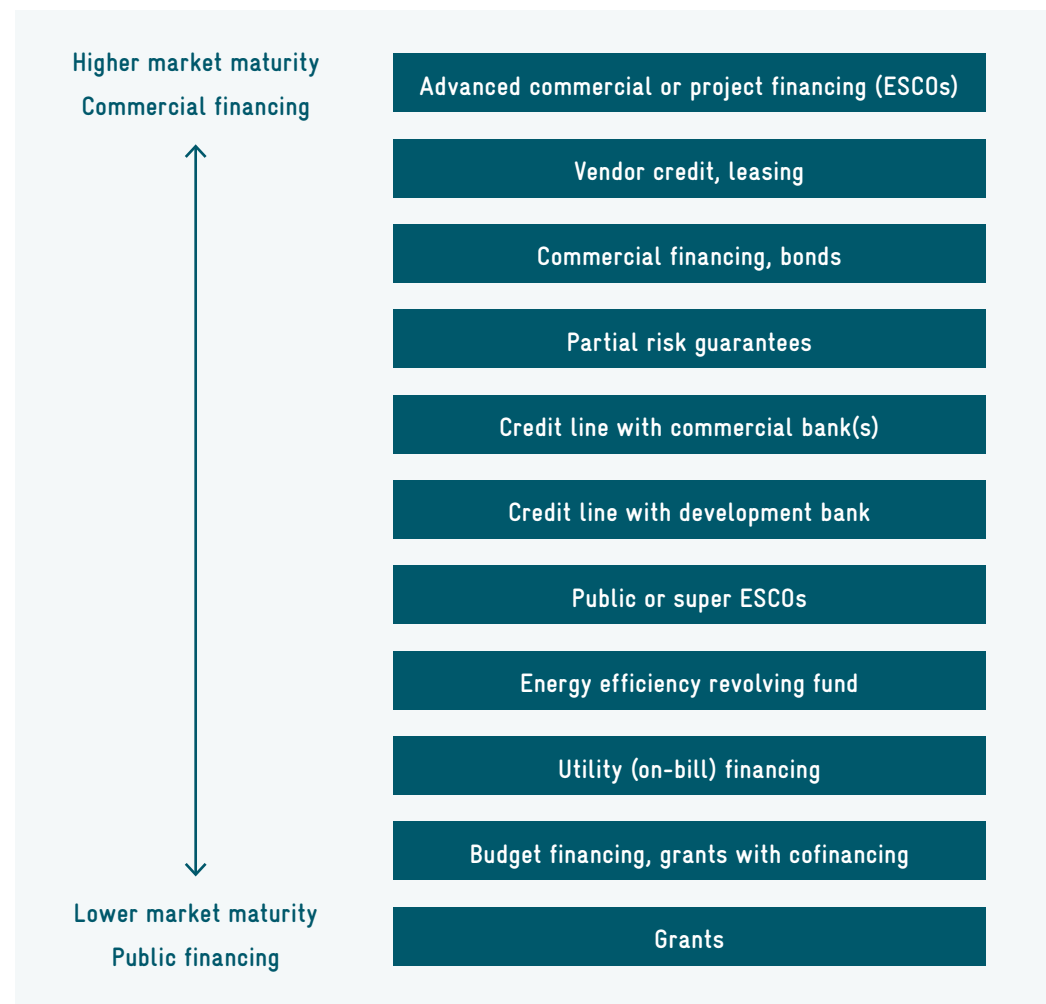


4.2 Financing models applied in other jurisdictions

As highlighted earlier, the establishment of ESCOs in Kenya is in its infancy and plans are underway to establish a Super ESCO. ESCO models are complex and require strong legal, financial, accounting, and business infrastructure. Thus, it is important to explore the practices in other jurisdictions that have similar frameworks to learn from their experiences regarding what might be expected to happen in Kenya's EE industry in future.

According to the World Bank Group report on Financing Energy Efficiency (World Bank, 2018), countries with lower EE market maturity use public financing such as grants, budget financing, and grants with cofinancing as depicted in Figure 4.

FIGURE 7. Financing EE - A ladder of options



As the market matures, public or super ESCOs are established before commercial financing is finally opened up. The Bank observes that moving up the ladder too quickly may hamper the creation of market capacity to sustain EE investments in the absence of continued public support.

Some examples of countries that have already implemented a super ESCO include Uruguay, Thailand and India:

The establishment of a public utility-based Super ESCO has been very instrumental in the development of a sustainable ESCO market in **Uruguay**. The Super ESCO supported the development of local private-sector ESCOs through training, operation, and financing. This support is very crucial because ESCOs by the very nature of their business face unique challenges that go beyond financing. Others include effective monitoring and verification of the cost savings accruing from implementation of EE projects and operation of the ESCO business (UNDP & GEF, 2023).

Thailand established an Energy Efficiency Revolving Fund (EERF) primarily to address financial barriers to EE projects and stimulate increased participation of commercial banks (UNDP & GEF, 2023). The

EERF was launched for a pilot period of only three years, with supplemental investments provided by six participating banks. The initial funding covering a ten-year investment horizon was through budgetary allocation, after which it will be sustained by the banks' own capital. The EERF is structured to lend to participating banks at an interest rate of 0.5%. The participating banks are required to cap their lending rates at 4% per annum and their loan size at USD 1.25 million per project. The target market of funding by the EERF comprises buildings, factories, ESCOs, and project developers. The facility's eligibility criteria are well spelt out.

The EERF passed on below-market interest rates, hence the commercial banks were able to mobilise more of its capital. As the banks' risk perceptions of EE projects improved due to their better understanding of the projects' technical aspects and business model, they increased their capital exposure, rather than simply matching the EERF's outlays. The EERF streamlined procedures and focused on achieving energy savings, with the result that the time it took to approve loans (and subsequently the time it took to begin implementing projects) was drastically shortened.

India developed guidelines for financing EE projects that serve as a reference guide for banks and non-banking financial companies (NBFCs). The guidelines shed light on EE projects and risk mitigating methods that can be applied when evaluating the benefits and risks of financing the projects. The guidelines thus familiarise local financial institutions and facilities with the benefits and risks of financing EE projects and provide new, appealing EE lending and savings insurance products (BEE, 2017).

The plans that Kenya has for the EE industry seem to be in line with what other countries have done before and proved successful. It will be necessary for development partners and the private sector to walk the journey with the government to realise the full potential of EE. Since regulation of EE financing is not under the purview of the energy sector, EPRA could consider developing guidelines for financing EE projects similar to the Indian ones. All players including the facilities, EE professionals, ESCOs, financial institutions, and the government have a role to play to unlock this potential.

4.3 Stance of C&I sector towards different financing models

Most facilities are open to having third-party financing of their EE projects, which would release their capital. However, some of the facilities have adopted a self-financing policy. This may largely be due to the fact that there are few financiers of EE projects and the market is currently not very friendly by way of having EE custom-made financial products. To date, the EPC models have been popular among the facilities.

4.4 Stance of banks and other financial service providers towards financing EE

Currently, financial institutions finance EE projects through normal corporate loans, with commercial banks offering a repayment period of up to one year. The institutions could consider financing large EE projects based on the projected cash flow from anticipated energy cost savings. However, smaller projects are often not financed due to limited customer awareness and understanding, prohibitive measurement and verification (M&V) costs relative to capital expenditure, the poor quality of energy audits which

are not typically bankable, and the risk of disputes and arbitration, all of which make small capital expenditure projects unattractive.

The primary challenges banks face in financing EE projects include high perceived risk, which leads to a higher cost of capital and reduces the potential cost savings and attractiveness of these projects to clients. Additionally, there are difficulties in securing collateral for EE project loans, adding to the perceived risk. The possibility that clients might use the financed equipment for purposes other than those intended, known as diversion risk, is also a significant concern. Furthermore, the information provided during due diligence may not always be reliable, further heightening the risk. Addressing these challenges would involve raising awareness, improving the reliability of due diligence, and potentially offering concessional results-based financing to mitigate perceived risks and enhance project attractiveness.

Primarily, EE project risks are evaluated by financial institutions through credit and currency risk assessments, with additional considerations for performance contracting projects. These additional risks encompass the quality of the energy audit, changes in customer behaviour, limited customer understanding, and the intricacies of M&V processes.

Overall, the Kenyan EE market is ripe for ESCO entry since most facilities have already implemented the low hanging fruits and they need to move to the implementation of more capital-intensive energy management measures. However, lack of awareness by the financial institutions on how they can leverage on energy cost savings and develop suitable financing products remains a stumbling block to the growth of the EE industry. There is also a need to enhance the capacity of financial institutions and energy professionals on EE project screening, evaluation, implementation, monitoring and verification, energy contracting, and dispute resolution mechanisms.



5

Recommendations

5.1 Recommendations for the legal-administrative framework

To enhance the implementation of energy efficiency (EE) projects in Kenya, several key legal and administrative recommendations have emerged from stakeholders. A primary recommendation is the enforcement of the recently enacted energy management regulations of 2025, which advocate for the implementation of EE projects, the development of skilled personnel to lead these initiatives, and the establishment of ESCOs in Kenya. Growth of the sector could be catalysed by the formation of a Super ESCO, typically established by governments. In Kenya, it is proposed to be under the electricity utility, Kenya Power (Maende, 2021). Super ESCOs function as intermediaries and project developers for public institutions and facilitate the implementation of EE projects by engaging private ESCOs. Super ESCOs act as catalysts for the EE market, providing capacity building and technical support to companies interested in entering the ESCO sector and offering engineering, procurement, and construction services. To ensure the successful execution of public sector EPC financing and leverage commercial funding, the government initially provides the Super ESCO with adequate capital (Africa Energy Portal, 2024).

Beyond ESCOs, affordable EE financing through government-backed schemes or green credit lines, along with the offer of concessional result-based financing, could mitigate the perceived risks and enhance the attractiveness of EE projects.

Additional policies could encourage facilities to adopt EE, including rewarding facilities that exceed their energy savings targets, international certification and labelling for energy-efficient organisations, and rolling out MEPS for a broader range of industrial equipment. A clear framework for carbon trading through EE projects could provide additional revenue streams for facilities.

With the policies encouraging EE in place, EPRA should establish industry benchmarks on EE based on local and international best practices as the next step. Together with ongoing annual KAM energy awards, this could continue to encourage firms to attain set standards through regulatory, policy, and financial incentives.

Capacity development and raising awareness are vital for the EE sector. Training financial institutions to develop customer-centric facilities to finance EE projects could enable banks to offer conducive terms for EE projects.

Harmonising frameworks and policies regionally within the East African Community (EAC) is an essential step to prevent the import of inefficient equipment to Kenya and ensure the success of EE projects.

5.2 Recommendations for the C&I sector

For many facilities, energy efficiency measures offer substantial potential for saving energy and therefore cost. Particularly those that have long-running and poorly maintained assets may find that replacing assets and improving setups provides a strong business case. Given increasingly strict regulation and a competitive business environment, the energy efficiency sector is expected to grow and professionalise, as well as offer a wider range of services and products. This will make the implementation of energy efficiency projects easier, even for facilities that do not have on-site expertise or strong financing power.

To ensure that EE projects are successfully implemented and maintained, facilities should prioritise capacity building by upskilling their staff through training programmes and workshops on energy management best practices. The capacity building should start at top management to help organisations prioritise EE. Additionally, capacity building should also target employees to equip them with the knowledge and skills needed to identify, implement, and monitor EE initiatives effectively.

In Kenya, facilities need to use licensed auditors to conduct energy audits as prescribed by law. The audit firms need to obtain and renew their licences with

EPRA. Therefore, facilities should check EPRA's website (<https://www.epra.go.ke/energy-efficiency-registers>) for the register of licensed auditors who can conduct comprehensive audits. Facilities should also conduct internal audits using their employees to help organisations identify and implement EE initiatives.

The facilities should consult EPRA's site when they need to retrofit or buy appliances considered under MEPS. This will help them identify the EE rating of the equipment based on Kenya's star rating. Additionally, facilities can refer to industry best practices, manufacturer recommendations, and case studies of successful EE projects. It is important to conduct thorough research and compare different options based on factors such as energy efficiency, cost-effectiveness, reliability, and after-sales support.

Accessing financing for EE projects can be facilitated through various channels, including commercial banks, specialised green funds, and government incentives. Facilities should explore different financing options and choose the most suitable one based on their financial situation and project requirements. Some finance institutions and organisations may have special programmes for green energy and energy effi-

ciency. The facilities should also embrace ESCOs for technical assistance as well as a financing alternative.

Facilities should stay informed about upcoming regulations and guidelines related to energy efficiency. This can be done by subscribing to industry newsletters, attending workshops and seminars, and engaging with regulatory bodies such as EPRA and industry associations.

5.3 Recommendations for suppliers of energy efficiency equipment and services

A number of factors make Kenya an interesting market for energy efficiency equipment and service providers, including the likelihood of rising demand due to increasingly stringent regulation and rising awareness, as well as a general appreciation for green technology and progressive attitudes among many companies. In addition, many companies could have inefficient equipment, resulting in a strong economic case for energy efficiency upgrades.

However, to be successful in this market, suppliers also need to understand and address various difficulties in the market, particularly on the financing side.

Engaging industry associations such as KAM, the Kenya Flower Council and others can help to gain a deeper understanding of the needs and challenges of the local market with the aim of providing contextualised solutions. It can simultaneously offer opportunities to showcase EE technologies to potential clients while offering innovative financing options.

Suppliers should also provide high-quality products that meet international standards and offer comprehensive after-sales support, including maintenance, repairs, and spare parts. Additionally, they should collaborate and partner with local entities, participate in industry events, and showcase successful projects.

Suppliers of energy efficiency equipment and services should stay informed about current and upcoming energy efficiency policies, regulations, and guidelines. The suppliers should keep abreast of EPRA's register of appliances that are regulated (<https://www.epra.go.ke/energy-efficiency-registers>) together with the requirements of having equipment certified to meet the EE criteria in Kenya.

Suppliers of energy efficiency services, ESCOs, should engage with industry associations and potential clients to develop a thorough understanding of the challenges facilities face when implementing EE projects. The ESCOs should tailor their services to include technical assistance to facilities and affordable financing for the facilities. Technical assistance could include support for project design, investment-grade auditing, and measurement and verification processes to enhance the financial attractiveness of EE projects. The ESCOs should also create more awareness among potential clients of their success stories. This would encourage more peer-to-peer learning among Kenyan facilities while catalysing the growth of the EE market. Equipment suppliers and ESCOs should also collaborate to provide contextualised solutions to the facilities. With the ESCOs offering tailored services to the facilities, suppliers

should offer the ESCOs tailored business models, competitive pricing, training, and suitable financing options for the equipment for them to increase their market share. Such collaboration would enable ESCOs to have a range of solutions for the facilities.

6

References

- Africa Energy Portal. (2024). *Super Escos & Esco Concept*. Retrieved 01 20, 2025, from Africa Energy Portal: <https://africa-energy-portal.org/ee/escos-super-cooling-escos>
- BEE. (2017). *Guidelines for Financing Energy Efficiency Projects in India- a Reference Guide for Banks and NBFCs*. Bureau of Energy Efficiency.
- Energy Spacewell. (2023, 07 20). *How to overcome the Fear of Energy Efficiency*. Retrieved 03 03, 2025, from Energy Spacewell: <http://dexma.com/blog-en/fear-of-energy-efficiency-how-to-overcome-it/>
- EPRA. (2020). *Impact Study of the Energy (Energy Management) Regulations, 2012*.
- EPRA. (2021). *Regulatory Impact Statement of the Energy Management Regulations*. Nairobi: Energy and Petroleum Regulatory Authority .
- EPRA. (2024). *Energy Performance Benchmarking Study for Designated Energy Consuming Facilities*. Nairobi: Energy and Petroleum Regulatory Authority.
- GoK. (2016). *The Energy (Appliances' Energy Performance and Labelling) Regulations*. Government of Kenya.
- GoK. (2020). *Kenya's Updated Nationally Determined Contributions*. Nairobi: Ministry of Environment and Forestry.
- GoK. (2025). *Energy (Energy Management) Regulations*. Government of Kenya.
- IEA. (2018). *Energy Service Companies (ESCOs)*. Retrieved 01 20, 2025, from ESCO contracts: <https://www.iea.org/reports/energy-service-companies-escos-2/esco-contracts>
- IFC. (2017). *Green Buildings Market Intelligence: Kenya Country Profile*. The International Finance Corporation.
- KAM. (2024). *Kenya Association of Manufacturers*. Retrieved 01 28, 2025, from Sectors: <https://kam.co.ke/sectors/>
- Kenya Power. (2024). *Integrated Annual Report and Financial Statements for the Year Ended 30th June 2024*. Kenya Power.
- KNBS. (2023). *Economic Survey*. Kenya National Bureau of Statistics.
- Maende, C. (2021). *Establishment and Operationalization of Utility-Run Super ESCO by Kenya Power and Lighting Company (KPLC)*. Kenya Power.
- Ministry of Energy. (2020). *Kenya National Energy Efficiency and Conservation Strategy*. Nairobi: Government of Kenya.
- SECCCA. (2024). *Sustainable energy knowledge hub*. Retrieved 01 20, 2025, from Types of EPC contracts: <https://secca.eu/knowledge-hub/practices/energy-services/epc-contracts-types/>
- SEFA. (2021). *Development of a Utility-run SUPER ESCO in Kenya* . African Development Bank Group.
- UNDP & GEF. (2023). *An Overview of the Best Practices of ESCO Market Design and Recommendations for Ukraine*. United Nations Development Programme .
- UNEPCCC. (2022). *Assessment of Skills and Knowledge Gaps in Energy Efficiency in Manufacturing and Commercial Sectors in Kenya*. UNEP Copenhagen Climate Centre.
- World Bank. (2018). *Financing Energy Efficiency, Part 1: Revolving Funds*. World Bank Group.

As a federally owned enterprise, GIZ supports the German Government in achieving its objectives in the field of international cooperation for sustainable development.

Published by
Deutsche Gesellschaft für
Internationale Zusammenarbeit (GIZ) GmbH

Registered offices
Bonn and Eschborn, Germany

Project Development Programme (PDP)
Köthener Str. 2–3
10963 Berlin, Germany
T +49 30 – 40 81 90 – 219/285
F +49 30 – 40 81 90 – 109

E pep@giz.de
I www.giz.de/en

Programme/project description
Project Development Programme (PDP)


Authors
SEI Sustainable Energy Innovations Ltd.
Nairobi, Kenya

Responsible/Editor
Anja Wucke, Stefanie Stemmer, Peter Waweru

Design/Layout
DITHO Design GmbH, Cologne

On behalf of
German Energy Solutions Initiative of the
German Federal Ministry for Economic Affairs and
Climate Action (BMWK), Berlin
Department VB4 German Energy Solutions Initiative,
Market Entry Programme Berlin

Berlin, 2025



Deutsche Gesellschaft für
Internationale Zusammenarbeit (GIZ) GmbH

Sitz der Gesellschaft / Registered offices
Bonn und Eschborn / Bonn and Eschborn

Friedrich-Ebert-Allee 36 + 40
53113 Bonn, Deutschland / Germany
T +49 228 44 60-0
F +49 228 44 60-17 66

Dag-Hammarskjöld-Weg 1 - 5
65760 Eschborn, Deutschland / Germany
T +49 61 96 79-0
F +49 61 96 79-11 15

E info@giz.de
I www.giz.de/en