

Energy Efficiency for Sustainable Livelihoods in Africa - EELA

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Energy Efficiency for Sustainable Livelihoods in Africa - EELA

The **EELA Program** seeks to promote inclusive and sustainable economic growth through integrated energy efficiency interventions. It focuses on transforming markets:

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towards high-performing affordable, and energy-efficient appliances,

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increasing energy efficiency investments in the industrial sector,



and promoting sustainable local value chains for energy-efficient products and services.



Implemented by UNIDO with financial support from the government of Sweden



EELA contributes to a low-carbon, climate-resilient and environmentally sustainable economy and responds to the priorities of the countries national NDCs and development goals.



EELA Interventions and development impact

The program includes regional interventions

- in the Economic Community of West African States (ECOWAS),
- the East African Community (EAC) and
- the Southern African Development Community (SADC) region through the **EELA Regional project**
- as well as multiple EELA Country Windows such as the EELA KENYA, the EELA ZAMBIA and the EELA ZIMBABWE country window which are currently in different stages of implementation/development.

The development impact

- contribute to poverty reduction through improved access to sustainable energy for women and men, girls and boys,
- mitigate negative externalities of the energy system.
- reduction of household expenditures and energy costs for businesses.
- enhanced deployment of productive use equipment to improve livelihoods and reduce post-harvest losses through high performing and energy efficient on and off-grid cooling and agro-processing equipment.



The New EELA project in a Nutshell

Total Budget: 20 Million EUR Funder: Swedish International Development Cooperation Agency Project Start / Duration:



Key implementing Partners







Swedish Energy Agency



Key National Counterparts:

Utilities and Regulators

Industry Associations

Environment

Ministries of Energy, Industry &

Standard Bodies & Testing Laboratories





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Why Regional Collaboration?

- Eliminates trade barriers for EE products
- Unlocks economies of scale
- Increase affordability
- Common monitoring, verification and **enforcement**
- Supports coordinated compliance planning and efficient use of resources when a regional market shares similar products
- Great potential to avoid duplication of compliance efforts



Global Network Regional Sustainable Energy Centres



Regional Sustainable Energy Centres play a pioneering role in regional harmonisation





The multiple benefits of Energy Efficient Lighting and Appliances

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PRIVATE SECTOR SUPPORT

To help ensure better access to energy services across East and Southern Africa, EELA is forging partnerships with key stakeholders and will particularly engage with the private sector to inject new investment and build the capacity of governments and public officials to expand energy services.

CLIMATE ACTON

EELA contributes to a climate action in many ways such as reducing emission through the widespread use of more energy efficient products, while also limiting the use of substances in inefficient cooling products.

RESPONSIBLE PRODUCTION AND CONSUMPTION 12

Through its focus on safe environmental management of products, development of MEPS and promotion of energy management systems by large power users, EELA also supports responsible production and consumption.

SUSTAINABLE CITIES

By promoting energy efficient street lighting, alongside the use of less electricity to run appliances, EELA supports sustainable cities and communities.

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POVERTY ERADICATION

3 1000 HEALTH

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Access to clean affordable sustainable energy remains key for eradicating poverty. By making more energy-efficient products readily available on the market, the EELA project will reduce household energy bills and expand the provision of clean energy services to households across East and Southern Africa.

HEALTH AND WELLBEING

Air pollution led to some 7 million deaths worldwide in 2016. The shift to energy efficient lighting and appliances, promoted through EELA, contributes to health and wellbeing across East and Southern Africa by enabling people to access clean lighting and appliances.

GENDER INCLUSIVENESS

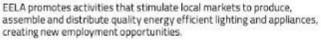
Women are often most affected by low quality products in households. EELA will empower women by expanding their access to quality products and by supporting women entrepreneurs to become more active in markets for energy efficient lighting and appliances.

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ENERGY FOR ALL

As energy consumption accounts for around 60 percent of total global greenhouse gas emissions, according to the UN, achieving climate safe universal access to electricity will require a doubling of energy efficiency improvement rates. The potential for energy saving across East and Southern Africa is huge. EELA estimates that introducing MEPS in the regions through the project could save the equivalent of five to eight times Kenya's total electricity consumption.

JOB CREATION



SUSTAINABLE INDUSTRIALIZATION



CONTWORK AND

Through its investments, EELA will also stimulate better infrastructure and industrial production. Energy accounts for a large amount of production costs and EELA will support local industries to become more competitive. At the same time, local manufacturing of products will be promoted.

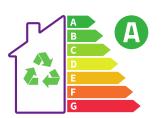


Achieved Milestones 2019-2024- Policy and standard development

- Regional MEPS adopted for
 - General lighting
 - Service lighting
 - Off-grid lighting
- Advanced MEPS process for
 - Refrigerators*
 - Air-conditioners*



* In collaboration with U4E



- Regional Technical Committees established
- Regional Compliance Framework developed
- Green Procurement Guidelines developed
- Direct TA for national implementation
- Supporting the **regional Energy Efficiency po**licy for the EAC region
- Strong support and local ownership through the established EELA network in the participating countries
- Regional centres become the Go-To organisations for national support







Regional Compliance Framework for EELA in EAC and SADC

- A Regional Compliance Framework for EELA in EAC and SADC was designed with the technical support of CLASP to support Member States in the implementation and enforcement of the regionally harmonised EELA policies (incl. MEPS for lighting and cooling appliances).
- The Compliance Framework was validated by EELA Focal Points in March 2023 and approved by the SACREEE Steering Committee at its 10th sitting.
- National in-person sensitisation workshops and trainings on the compliance framework took place in Burundi, Rwanda, South Sudan and Uganda for EAC and Namibia, Mozambique, Zambia, Zimbabwe and Mauritius for SADC.
- Trainings also include a module on the Energy Efficient Public Procurement Guidelines.



EELA Focal Point Compliance Framework Validation Meeting, Nairobi, Kenya





Regional Policy and Regulatory Environment for EELA Improved



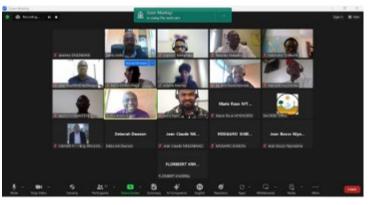
Mauritius National Stakeholders workshop – 6 July 2023



Zambia National Stakeholders workshop – 23 May 2023

EELA NATIONAL WORKSHOPS IN SADC

- Held in Namibia, Mozambique, Zambia, Zimbabwe & Mauritius in SADC and Burundi, Rwanda, South Sudan, and Uganda in EAC.
- MS appreciated EELA support on the MEPS, Compliance Framework, distribution of Portable Light Test Equipment as well as the establishment of Regional Testing Laboratories.
- MS raised the need for more financial and technical support for capacity building, awareness raising and regulations in order to help in implementation.
- Collaboration amongst key institutions was emphasised as well as the capacitation of institutions both in terms of personnel and equipment.
- Countries are at different stages of development in terms of market surveillance, conformity assessment and enforcement



Burundi Virtual National Stakeholders workshop – 1 March 2024



South Sudan Virtual National Stakeholders workshop – 29 February March 2024







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Development of the EAC Regional Energy Efficiency Policy

- The EELA project is supporting the development of the EAC Regional Energy Efficiency Policy through the subcontract provided to EACREEE and the engaged consultants who have drafted the policy. The policy will provide an important regional EE framework and includes targets for EE appliances.
- EACREEE on behalf of the EAC Secretariat is conducting national consultations on the EAC Regional Energy Efficiency Policy and EAC Regional Compliance Framework.
- National consultations were conducted in Burundi, DRC, Kenya, South Sudan, and Uganda from August 2023 to March 2024. The pending countries are Rwanda, and Tanzania.
- EACREEE is planning to conduct the EAC regional harmonization meeting on the EAC Regional Energy Efficiency Policy alongside the 9th IEA global energy efficiency conference scheduled for 21-22 May 2024.



National consultations on the EAC Regional EE Policy and Regional Compliance Framework in Kenya August 2023







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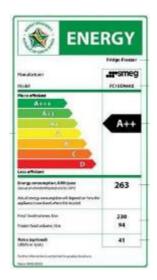
Launch of the Regional Energy Efficiency Labeling initiative

Task 1. Mapping and review of existing EE labels in the SADC and EAC – March through April 2024

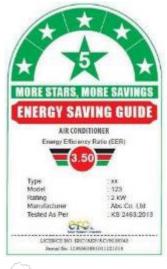
Task 2. Conduct a detailed analysis of EE label development process - April through June 2024

Task 3. Develop label options for the SADC region - May through July 2024

Validation Workshop: SADC Industrialisation Week, July 2024













Achieved Milestones - Testing capacity strengthened through equipment and capacity building activities

- Capacitating **Regional Reference Laboratories** in Zambia, Uganda and Mozambique through training and procurement of laboratory equipment to test lighting products and strengthen compliance in regional market.
- Market Surveillance for lighting products enabled through purchase of Portable goniometers for screening quality of lighting products in markets procured for each 21 member states.
- Establishing a **network of testing labs** in the region









Capacity Building of key Stakeholders

- Portable Lighting Test Equipment being purchased for 21 Member States
- For use in Market surveillance and conformity checks

MEASURE IN 30 SECONDS

- Lumen
- Peak candela value
- · Color temperature, CCT
- Spectrum, CRI, TM30, CQS
- Beam angle
- Detailed light distribution
- · Power and power factor
- Lumen per Watt





Measure any type of Light Source

Measures a variety of parameters No expert Knowledge required to use the equipment

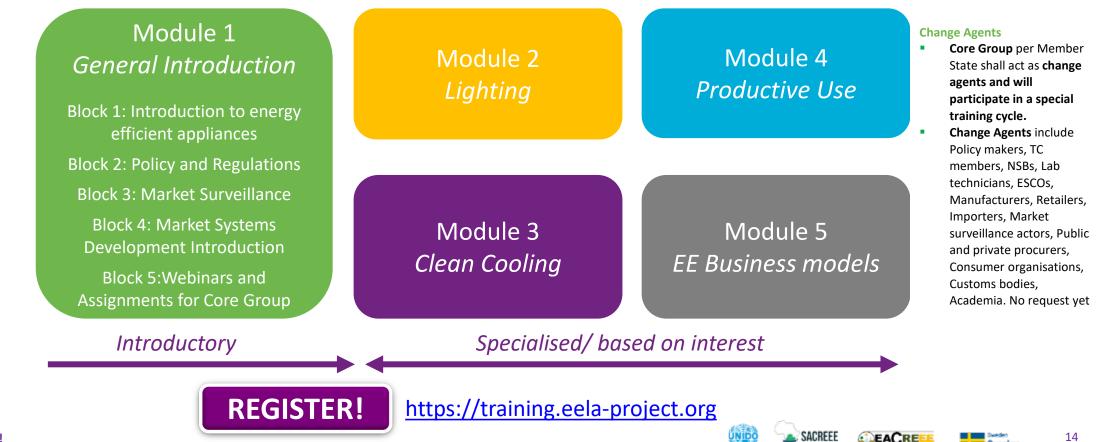






Achieved Milestones – Launch of the EELA E-learning Platform

- Launched on 22 October 2021 with Modules 1 and 2
- Course open to all stakeholders with guided (blended) training for change agents
- EELA Project is collaborating with Kafue Gorge Regional Training Centre (KGRTC) in Zambia





Collaboration with the Kafue Gorge Regional Training Centre for Change Agents' Guided Training

- EELA E-Learning Platform launched with Modules 1&2 uploaded.
- Change Agents identified in collaboration with EELA focal points and Ministries of Energies
- Training on Module 1 and 2 Started in September 2023 and has been completed
- Extensive in-person training of **lab technicians** on testing and lighting standards
 - KGRTC
 - ZABS
 - Visit to SAVENDA Electronics
 - Testing and reporting at national level
- **Curriculum** for Modules 3, 4 and 5 developed and facilitators for Module 3, & 4 mobilized, training to commence on 6 May 2024
- Procurement of lab equipment for reference Labs (Mozambique and Uganda) underway. Equipment manufacture in process

Regional training for Lab Technicians was held December 2023 at KGRTC with a visit to ZABS lab facilities - organised in collaboration with the Swedish Energy Agency and Life Academy











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Achieved Milestones – 3 Market Studies: lighting, cooling and productive use appliances

- EELA carried out three market studies which are guiding the implementation strategy
- The most recent market study and supply chain analysis was carried out on Productive Use Appliances
 - Generate data and in-depth knowledge on the status of on-and off-grid productive use appliances (PUA) in the EAC and SADC regions
 - Identified high potential value chains and PUA in EAC and SADC
 - Identified most relevant on- and off-grid PUA
 - Guides the EELA intervention strategy to accelerate the uptake of EE PUA and to strengthen value chains

Highlighted the need for a special EELA Off-Grid PUE component

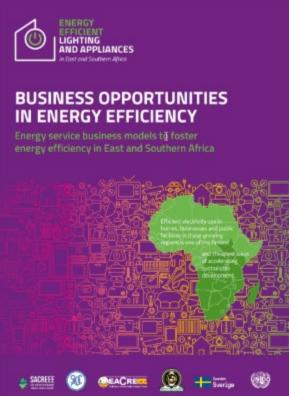


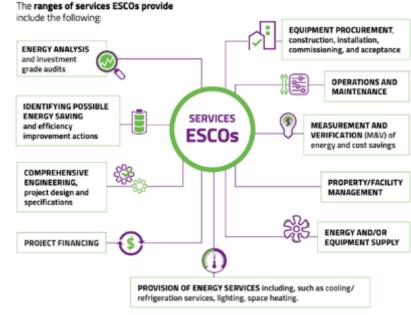
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Achieved Milestones - Business support and ESCO market development

- Private Sector Support strategy developed
- Private sector awareness raising on energy service business models
- EELA TA and Co-financing facility launched, supporting
 - Energy As a Service (lighting, cooling etc)
 - Energy Supply/Performance Contracting
 - Leasing models
- Selected projects under implemenation benefiting from TA and co-financing through an call for EoI – first Energy Service Business Models in most target countries!





Holistic information activities for private sector carried out to raise awareness on the business opportunities!!



Communication and awareness raising

 Launch of the EELA website as a resource for information, tools and guidelines to support countries on advancing with energy efficient appliances.

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• Several awareness raising activities conducted including a webinar series on key EELA topics – high attendance!





Annual EELA Stakeholder Forum







EELA Stakeholder Forum

EmPowering Efficient Appliances for greater livelihoods in EAC and SADC

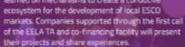
29 - 30 March 2023 Nairobi, Kenya



we discuss the latest developments in the vibrant energy-efficient lighting and appliances markets across East and Southern Africa

awareness on new EELA policies in the regions, showcase trends and new initiatives, and explore the market potential for Energy Service Companies (ESEOs). Experts will share best practices and lessons learned on mechanisms to create a conducive

This multi-stakeholder platform will track progress on the uptake of energy-efficient appliances, raise



Be part of this exciting event and stay tuned for more information!

About the Project:

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Emploies: Informational projections









Awards for outstanding EELA Champions

The awards ceremony acknowledged outstanding leadership in promoting energy efficient lighting and appliances in the EAC and SADC region in three categories:

- Country Action: Seven recipients
- Institutional Leadership: One recipient
- **Personal Leadership:** Four recipients

Visit the EELA website for details









EELA Outlook



Scaling up the Energy Efficiency for sustainable Livelihood Program

Expand EELA to new regions

- EELA 2.0 Building on first phase with expanded value chain approach
- Expansion to the ECOWAS region (in addition to SADC and EAC)
- Establish closer collaboration with AFREC to adopt EELA approach at continental level
- Support other regions through partnerships (ECCAS – GNSEC – EU funded)

Transforming EE markets in Africa

Scale up the **EELA TA and Cofinancing facility** through Loan-Guarantee scheme – Concept developed – ongoing fund mobilistion

Develop Country Windows

- First country windows signed with Kenya, Zimbabwe and Zambia
- Potential further country windows for 2025 are under discussion
- Government requests received from Mozambique, Rwanda, Uganda, Tanzania and concept presented to Swedish embassies.

Ambition to identify additional donors and partners New branding due to broader scope (including industial EE, waste management, skills development etc)

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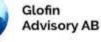




Swedish Energy Agency











Switch it on!



Key National Counterparts:

- Ministries of Energy, Industry & **Environment**
- Utilities and Regulators
- Industry Associations
- Standard Bodies & Testing Laboratories



EELA Country Windows

Local Adaptation: Each country window tailored to address specific local energy demand, policy environments, and market conditions.

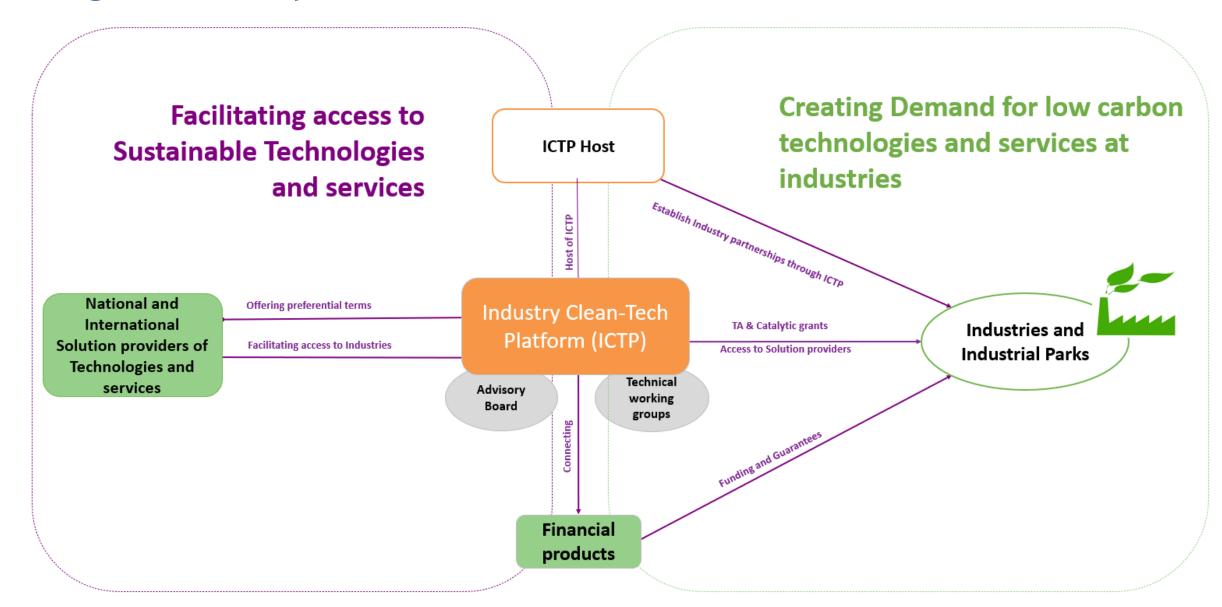
Common objectives across country windows:

- •Stimulate inclusive growth through EE in Zambia, Kenya, and Zimbabwe
- •Support national energy strategies and regional goals for energy access, renewable energy, and carbon reduction
- •Develop sustainable local value chains, addressing energy consumption, emissions, and environmental impact
- •Increase adoption of EE lighting and appliances with MEPS and private sector development
- •Enhance repair and maintenance skills for EE equipment and develop e-waste management capabilities
- •Gender-responsive campaigns to increase understanding of EE benefits, MEPS, and PUE appliances
- •Strengthen policies, regulations, and institutional capacities to sustain EE efforts





Accelerating Investments in the Low Carbon Transformation of Industries through the Industry Clean-Tech Platform –ICTP





THANK YOU

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