EACREEE

Building a Sustainable Energy Future

BUSINESS PLAN

2020-2024

EACREEE Business Plan 2020-2024

Final Version, Kampala, Uganda
Approved by the Board of Directors of EACREEE
in July 2020

Developed with technical and financial support of

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Foreword from the Chairperson

The East African Community (EAC) Partner States (PS) recognize the importance of regional cooperation in the achievement of universal access to sustainable energy and other Sustainable Development Goals (SDGs). In order to strengthen their cooperation in this area, the EAC with support from the United Nations Industrial Development Organization (UNIDO), sought to establish a regional centre to coordinate regional renewable energy and energy efficiency interventions including knowledge management, information sharing and capacity building, and policy development and harmonization.

Such a Centre ought to provide regional leadership in promoting the benefits of clean energy transitions. It should spearhead the delivery of inclusive policy dialogue, knowledge sharing, and networking opportunities. It must utilize its position to mobilize local and international resources for the benefits of the communities it serves.

Since its inauguration, the East African Centre for Renewable Energy and Energy Efficiency (EACREEE) has attempted this. In order to concretize its achievements, EACREEE needed to draft its vision through a Business Plan (BP). Drawing from the successes made, the challenges faced, and, the joint cooperation framework of the Global Network of Sustainable Centers (GN-SEC), EACREEE needed to double its efforts and aim to substantially contribute the achievement of SDG goal 7, in particular, as well as goals 9 and 13 in the EA region.

In the pages that follow, EACREEE sets out its ambitious vision for the future – listing priorities, setting out programme of activities, and articulating the ideas and means that underlie and will drive those activities. This Plan has been written following extensive consultation with the wider EAC, with input and ideas from across the energy ministries of the EAC, development partners, own staff, and far beyond. The extensive engagement with the EAC and its PS throughout the planning process has provided a great platform for increased ownership of EACREEE. Hence, the plan envisages the transformation of EACREEE from a Center of Excellence into an EAC institution within the plan period.

I would like to thank everyone who was involved in devising this Plan, the members of the Technical Advisory Committee (TAC) and the Board of Directors (BoD), and all those who took the time to share their vision for EACREEE in the process. This Plan builds on a platform of high aspirations, successes, and stakeholder well-wishes worth noting. I am pleased to recommend this Plan to the people of the EAC and the region's current and future development partners.

I look forward to unwavering and continued support and cooperation of all EACREEE stakeholders and a successful implementation of this Business Plan.

Eng. Benson Mlambo Mwakina
Chairman, Board of Directors

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Acronyms

ADA	Austrian Development Agency
ACEC	Africa Clean Energy Corridor
AFREC	East African Energy Commission
BoD	Board of Directors
BP	EACREEE´s Business Plan 2020- 2024
CARICOM	Caribbean Community
CBO	Community Based Organisation
CCREEE	Caribbean Centre for Renewable Energy and Energy Efficiency
CEDAT	College of Engineering, Design, Art, and Technology
CEMG	Clean Energy Mini-Grids
COMESA	Common Market for Eastern and Southern Africa
CSO	Civil Society Organisation
DRE	Distributed Renewable Energy
EA	East Africa
EAC	East African Community
EACREEE	East Africa Centre for Renewable Energy and Energy Efficiency
EAPP	Eastern African Power Pool
EAREF	East African Renewable Energy Federation
EASTICO	East African Science and Technology Commission
ECOWAS	Economic Community of West African States
ECOW-GEN	ECOWAS Network on Gender Mainstreaming in Energy Access
ECREEE	ECOWAS Centre for Renewable Energy and Energy Efficiency
EE	Energy Efficiency
ENERGIA	Internacional Network on Gender and Sustainable Energy
EREA	Energy Regulators Association of East Africa
EU	European Union

GN-SEC	Global Network of Regional Sustainable Energy Centres
GMG	Green Mini-grids
ISA	International Solar Alliance
KOSAP	Kenya Off-Grid Solar Access Project for Underserved Counties
M&E	Monitoring and Evaluation
NFI	National Focal Institution
PCREEE	Pacific Centre for Renewable Energy and Energy Efficiency
PS	Partner States
P&R	Policy and Regulatory
RCREEE	Regional Centre for Renewable Energy and Energy Efficiency
RE	Renewable Energy
REEECH	Regional Renewable Energy and Energy Efficiency Centre for the Hindukush-Himalaya
RET	Renewable energy Technology
SACREEE	SADC Centre for Renewable Energy and Energy Efficiency
SADC	Southern African Development Community
SAPP	Southern African Power Pool
SECT	Sustainable Energy and Climate Technology
SICREEE	SICA Regional Centre for Renewable Energy and Energy Efficiency
SDGs	Sustainable Energy Goals of the United Nations
SIDA	Swedish International Development Cooperation Agency
SIDS	Small Island Developing States
SPC	Pacific Community
TAC	Technical Advisory Committee
UNDP	United Nations Development Programme
UNIDO	United Nations Industrial Development Organization
WAPP	Western African Power Pool

1 Executive Summary

The East African Centre of Excellence for Renewable Energy and Efficiency (EACREEE) has been established to play a key role in promoting renewable energies (RE) and energy efficiency (EE) in the East African Community (EAC) region. EACREEE was officially launched in 2016 following the request by the East African Community (EAC) Secretariat and with support of the United Nations Industrial Development Organization (UNIDO), to create a Centre of Excellence in the region in 2013 and following the refinement of EACREEE´s strategy in 2014 and 2015. At their 33rd Meeting held on 29 February 2016, the EAC Council of Ministers designated Makerere University College of Engineering, Design, Art, and Technology (CEDAT) as a Centre of Excellence for EACREEE. The Centre receives key technical support from the United Nations Industrial Development Organisation (UNIDO) and financial assistance from the Austrian Development Agency (ADA). The Centre is hosted by the Government of Uganda, at the Makerere University in Kampala. EACREEE is a member of the Global Network of Regional Sustainable Energy Centres (GN-SEC).

EA has recently witnessed great progress in the areas of RE& EE. Some of the EAC Partner States (PS) have developed and consolidated long-standing policies and regulations that have immensely contributed to the establishment of an active private sector able to scale up RE&EE solutions across the region. However, challenges remain including the much-needed energy policy integration, the lack of sustainable energy access for millions of citizens, or the harmonisation of policies and regulations across the region just to mention some.

EACREEE has been mandated by the EAC Council of Ministers responsible for energy to promote RE&EE in the EAC region. EACREEE´s goal is to facilitate the creation of an enabling environment for RE&EE markets and investments, to contribute to (a) Increased access of modern, affordable and reliable energy services, (b) Energy security and (c) Mitigation of negative effects (e.g. local pollution and Greenhouse Gas (GHG) emissions). EACREEE´s main areas of intervention include support in regional energy policy, capacity building and project development and execution, knowledge management, lobbying , advisory provision, and financing and investment facilitation.

The current document presents EACREEE´s Business Plan (BP) for the coming 5 years (2020-2024).

The following chapters have been developed:

2		**Introduction** EACREEE´s Mission, vision, objectives and core values
3		**Strategic Positioning & Technical Mandate** Assessing EACREEE in the context within which it operates (SWOT and PESTLE)
4		**Strategic Interventions and Programs** Presenting EACREEE strategic programs, concept notes and results framework
5		**Organizational and Implementation Capacity** The operational model to achieve the proposed ambition
6		**Sustainable Business Model** Ensuring resourcing and clear financial objectives for EACREEE
7		**Strengthening Cooperation** Reviewing regional partners and potential for collaboration
8		**Monitoring & Evaluation** Measuring the success of the centre

Following an in-depth regional contextual analysis and conversations with EACREEE´s National Focal Institutions (NFIs), relevant strategic understanding has been built up in chapter 3. Major takeaways include:

- "Time for action" is needed across the EA region, moving from capacity building and policy support to investment promotion and project development support, vital to accelerate the transition towards RE&EE markets.
- Two different country groups can be found in the EA region: (i) while the first group of countries advances quicker towards achieving SDG7 (ii) the second group is still in a strong need for regional coordination and support. EACREEE has been identified by PS as a key regional institution to help to solve this gap.
- EACREEE´s regional ownership, including its chances for resource mobilisation and regional recognition, would significantly increase if integration under EAC could effectively happen.
- Preparing the Centre for full autonomy and long-term sustainability during the period 2020-2024 will be critical. This includes the recognition of EACREEE as an institution under the EAC, the implementation of a sustainable funding model, the testing of the robustness of the internal rules and procedures.

In line with its mandate to promote RE&EE in the EAC region, and deriving from the contextual analysis undertaken under chapter 3, chapter 4 presents the seven (7) strategic programmatic areas identified and prioritized by the BP for the period 2020-2024:

1. Accelerating adoption of clean and sustainable cooking and heating.
2. Improving energy efficiency in the built industrial environment.
3. Promoting capacity building and investment in electrification via clean energy mini-grids and standalone solutions.
4. Ensuring inclusive and sustainable energy access in situations of displacement.
5. Fostering a lighthouse of new technologies and solutions (storage, digitalization, innovative renewable energy technologies (RET), and circular economy).
6. Promoting utility-scale and distributed grid-connect RE.
7. Enhancing women and youth entrepreneurship and employment in sustainable energy businesses within the EA region.

Detailed analysis of the required operational and programmatic resources required to achieve the ambitions of EACREEE´s mandate is presented. EACREEE will progressively hire until it reaches 20 permanent staff by 2024 managing a growing annual operative and programmatic budget intended to achieve the amount of 8.5 millon Euros by 2024.

For this, a resource mobilisation strategy has been designed and presented in order to deliver the strategic areas and programmes defined and outlined in annex 1 (Concept Notes).The Centre is expected to continue engaging with existing key partners (ADA and UNIDO) and forge new alliances and joint-partnerships to advance its positioning and regional added-value in the region.

There is a big potentiality when it comes to arranging relevant joint-partnerships and collaborations in the EA region. For this, under chapter 7, the document presents existing relevant different stakeholders and potentiality for partnership building. Some takeaways are:

- EACREEE must keep its continuous engagement with key core and supportive DFIs (ADA and UNIDO) while making an effort to reach and cooperate with new ones.
- Building added-value collaborations and long-term partnerships with complementary re gional institutions will be critical, including international ones active in the region (e.g. The International Renewable Energy Agency (IRENA)).
- (Local) private sector developers are key for the Centre´s ambitions to scale up RE&EE solutions and promote additional investments in the region.
- Collaboration with EACREEE´s NFIs and other national institutions will prove critical to lever existing domestic skills and resources to amplify EACREEE´s potential and impact.

2 Introduction

2.1 Mission, Vision, Theory of Change, Objectives and Core Values

EACREEEs Strategic Plan (2019-2023) published in March 2019 describes its mission, vision, objectives, and core values.

Mission

The Mission of EACREEE is to promote an integrated and inclusive energy market as an engine for socio-economic development and improved livelihoods.

Vision

EACREEE aims to become a leading hub for RE&EE in the EA region.

Theory of change

EACREEE is part of the (GN-SEC)[1], a global initiative led by UNIDO encompassing 8 regional centres. The other organizations are:

- In the Pacific region, the Pacific Centre for Renewable Energy and Energy Efficiency (PCREEE)[2].
- In West and Southern Africa , the ECOWAS Regional Centre for Renewable Energy and Energy Efficiency (ECREEE) and the SADC Centre for Renewable Energy and Energy Efficiency (SACREEE)[3] respectively.
- In the Arab region, the Regional Centre for Renewable Energy and Energy Efficiency (RCREEE)[4].
- In the Caribbean region, the Caribbean Centre for Renewable Energy and Energy Efficiency (CCREEE)[5].
- In Central America, the SICA Regional Centre for Renewable Energy and Energy Efficiency (SICREEE)[6].
- In the Hindu Kush Himalaya region, the Regional Renewable Energy and Energy Efficiency Centre for the Hindukush-Himalaya (REEECH)[7].

The GN-SEC Centres aim at creating integrated and inclusive regional markets for Sustainable Energy and Climate Technology (SECT) products and services by addressing simultaneously the barriers and drivers for their demand and supply through regional tools and methodologies.

1 http://gn-sec.net
2 https://www.pcreee.org/
3 https://www.sacreee.org/
4 https://www.rcreee.org/
5 https://www.ccreee.org/
6 https://www.sicreee.org/
7 http://www.icimod.org/?q=33317

They aim at positively transforming the lives of people, achieving high positive environmental, social and economic impacts while contributing at the same time to national and global policy objectives and priorities.
SECTs market development is envisaged in three phases i.e. innovation, demonstration, and replication.

Objectives

EACREEE works towards the creation of an integrated and inclusive EAC market for sustainable energy and climate technology products and services. For this to happen, EACREEE will pay equal attention to the local demand and the local supply.
EACREEE's core objectives are:

- To promote RE&EE technology in the region by offering a convening power and facilitating targeted technical support to the EAC, national governments, local governments, civil society organizations and private sector organization that contribute to the achievement of the Sustainable Energy Goals (SDGs) and the implementation of the Paris Agreement on Climate Change.
- To facilitate the transformation of RE&EE policies at the regional and national level by lobbying and joint mobilization of resources for formulation and implementation of coherent and regionally harmonised sustainable energy policies as well as de-risking of investments. This is intended through the provision of reliable data, analytics, bundling of projects, and convening power in the EAC in efforts to consolidate sustainable local renewable energy enterprises/entrepreneurs and improve access to clean energy.
- To facilitate RE&EE investment, entrepreneurship, and innovation through partnerships and innovative tools and methodologies. For this, the domestic private sector and national and regional private sector associations will prove crucial.
- To facilitate capacity building on RE&EE in the EAC through training, seminars, workshops, conferences, and forums.
- To facilitate and promote research or technology transfer and disseminate findings on topical issues as input into policy formulation, development planning, and implementation.
- To promote a joint sustainable energy development programme for the EAC.
- To cooperate with international organizations with similar goals and objectives in the formulation and implementation of sustainable energy development programmes in the EAC.
- To help enhance the competitiveness and expansion of EAC private sector firms to achieve regional structural change and sustained growth.

Core Values

EACREEE will be guided by the following core values: teamwork, integrity, accountability and transparency, diligence, professionalism, results, and responsiveness and continuous improvement.

2.2 EACREEE in the Framework of EAC

EAC plays a fundamental role in the region and specifically in the RE&EE sector, including the energy supply and access as part of its development strategy, focusing on the supply of sufficient, reliable, cost-effective and environmentally friendly energy. Additionally, the EAC aims at facilitating the broader EAC objectives of attracting investments, competitiveness, and trade.

EACREEE was officially launched in 2016 following the request by EAC Secretariat. EACREEE´s activities are fully integrated into the EAC energy agenda. The Board of Directors (BoD) of the Centre presents its decisions to the EAC Sectoral Council on Energy. The relationship is formalised in the form of delegation of responsibilities. The Centre and its NFIs are responsible for the coordination of the development and implementation of EA regional strategies and policies.

By operating in the framework of EAC, EACREEE is fully aligned with the regional intergovernmental development priorities. Additionally, EAC provides EACREEE with in-kind contributions, useful to deliver EACREEE´s mandate in the region.

2.3 EACREEE as Part of a Global Network

EACREEE follows the established theory of change of the GN-SEC as shown in Figure 1. As part of the EAC economic integration efforts, EACREEE aims to create integrated and inclusive regional markets for RE&EE products and services. In this context, EACREEE will put equal emphasis on addressing the demand-side and supply side barriers and drivers through regional tools and methodologies.

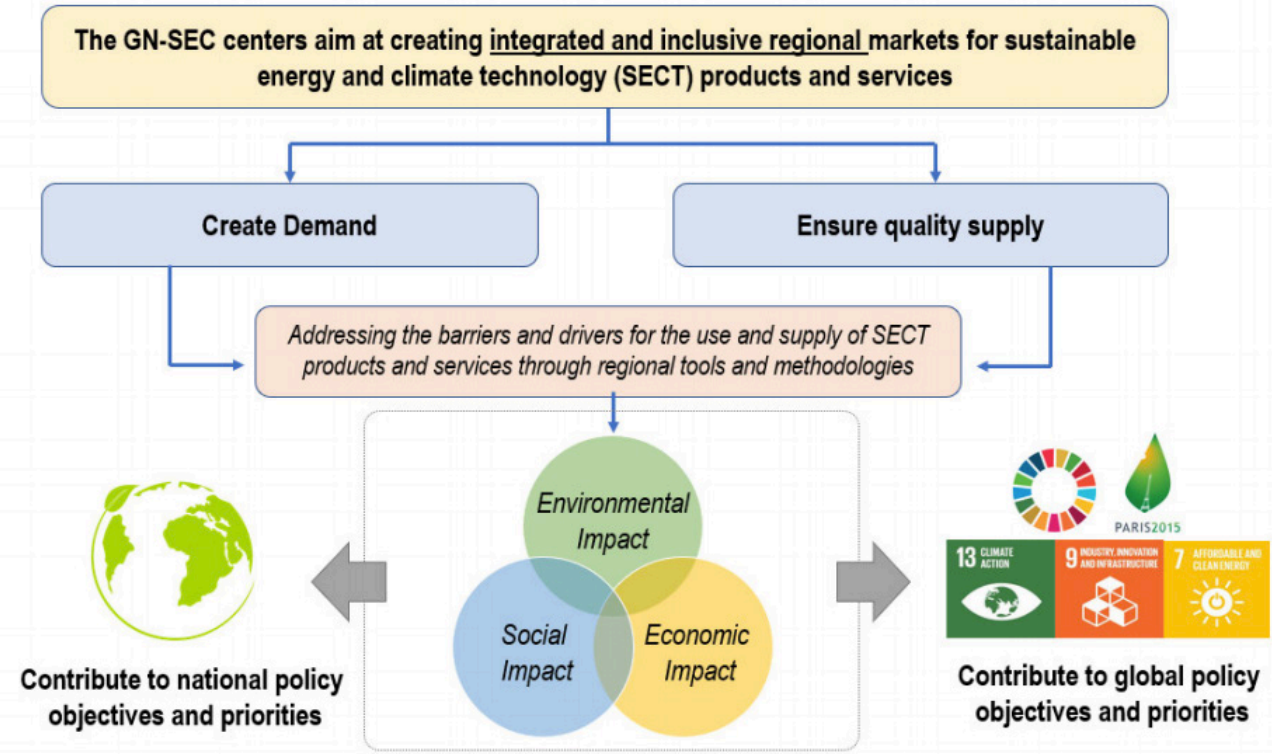

Figure 1. GN-SEC Theory of Change

The GN-SEC is an innovative south-south and triangular multi-stakeholder partnership to accelerate the energy and climate transformation in developing countries. The gradually expanding partnership comprises a sub-network of centres for the African and the Arab region (in cooperation with the EAC, the Southern Africa Development Community (SADC), the Economic Community of West African States (ECOWAS), and the Arab League) and a sub-network of organisations supporting Small Island Developing States (SIDS) (in cooperation with SIDS DOCK, the Caribbean Community (CARICOM), and the Pacific Community SPC)). The network is now becoming a global platform for knowledge exchange and provides a “maker-space” for south-south cooperation on joint issues and solutions.

Through regional activities, EACREEE will introduce new RE&EE innovations into the EAC market as shown in Figure 2. Once demonstrated and tested, EACREEE will facilitate their commercialisation, replication, and industrial scale-up.

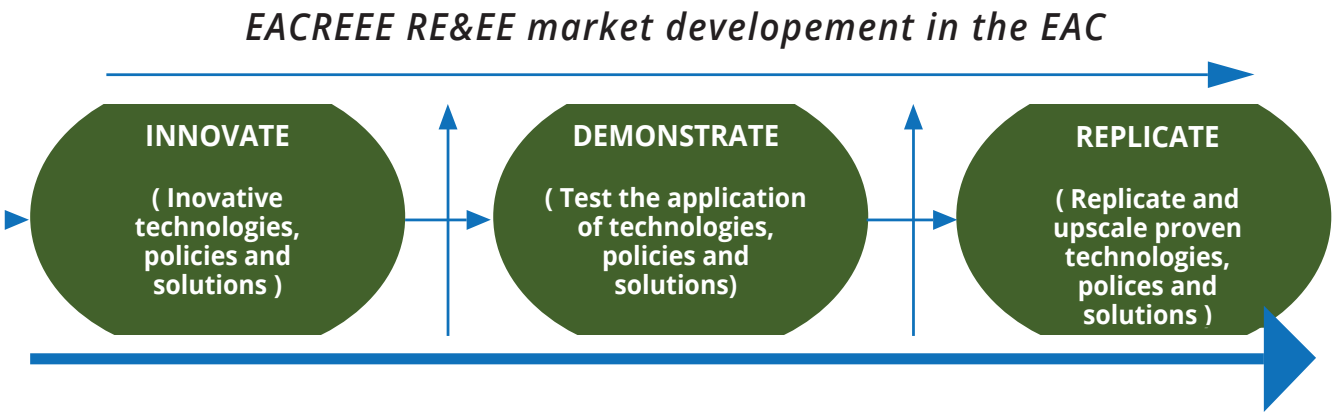

Figure 2. GN-SEC Theory of Change

EACREEE is already playing an active role in this global network, seeking to share experiences with other regional GN-SEC Centres and cooperating with them in putting forward the sustainable energy agenda in the global debates. On top of knowledge and experience sharing, the GN-SEC also represents a unique platform for joint multi-regional projects, fund-raising, and implementation.

2.4 Sustainable Business Model

Sustainability plays a critical role for in the EACREEE's coming five years and will be defined by the social, economic, and environmental dimensions, in line with EACREEE's guiding principles:

- **Regional and National Ownership**: This is the central guiding principle. Development partners will be encouraged to support only programmes/projects that address areas where there are regional or national programmes enjoying strong EAC or government commitment with evidence of significant financial support. This will ensure the sustainability of the programmes.
- Sub-set to the previous is the **need for EACREEE to encourage equal national representation** both in terms of programmatic efforts across the PS and staff recruitment.
- **In-kind Contributions by EAC and its PS**: Mobilising time of experts, as well as hosting services for conferences and events.
- **Resources Optimization**: EACREEE will seek to make the best use of available financial resources, prioritizing 'high impact/ low cost' solutions, and match making actions with most appropriate funding mechanisms.
- **Prioritization**: The strategic interventions are based on EAC development priorities and the PSs will have the liberty to prioritize the most important actions according to their development priorities.
- **Stakeholders Participation**: Relevant stakeholders will be informed, consulted and involved throughout the implementation of this BP.
- **Best Practices and Replicability**: EACREEE will develop projects based on best practices or proven experiences replicable across the EAC PS.
- **Integrating Cross-cutting Elements**: Consideration of gender, youth, social and environmental criteria in all programmes and interventions.
- **Competitiveness**: Enhancing the abilities, skills, and resource availability by local EAC private sector to grow and create a sustained domestic market environment in line with EAC´s Secretariat "Industrial Competitiveness Report" published in 2017[8].

8 https://www.eac.int/press-releases/149-industrialization-sme-development/891-eac-unveils-industrial-competitiveness-report-2017

Guiding principles 2 and 3 focus mostly on the economic sustainability side, playing a critical role in the definition of EACREEE's funding mobilisation strategy (see chapter 6.1.2.) and efficient and coherent running costs for the Centre (see chapter 6.1.1.) for the next five years. Guiding principle 7 focuses on the social and environmental sustainability, including the gender, social, and environmental cross-cutting dimensions. For the rest of guiding principles - 1, 4, 5, and 6 - a different combination of the three sustainability dimensions apply.

EACREEE's Business Plan is aligned with the following the SDGs:

- SDG 5 (Achieve gender equality and empower all women and girls).
- SDG 7 (Ensure access to affordable, reliable, sustainable, and modern energy for all).
- SDG 9 (Build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation).
- SDG 11 (Sustainable cities and communities).
- SDG12 (Responsible consumption and production).
- SDG 13 (Take urgent action to combat climate change and its impacts) as well as the Paris Agreement on climate change and
- SDG 17 (Sustainable development through global partnerships).

The existing alignment between the Strategic Plan and those SDGs further strengthen the overall Business Model Sustainability, especially in areas such as institutional engagement with and ownership building from regional and national stakeholders and PSs (guiding principle 1 and 5).

2.5 Gender Mainstreaming Strategy

Although gender is mentioned in EACREEE´s Strategic Plan, a detailed strategy has not yet been produced. Based on the findings of EACREEE´s gender and sustainable energy report published in 2018[9], the Centre will need to increase its efforts in mainstreaming gender in both the proposed strategic areas and the operational endeavours. EACREEE's commitment to tackle gender is also reflected in the introduction of a strategic program, as described in chapter 4.2.7.

Gender Mainstreaming in the Programmatic Areas

The current business plan aims at mainstreaming gender throughout all the prioritized strategic areas and build on existing regional and national gender expert institutions. The existence of the successful ECOWAS Network on Gender Mainstreaming in Energy Access (ECOW-GEN) programme in West Africa (under the ECOWAS Centre for Renewable Energy and Energy Efficiency (ECREEE)´s operation) could be a source of inspiration and its lessons learned could help to improve the current and upcoming EACREEE´s gender efforts. EACREEE will aim to build Partnerships with other expert gender organizations such as the International Network on Gender and Sustainable Energy (ENERGIA) or the National Renewable Energy Laboratory (NREL).

Disaggregated data by sex and gender will be established in each of the strategic areas, as a preliminary element to study gender-differentiated energy impacts in EACREEE´s current and future programs. As the Centre enjoys direct access to the EAC, different PSs and public institutions in the region, EACREEE will lead the adoption of industry-wide indicators and methodologies to collect gender-disaggregated statistics from government agencies, donors, and the private sector. This will place EACREEE in a privileged position to help to facilitate dialogue and raise awareness across the region. Finally, EACREEE´s programs will be always designed and implemented with

9 Situation Analysis of Gender and Sustainable Energy in the East African Community 2018

a gender and youth inclusive-embedded approaches and tools.

Gender Mainstreaming in the Operational Area

EACREEE will become gender-balanced through the implementation of effective gender equality practices, including integrating the ambition of hiring women for at least 50% for all open positions (including technical and management positions), reducing or eliminating any existing gender pay gaps, proposing shared parental leave and making sure the recruitment processes are consistent.

For the institutional structure and the BoD, integration and mainstreaming of gender will be done within the gender strategy. Regarding the internal and external communication, mainstreaming gender at EACREEE´s communication channels will be an important element, aiming to create transparency, raise awareness, and strengthen commitment within the organisation.

Gender must be mainstreamed throughout all the channels and forms of communication customarily used within EACREEE. For this, gender mainstreaming becomes a regular item on the meetings´ agendas. Customized training to communication and public relations staff will be factored in and gender-sensitive language integrated into internal newsletters/speeches at events. External communication will integrate and explicitly portray gender equality as one of EACREEE´s objectives, showcasing it as a visible part of EACREEE´s external identity (e.g. on the organisation website or in its publications).

EACREEE will develop a similar tool to the United Nations for Development Programme (UNDP) Gender Mainstreaming Scorecard, which combines the measurement of both institutional and programmatic performance on gender. The Scorecard will help EACREEE measuring the evolution of the gender mainstreaming process including 6 major indicators[10].

2.6 Environmental and Social Governance

Environmental Governance

Different emission measurement guides exist and are available. United Nations for Environmental Programme (UNEP) Guidelines for Calculating GHG Emissions for Businesses and Non-Commercial Organisations[11] will be used to measure and evaluate the outputs of EACREEE´s interventions.

In that sense, activities involving travelling and lodging for EACREEE´s staff or external staff within programmatic interventions represent the biggest bulk of emissions for the proposed interventions. However, actions involving funding mobilisation and calls for applications that enable other institutions or organisations (e.g. private sector) getting involved into project development may indirectly create emissions and those will need to be measured as well. For this, EACREEE will out a simplified emissions Monitoring and Evaluation (M&E) tool to the awarded organisations to aggregate the emissions generated and the emissions reductions.

The proposed guide (and many others) provide the worksheets to calculate and measure the GHG emissions and additional recommendations. Becoming a carbon neutral centre will help EACREEE to better portray itself externally while encouraging other regional and national institutions to follow the example.

10 http://www.oecd.org/dac/gender-development/43041409.pdf
11 https://www.unepfi.org/fileadmin/publications/cc/ghg_indicator_2000.pdf

Buying voluntary carbon credits with social co-benefits is a good option. Contracting renewable electricity for the centre will showcase the intend of the centre to achieve sustainability.

Additionally, all infrastructures promoted, supported, or under the management of EACREEE will have their environmental impact assessment and mitigation plan timely developed and in place. This will directly help the Centre contributing to achieving SDG13.

Social Governance

Social governance is recommended to be addressed through a series of open stakeholder consultations where Civil Society Organisations (CSO) or citizens are invited to provide their feedback to the work of EACREEE. Additionally, annual events could be organized in any of the EAC partner states to ensure direct relationship and engagement with different CSOs.

All infrastructures promoted, supported, or under the management of EACREEE will have their social impact assessment[12] and mitigation plan timely developed and in place.

Additionally, civil society could be invited to disseminate and share the news and information created by EACREEE.

Finally, the BoD will count at least on one CSO representative attending EACREEE´s BoD meetings as an invitee. This way, the CSO voice will also be considered. This will be also extensible to the technical advisory group.

2.7 Communication Strategy

EACREEE´s communications strategy must:

- **Sensitize the public and policymakers** in the PS on the benefits of developing RE&EE resources and achieving improvements.
- **Inform stakeholders in the region and donors** about EACREEE's activities, achievements, and objectives.
- **Project EACREEE activities** and the region's RE&EE sectors to the international community, the private sector, and potential donor organizations. EACREEE will regularly organize conferences on RE&EE aspects, will prepare policy statements for decision-making processes and publish key studies. EACREEE will make use of new forms of networks, social media, and programmes, including LinkedIn, Facebook, YouTube, or Twitter, among others. There are numerous examples of organizations like EACREEE that have begun to exploit these social media as part of their formal communications strategies, including other GN-SEC Centres (e.g. ECREEE).
- Regarding the internal communication, **EACREEE´s communication channels will be an important element**, aiming to ensure sufficient levels of transparency, raise awareness on important topics (e.g. gender or youth) and strengthen commitments and values within the organisation.

12 Social impact assessment is a methodology to review the social effects of infrastructure projects and other development interventions

2.8 EACREEE´s Operational Achievements (2018 – 2019)

Over the past 2 years, EACREEE´s operational work has rapidly evolved, including numerous achievements listed in the recently published document "First operational phase of EACREEE", some of which are:

- **Establishment of the institutional governance structures** (e.g. Secretariat and a fully functional office) and development of its long- and short-term planning, implementation, and monitoring framework.
- **EACREEE's role, influence, recognition and visibility** by stakeholders is growing both in the region and beyond.
- The Centre has **fostered local RE&EE capacities of business and industry sector**, including capacity building and certification for trainers (e.g. Micro-grid academy) and the improvement of RE&EE skills across a range of market enablers and players.
- In the fields of market data, awareness and advocacy, **EACREEE has established an online RE&EE information management system** and promoted awareness-raising on various RE&EE aspects (e.g. Sustainable Energy Forum and Exhibition for East Africa).
- In the investment area, the Centre has moved forward with the **development of the Energy Access Explorer database** for investment project promotion in Kenya, Uganda, and Tanzania. Additionally, EACREEE has embarked in the implementation of the 5 years 6 million Euro project titled "Energy Efficient Lighting and Appliance for East and Southern Africa (EELA)", funded by SIDA in collaboration with SACREEE and support from UNIDO.

3 Strategic Positioning and Technical Mandate

3.1 External Environment – PESTLE Analysis

PESTLE Analysis is key to understand the risks and challenges associated with RE&EE sector and opportunities available in the EA Region for EACREEE. The analysis covers several areas: Political, Legal, Social, Economic, Technological, and Environmental. Overall challenges have already been discussed in detail in the RE&EE Regional Status Report (2016) published by REN 21 and in the EACREEE's Strategic Plan (2017), hence this document aims to provide just a general revision. A comprehensive amount of country-specific information for all six EAC PS has been gathered and analysed. The summary of the most relevant energy-related challenges in East Africa is shown in the list below:

- **Limited and uncertain sources of domestic financing** for RE&EE. The same is true for international concessional and commercial finance, specifically for less financially attractive interventions.
- **Prioritization of** national **electrification grid** over inter-regional development.
- Although progress has been done in the region in terms of incentivizing the introduction of RE, **inefficient distribution and transmission lines** and partly high technical and commercial **losses** exist (e.g. theft).
- **Electricity tampering** in urban and peri-urban areas.
- Challenges on **the institutional capacity** to implement and/or enforce regulations.
- There is a need for a **higher level of harmonisation of standards** for RE&EE products, personal and services and to promote local energy entrepreneurship and innovation.
- Although there is generally a governmental recognition of the private sector role, **more financial and technical support is still needed as well as a more comprehensive policy and regulatory framework** to improve current enabling environments.
- **Mixed regional efforts in the liberalisation** of energy generation, transmission and distribution portfolios.
- **Low levels of fees collection** by the national utilities affecting their credibility.
- High rates of **energy poverty, low electricity access** and increasing pressure on already **limited bioenergy resources**. This is particularly true in peri-urban and rural areas and specifically for women, who are suffering from the impacts of energy poverty.
- A growing number of **refugees and displaced people** in the region.
- In a global scenario of **climate change**, overreliance on biomass especially for cooking with a negative impact on both the environment and peoples' health.
- New **innovations are starting to arrive and being rolled out** across some of the EAC countries, like electric cooking, sustainable transportation (e.g. electromobility) or digitalisation (e.g. digital banking or PAYGO). Lack of standards, in particular on safety, raises some potential problems for the end consumers.
- Despite manufacturing trade growth rates sustained by the EAC in recent years stand above the global average, they still are far from the targets set in the EAC Industrialisation Policy. For the RE&EE sector, although the net investment grows annually, still a relatively low number of EAC domestic private sector access the flowing of capital. The current discussion on regional policies that **improve domestic private sector competitiveness is a major trend in the region.**
- **Unreliable or costly electricity supply** impacts the competitiveness and productivity of urban and rural key industrial sectors and businesses across the region.

3.1.1. Political and Legal Framework

The Regulatory Indicators for Sustainable Energy (RISE) developed by the World Bank provide an annual country-wise overview of progress towards establishing the necessary policy and regulatory frameworks to achieve SDG7. Figure 3 shows the RISE Scores for the EAC Partner States.

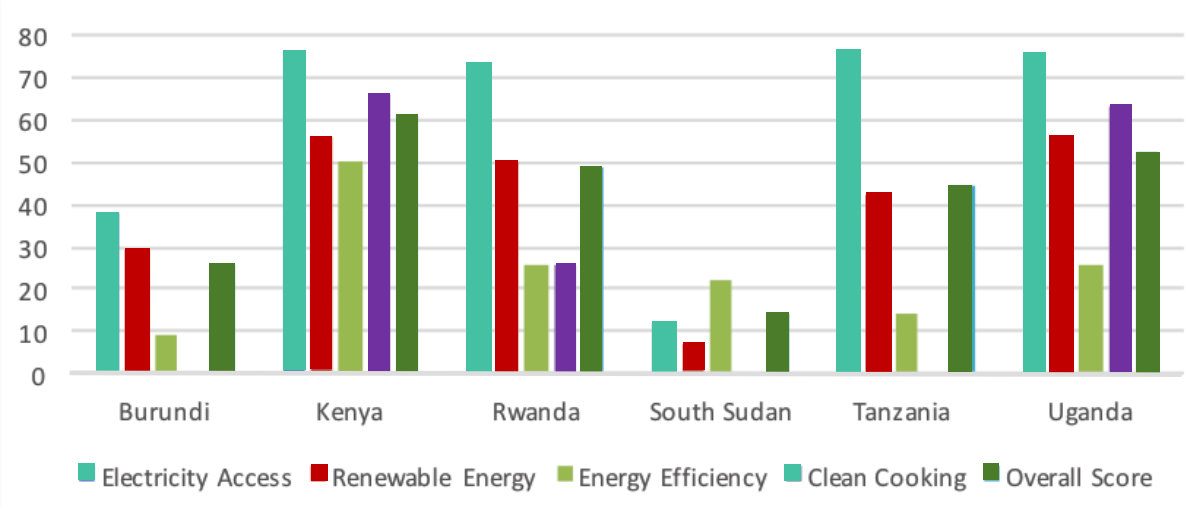

Figure 3. Regulatory Indicators for Sustainable Energy for EAC PS (Score from 1 (lowest) to 100 (highest))
Source: ESMAP 2018 (Regulatory Indicators for Sustainable Energy)

According to REN21 last report on the region[13], most EAC PS have developed their own set of specific policies and instruments for RE (and to a lesser extent EE except for the case of Kenya), intending to attract private investment. Harmonisation of regional policies and regulations is yet a pending issue in the region and a potential window of opportunity for EACREEE. Major differences in the region have been found around the development of national RE policies and regulations, with advanced RE Policy and Regulatory frameworks in some EAC PS (e.g. Kenya or Tanzania) and very nascent ones in others (South Sudan or Burundi).

The **focus of RE policy frameworks across the EA region has been on developing the electricity sector**, with less attention being paid to the transport, heating, and ventilation or cooking sectors. Perhaps the most relevant example of energy regional policies (and one of the few in the EAC) to date in the regional East African Community Import Duty Exemption, approved by Rwanda, Burundi, Kenya, Tanzania & Uganda and offering a series of tax exemptions. Although interpretation may vary across EAC PS, this exemption has a common agreement on import duty waivers applying to equipment for the generation of solar and wind energy. As in other regions of the world, **policy developments in the biomass sector remain challenging** in the absence of an integrated regional approach for improving the sustainability of biomass energy resources. At the national level, there are several success stories. Kenya introduced the first feed-in tariff policy in 2008 for wind, solar, biomass and small-scale hydropower and the first Solar Water Heating regulation in 2012.

Furthermore, Uganda and Rwanda undertook major restructuring utility and policy reforms

13 RE & EE Regional Status Report

resulting into higher levels of investor confidence. Moreover, **vibrant off-grid markets led by the private sector** have been generated in some of the EAC member states as a result of the right policy and regulatory enabling environment and nowadays represent some of the biggest Solar Home System (SHS) markets worldwide and major mini-grid markets for the private sector (Kenya, Tanzania, and Uganda recently).

3.1.2. Economic and Social Environment

Low national rates of electrification are hampering social and economic development in the EA region. However, different trends are found, with several countries advancing quicker than others towards SDG7 (e.g. Kenya and Rwanda). Current national policies and investments prioritise grid extension. However, with a vast amount of dispersed rural population and an inefficient and costly transmission system, integrated energy access planning shows that **best cost-effective technology solutions require the deployment of decentralized renewable energy solutions** (e.g. mini-grids, SHS) to complement grid extension and achieve universal energy access by 2030 (see KTH-dESA OpeN Source Spatial Electrification Tool – ONSSET – their publications and other tools).

An example of this is the Kenya Off-Grid Solar Access Project for Underserved Counties (KOSAP) 2018-2023, implemented by the Ministry of Energy (MoE), Kenya Power and Lighting Company (KPLC) and the Rural Electrification Authority (REA), with support from Lighting Africa and the World Bank (WB). KOSAP aims to increase access to modern energy services – electricity and modern cooking solutions– for households (1,272,525 people), businesses, community, and public facilities (1,097 community facilities) adding 9,6 MW additional RE generation capacity in fourteen underserved counties in Kenya[14].

Implementation of KOSAP follows a Results-based Financing (RBF) facility and a debt facility to support Solar Service Providers (SSPs) in meeting up-front costs and medium-term consumer financing to enable households to pay off the systems over time.

Besides, governmental, international financing, and private sector **efforts in the cooking sector are proving insufficient**, leaving most of the population in the region relying on traditional biomass, resulting in a growing impact on health (especially for women and girls), fuel scarcity, deforestation, and land degradation.

Climate change is also a regional challenge, provoking lower rainfall, alteration of river flows due to deforestation, and growing weather extreme events (e.g. floods, cyclones, and droughts) while affecting the regional and national energy security (e.g. the predominant energy source in the region is hydropower). Besides, (climate-related) the numbers of **refugees and displaced people is growing in the whole South-Sahel Africa**, with a need to increase access to energy services for new - and sometimes moving - population.

From a private sector perspective, a mixed situation exists in the EA region. While Kenya, Rwanda, Tanzania, or Uganda have built up reasonable policy and regulation frameworks to attract private sector development and investment in the energy sector, some PS like Burundi still have strong public monopolies over the energy sector. Furthermore, a vibrant emerging off-grid sector is growing in the region but lack enough domestic financing and political and regulatory uncertainties may jeopardize it.

14 https://www.lightingafrica.org/wp-content/uploads/2018/12/KOSAP-1-pager.pdf

In terms of the business environment and financial capital flows, the region continues to move forward. Africa capitalized 5% of total RE global investment in RE in 2018, with several countries in the region experiencing significant RE investment growth (e.g. with Kenya currently having a $1 billion market due to wind and geothermal projects).

Since 2010, a significant investment has been directed towards off-grid electricity companies operating in Africa, with East Africa accounting for 58% of the investment mobilised, ahead of West Africa and Southern Africa with 17% for 4% respectively. However, most of the investment capital has targeted international companies established in the region with a lower role played by domestic ones.

According to the latest REN21 Global Status Report 2019[15], Distributed Renewable Energy (DRE) systems continued to play an important role in connecting households in remote areas to electricity services. An estimated 5% of the population in Africa has access to electricity through off-grid solar Photovoltaic (PV) systems. The mini-grid sector expanded in 2018, with some 800 solar mini-grids in operation in Africa. Mini-grid start-ups attracted around $51 million in investment, down 18% from 2017. Additionally, sales of affiliated off-grid solar products grew in the EA region (16% increase compared to 2017), with a strong growth in Kenya (30%) while decreasing in Uganda (21%). East African countries accounted for more than 60% of all PAYG sales, with Kenya, Uganda, and Rwanda among the main markets for affiliated off-grid solar products that year.

Also, in 2018, Africa's first project financing facility, CrossBoundary Energy, was launched with an initial capital of $ 16 million, to provide electricity to some 170,000 people through mini-grids in Tanzania and other 2 African countries.

The EA region presents different levels of technology and innovation uptake and development, with countries' enabling environments such as in Kenya and Rwanda which aim to efficiently develop and stimulate innovation in the RE&EE sectors.
This has been driven by the establishment of ambitious and clear RE&EE national strategic plans and a set of policy reforms aiming to attract foreign and domestic private investment, including utilities reform, the inclusion of transparent tenders, unsolicited proposals, favourable tax regimes or strong donor support, among others. Showcasing best practices, technology, and capacity transfer and policy harmonisation across the EA region is highly requested and a potential role for EACREEE to play. For this, EACREEE will have to work with national standards agencies and ministries of energy, among other institutions, prompting for the adoption of validated regional standards and harmonising approaches that will prove to work for the EA region.

This is especially true for the off-grid sector, with countries like Kenya, Rwanda, Uganda, or Tanzania enjoying thriving off-grid private sector communities and high innovation (e.g. digital payment, Green Mini-Grids (GMG), digital monitoring of systems, PAYGO gas models).

15 https://www.ren21.net/wp-content/uploads/2019/05/gsr_2019_full_report_en.pdf

Some new RE & EE technological and innovation trends are starting to arrive in the region, including:

- Rolling out of first **sustainable transportation** experiences and models of electromobility.
- **Heat pump** sales growing in the residential sector.
- Following Kenya's solar thermal experience, removal of existing barriers, and incentivisation of **low-carbon heating technologies**.
- Continued growth for alternative cooking fuels and devices including clean and **efficient cookstoves, biogas, modern solid biomass, Liquefied Petroleum Gas (LPG), and electricity cooking.**
- **RE technologies are significantly cheaper than a few years ago.** Battery storage innovation to further facilitate the integration of variable renewables and reduce the price of clean mini-grids.
- **Digitalisation** is a key enabler to amplify the energy transformation by managing large amounts of data, allowing banking access to rural isolated populations, optimizing systems with many small generation units, and also enhancing revenue collection and monitoring in PAYGO systems.
- **Distribution of Energy and Supply Companies (DESCOs)** are starting **to penetrate the commercial and industrial market** with a focus on solar PV technologies (rooftop or ground-mounted) through "pay or take", PPAs or leasing models. In particular, there are numerous examples of these projects in Kenya and Rwanda.

3.2 Internal Environment

3.2.1. SWOT Analysis

The review of EACREEE's first phase of operation allowed conducting a SWOT analysis, summarized in the Table 1.

Table 1. SWOT Analysis (Strengths, Weaknesses, Opportunities, and Threats)

Strengths	Weaknesses
• EAC recognizes EACREEE as a Centre of Excellency for RE&EE with a mandate of propelling the RE&EE initiatives within the region on behalf of EA • Achieving international recognition as a central institution for the promotion of RE&EE in the EAC region • Core staff with very diverse knowledge and experience available • Well-connected at international level • EACREEE active in many different thematic areas • EACREEE is part of GN-SEC • Ample and diverse portfolio of interventions defined in the Strategic Plan and in the Work Plan	• A very small team of only 3-6 full-time equivalent staff • Insufficient financial and technical support from donor partners, i.e. low / no financial commitment of EAC countries so far • Lengthy discussions on the legal status hindered the mobilisation of funding and implementation of technical activities • Legal status: registration of EACREEE as a limited liability company and physically placed at the Makerere University of Uganda and not as a regional institution under EAC is not conducive to allow for member states' financial support beyond symbolic national in-kind contributions • Limited funding secured • Too high expectations placed on a very big portfolio as defined in the Strategic Plan and Work Plan • Recruitment difficulties • Not yet formally integrated into EAC group of institutions

Opportunities

- While EACREEE has been capable of implementing the BP with its current strengths, achieving the integration of the Centre as a regional institution under the EAC umbrella will greatly facilitate mobilising financial contributions from and enable a more dynamic and institutional relationship with EAC and partner states
- RET has become significantly cheaper, more robust and efficient in the last years
- RET Least Cost of Electricity (LCoE) are competing and in some cases cheaper than fossil fuels
- Potential to build on EAC´s mandate
- Some of EAC Countries (Kenya and Tanzania) have already vibrant RE market
- Regional approach "not leaving any country behind"
- Flagship programmes to be implemented during the next five years defined in this BP
- Few institutions able to train technicians and engineers in RE and even those trained and licensed are mainly based in Nairobi, Kenya
- Big appetite by the local private sector for RE&EE, needing capacity building and technical assistance at various levels
- The regional approach is being more appreciated and supported in the energy sector, thanks also to the success of some members of the GN-SEC
- Core partners are committed to supporting EACREEE in the implementation of this Business Plan
- Thematic areas covered by EACREEE well responding to member countries', regional, and global priority focus areas
- EAC finds EACREEE quite a relevant and a key Institution, the only one covering RE&EE, relevant to the regional energy mandate
- Therefore, EAC´s appetite to have EACREEE formally recognised as one of her regional institutions
- NFIs found to have bigger ownership and eager to support the centre

Threats

- Funding depending on donors for several years leads to insecure planning
- If EACREEE cannot get the legal status of a regional Centre or be better anchored under EAC, member states will not be willing to support the centre financially and national ownership can be jeopardized
- PS may prefer dealing with RE&EE policies, regulation or capacity building on a national level
- Due to the current registration status of the Centre, EACREEE may not get enough national financial support
- Difficult political environment
- Member states see many important action fields for EACREEE. This can lead to a situation where EACREEE tries to do all but has in the end only limited impact due to a lack of focus
- Quick built-up of the team over the next few years may lead to internal coordination problems
- Other initiatives/ institutions exist for some strategic areas explored by EACREEE (for example KAM and SUNREF in Kenya)
- Even if the Centre gets registered under EAC umbrella, (some) PS may not stand to their contribution commitments

3.3 Risk Assessment

Building on the previous PESTLE and SWOT analysis, table 2 has been designed with the major topics and risks identified. Following Table 2, a thorough analysis of mitigation elements to identified weaknesses and threads has been included. It is important to highlight however that the success in the implementation of this BP is significantly reliant on the proper mitigation and resolution of the risks mentioned below.

Table 2. Risk Assessment Table

Topic	Risk
EACREEE´s funding to cover its operational and programmatic expenses	Lack of funding to support the operational and programmatic work of the Centre
Ownership building	Low financial and in-kind support to support the Centre from the PS
	Weak institutional (and technical) support to run the technical programmes and actions from national and local levels
	Reluctance to absorb EACREEE as an EAC Institution
Regional recognition of EACREEE	The Centre is seen as a convener without technical capacity, added value or specific expertise to play a critical role in advancing RE&EE markets
	Become a regional Centre with not means or leverage to mobilise financing for the (local) private sector to grow
	Unable to attract senior thought and action leadership profiles with the ability to fund-raise and
ECREEE´s registration under EAC	build solid programmatic lines Loss of ownership and support by PS
	Potential competition with other not-for-profit or for-profit entities
	Unavailable funding contribution by the EAC

3.3.1. Mitigation Analysis for Weaknesses/Threats Identified in the SWOT Analysis

NFIs surveys and interviews have shown EACREEE has demonstrated strong relevance and coordination within the areas of RE&EE for the region, receiving a significant level of acknowledgement by EAC and PS in its crucial role and mandate. But for this to evolve adequately, it will require EACREEE ensuring its mid and long-term sustainability and solid financial standing, a concerning threat to EAC, and to some PS.

For this to happen, several weaknesses and threats have been identified within the SWOT analysis. The Centre will have to respond to them adequately. Following there is an assessment to mitigate the most acute ones:

- **Registering the Centre as an EAC regional institution**: While EACREEE is capable to implement the BP with the current strengths (and in its current legal status), registering EACREEE within the EAC administrative structures is highly strategic, thus becoming formally an EAC regional institution. This will help to increase EACREEE´s actions ownership among PS, receive additional domestic resources and support, and enhance the recognition of the Centre in front of international donors and other stakeholders [16]
- **Demonstrating significant expertise and added value**: While EACREEE keeps exploring a range of potential areas where to successfully engage, there is need for the Centre to rather focus on a limited number of specific areas where to build technical expertise, hence gaining regional recognition and becoming a highly specialized institution for a set of topics. The current BP aims at helping to nail down the most promising areas while keeping an eye to the on-going trends, changes, and other stakeholders´ roles in the region.
- **Clear time for action mindset**: EACREEE will become financially more ambitious, engaging more successfully with international and regional donors interested in finding the right partners and added value to their initiatives and delivering to the scale requested in the region. For this, defining the Centre´s added values and areas of interest and increasing the business development efforts will prove fundamental to improve on securing funding and, what is even more important, impact.
- **Building and maintaining a successful team**: EACREEE´s business development efforts will be coupled with an aggressive recruitment policy, able to attract senior thought and action leadership profiles with the ability to fund-raise and build solid programmatic lines and partnerships.
- **PS ownership building**: NFIs interviewed affirmed seeing added value for the Centre in playing a regional role. However, this role must help PS to engage in national discussions and processes. This way EACREEE´s efforts will help to engage with PS, building their ownership of the Centre and eventually start co-funding EACREEE´s specific programmes.
- **Create an EACREEE fund**: the fund would be meant to finance EACREEE activities

3.3.2. Roadmap to Register EACREEE as an EAC Regional Institution

Although EACREEE is not yet an EAC Institution, its activities fit and feed into the EAC energy agenda. EACREEE reports to both the EAC organs and the Subscribers (Makerere University Council). EAC provides direction on the priority programmes to be implemented by EACREEE while the Subscribers provide a financial guarantee, oversight role, and ensure proper accountability of funds received.

It is the objective to transform EACREEE into a full EAC institution during the second operational phase, which will also involve membership fees of the EAC PS. It is to be noted that EACREEE can implement the BP with its current legal status for the coming years. However, EACREEE Business Plan foresees a full EAC integration by 2023. For the years to come, the Centre will need to implement a roadmap to register as an EAC regional institution.
The following Figure 4. **Roadmap to register EACREEE as an EAC regional institution.** shows the recommended (and simplified) steps to successfully register EACREEE as an EAC regional institution.

The EAC will provide the EACREEE with the requisite support to ensure its successful continuous existence and operation. This will include empowering EACREEE through its recognition as a central institution in the RE&EE market and active participation in the BoD of the Centre. As custodian of the EACREEE, the EAC will facilitate the deliberations of relevant matters about the Centre, its meetings, and conferences. Also, the EAC will finance some of the activities of the EACREEE as presented in the budget.

16 A roadmap guiding EACREEE´s integration within the EAC administrative structures has been provided in chapter 3.2.3.

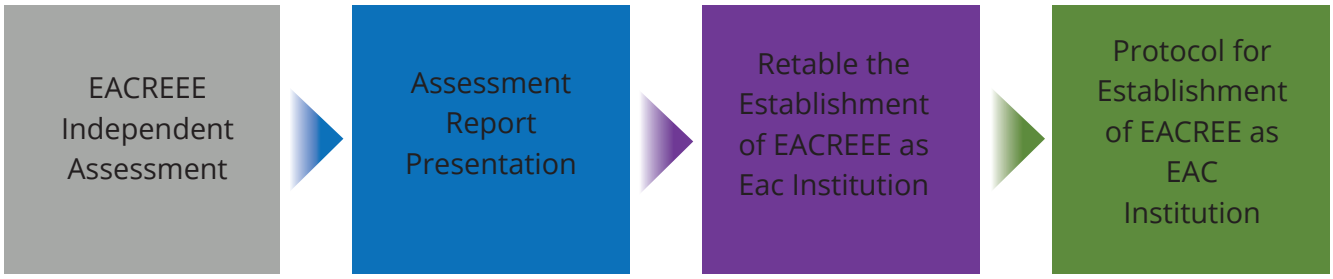

Figure 4. Roadmap to Register EACREEE as an EAC Regional Institution

1. Conduct an independent assessment of EACREEE and prepare a report.
2. Present the report at retreat of permanent secretaries from the energy ministries and ministries responsible for EAC affairs to discuss transition of EACREEE into an EAC institution.
3. Retable the establishment of EACREEE as an EAC Institution at meetings of the EAC Sectoral Council on Energy, followed by meeting of the EAC Council of Ministers.
4. Prepare Protocol for Establishment of EACREEE as an EAC institution.

In the meantime, and cognizant of the absence of proper instrument through which EAC delegated EACREEE, the process to register EACREEE can take longer than initially foreseen. For this, different avenues are proposed to advance on a delegation arrangement as ways to temporarily advance while a more formal integration is achieved: (i) an Memorandum of Understanding (MoU) or an agreement between EAC and EACREEE or (ii) a regional cooperative delegation agreement among EAC PS.

3.3.3. Baseline of Fund Mobilization of EACREEE

The baseline budget for 2019 is assumed to be in the range of about $200,000 for three main staff members, including travel and other expenses (e.g. office space and equipment, administrative costs).

The fund mobilization for the period 2019-2024 will focus on the following funding sources:

- Member states contributions (staff secondments, cash, and in-kind).
- Bilateral and multilateral donors (UNIDO, ADA, and others).
- Private companies, corporate foundations, and/or foundations.
- Own activities (trainings, events, TA services).

The planned funding of the budget until 2024 is shown in chapter 6.

3.4 Comparative Advantages of EACREEE

The most important comparative advantage of EACREEE is its recognition by the EAC as a centre of excellency for RE&EE with a mandate of propelling the RE&EE initiatives within the region on behalf of EAC.
EACREEE is well regarded by NFIs as a regional platform to play a potentialy pivotal role for the region in several areas, including:

- EACREEE is well placed to fill a much-needed regional convening role building on and contributing to existing EAC national experiences, strategies, and initiatives but with the ambition to steer it from a regional perspective.
- Under the EAC umbrella, EACREEE can help harmonising policies and regulations in the region, showcasing what works and what does not, and more importantly, supporting countries falling behind to adopt best practices and success stories in the region while stimulating others to experiment and innovate.
- EACREEE is expected to step into specific thematic niche areas or areas of opportunities and build up over the coming years differentiated value for EAC PS, regional institutions, and international donors and investors. This would include:
    - The EE area generally, and specifically EE for households' appliances and solar lighting.
    - RE&EE capacity building across the board, with specific themes covering differentiated priorities by public and private entities, emphasizing the role EACREEE could play not just as a trainer but a facilitator for this endeavour.
    - A major role in boosting the clean Cooking Fuels and Technologies area. This area has historically been overlooked by donors and PS but holds a critical importance if SDG7 is to be achieved. NFIs have agreed to highlight this as a priority area where EACREEE would have regional advantage, access to best practices, and could provide country-specific support.
    - Additionally, and following the great success of ECREEE in West Africa, EACREEE is well placed to support the local private sector with clear financial instruments and technical support to further develop sustainable off-grid solutions across the region.

On the other hand, EACREEE will invest strategically in potential areas of interest over the years to come (e.g. electric cooking, finance mobilisation for RE entrepreneurs, displaced and refugee people, or sustainable transportation), positioning itself, piloting new solutions or approaches and accelerating progress. Meantime, playing a minor strategic role (e.g. facilitating or convening) in less valued areas of interest by the EAC PS but where the international community is heavily stepping in could be advisable as a way to secure additional funding and place the Centre as a regional and international reference (e.g. the work with displaced people or climate change).
It is recommended to EACREEE to not compete with national interests and national governmental institutions but acts as an amplifier and coordinator of relevant efforts if regional interest exists (e.g. political RE supported policies). In such cases, EACREEE is recommended to play a complementary role, disseminating learnings and success stories across the region when possible.

3.5 Logic of Intervention, Mandate, and Value Proposition

To become the regional hub that boosts RE&EE, the Centre will need to strategically build up a body of work that gradually incorporates value for the PS and other regional institutions (e.g. EAC) while contributing to relevant international discussions and bringing them to the attention of the PS.

The value proposition for EACREEE is to become a reference for member states and international actors alike in the EA region, facilitating processes and becoming an expert figure in a variety of technical processes. Growing the added value over the years will help EACREEE to play a transformative role in (political and high level) discussions and serve as a catalyser in the implementation of RE&EE related measures.

Some initial niche areas of work have already been identified and EACREEE is already exploring them (e.g. EE for lighting appliances). While they represent quick and safe avenues to build momentum and credibility for the Centre, other themes and areas will require an initial level of investment which will be paid back over the years to come. Those investments in risky but niche areas today will represent the future growth for the EACREEE. Those areas have briefly been described in the previous chapter; they are aligned with those identified in the Strategic Plan and will be further developed in the next chapters.

Finally, for EACREEE to fulfil its mandate, it will be crucial to ensure that PS take full ownership of the Centre. For this, active engagement of and within regional entities (e.g. EAC or the African Development Bank (AfDB) will prove key. This will help EACREEE to build relationships with NFIs, secure important in-kind and cash domestic contributions, and link up with other ongoing RE&EE efforts and national programs in the region.

3.6 Key Functions and Services

EACREEE´s key functions and services will aim at promoting specific RE&EE areas across relevant stakeholders, helping to build a credible space for them to engage. A demand-driven knowledge, technical support, and capacity building offer to PS and international institutions will reinforce EACREEE convening´s role and foster its relevance across the region.

The main identified function and services are:

- **Convener** of relevant actors (including public, academic, private, and Non-for-Profit Organisations (NGOs) among others), stimulating and coordinating inclusive and participative dialogues (e.g. services - assessing demand-driven national demands or gathering data from national industry bodies).
- **Technical assistance provider**, mobilizing resources when possible together with expertise within the Centre, PS, and within and beyond the region. The TA provision will help EACREEE to stay ahead of the game and build technical credibility in specific key areas (e.g. running mentoring programs or creation of strategic technical pieces).
- **Partnership builder**, fostering new ways to test innovative joint approaches with expert complementary organisations (e.g. piloting de-risking financing schemes or testing M&E tools).
- **Investment facilitator** by making available to the sector and helping mobilizing funding and finance opportunities in the RE&EE sectors.
- **Knowledge broker** including cross-country knowledge sharing as well as technology transfer (e.g. on-line knowledge platforms or portals, knowledge exchange programs, technical training provision or publications and research for specific topics).
- **Policy influencer**, supporting PS with the best policy practices and successes available where these policies are not in place.

4 Strategic Interventions and Programs

4.1 Prioritization of Strategic Interventions

EACREEE´s Strategic Plan (2019-2023) outlined several strategic interventions and programs resulting from a previous consultation with EAC PS and other regional institutions. To prioritize the most relevant ones and map out where EACREEE could generate concrete impact and have the highest potential in the mid and long-term, a prioritization exercise was carried out. For this and to complement the information gathered during the inception phase from EACREEE and the Core Partners, all EAC NFIs as well as other relevant stakeholders and developers (e.g. the Solar Industry Association based in Rwanda) were consulted through a series of semi-structure dconversations.

The result of this consultation presented 2 groups of countries in the region: while some PS are progressing well in both RE&EE but specifically in the RE area (e.g. Kenya in both EE and RE and Tanzania and Rwanda in the RE areas) another group of countries is moving at a slower pace, where RE&EE policies, regulations, capacities, and knowledge areas are still falling short and could significantly benefit from the regional approach and experience sharing with the first group (e.g. Burundi, South-Sudan and to a lesser extend Uganda).

Additionally, the analysis also showed three (3) demand-driven (bottom-up) strategic interventions and programs prioritized by a majority of NFIs. They include:

- Accelerating adoption of clean and sustainable cooking and heating.
- Improving energy efficiency in the built industrial environment.
- Promoting capacity building and investment in electrification via clean energy mini-grids and standalone solution.

Identified on-going regional dynamics have been analysed, including relevant topics arising across the region which do not count yet with institutions of reference to champion them. Based on that, three (3) additional Strategic Interventions and Programs have been prioritized:

- Ensuring inclusive and sustainable energy access in situations of displacement.
- Fostering a lighthouse of new technologies and solutions (storage, digitalization, innovative RET, and circular economy).
- Promoting the utility scale and distributed grid-connect RE.
- Enhancing women and youth entrepreneurship and employment in sustainable energy businesses within the East African Region.

Based on this logic, Table 3 shows the seven (7) strategic interventions and programs prioritized as a result of the analysis and their relationship with the cross-cutting activities (policy support; knowledge management; capacity building; and project development and financing).

While most of the strategic intervention encompasses all the five (5) cross-cutting activities, the focus will be given to project development and financing to support the deployment on the ground of sustainable energy solutions.

This is based on the observation of the situation in the PS, where important initiatives are already happening on the ground and most of the stakeholders feel it is "time for action" and to "move from power-points to power-plants". Additionally, the attention of most partners and donors is on achieving concrete results after several years of efforts on the enabling environment and they are mobilizing important financial resources in that sense. However, focusing on project development and financing does not mean EACREEE has to mobilize all the required funds to finance the infrastructure, as it can provide TA for project preparation, transaction advisory services and connect the project with the financing facilities already existing as well as facilitate the channels for disbursement of the significant financial resources of major stakeholders.

Table 3 shows the level of relevance given to the cross-cutting activities by each of the seven (7) selected strategic interventions. Four (4) levels of relevance (no ● - no relevance, ● – slight relevance, ●● - medium relevance or ●●● - high relevance) have been given for each of the cross-cutting activities.

Table 3. Prioritized Strategic Interventions and Cross-cutting Activities

Prioritized strategic interventions	Cross-cutting activities				
	Policy Support	Knowledge Management	Capacity Building	Project development and financing	Innovation and entrepreneurship
1. Accelerating adoption of clean and sustainable cooking and heating	●●	●●	●	●●	●
2. Improving energy efficiency in the built industrial environment	●●	●●	●●	●●●	●
3. Promoting capacity building and investment in electrification via clean energy mini-grids and standalone solutions	●	●	●●	●●●	●●
4. Ensuring inclusive and sustainable energy access in situations of displacement	●●●	●		●●	●
6. Fostering a lighthouse of new technologies and solutions (storage, digitalization, innovative RET and circular economy)		●●●	●●		●●

7. Promoting utility scale and distributed grid-connect RE	●●	●	●●●	●●	●
8. Enhancing women and youth entrepreneurship and employment in sustainable energy businesses within the East African Region	●●●	●	●●	●●●	●●●

It must be observed that strategic areas 1, 2, 3, and 6 are directly related to the targets of SGD7. Additionally, other SDGs directly benefit from the selected strategic areas, including those mentioned in chapter 2. For instance, SDG 13 is implied in most of the strategic areas but specifically, under 1, 2, 3, 6, and 7 and SDG 9 falls under actions and interventions specifically tagged under the cross-cutting activities of *"Innovation and entrepreneurship"*.

Table 4 shows those prospective thematic areas where EACREEE may find a potential niche of opportunity over the coming years. Although not a top priority for the Centre now, they may well be in the coming future. For this, staying on top of the latest developments and playing an active role to help to steer and develop those areas might help EACREEE in finding additional niches of opportunity.

Table 4. Prospective Thematic Areas

Prospective thematic areas
Promoting Sustainable Energy Programmes in Cities and Other Built Environments
Energy efficiency and conservation in the transport sector (mass transportation, e-mobility, non-motorized, standards, fleet management)
Sustainable Energy-Water-Food Nexus Planning and climate change adaptation
Solar Water Heating promotion

4.2 Prioritized Strategic Interventions

The concept notes for the following strategic interventions can be found in annex 1:

1. Accelerating adoption of clean and sustainable cooking and heating.
2. Improving energy efficiency in the built industrial environment.
3. Promoting capacity building and investment in electrification via clean energy mini-grids and standalone solutions.
4. Ensuring inclusive and sustainable energy access in situations of displacement.
5. Fostering a lighthouse of new technologies and solutions (storage, digitalization, innovative

RET, and circular economy).
6. Promoting utility scale and distributed grid-connect RE.
7. Enhancing women and youth entrepreneurship and employment in sustainable energy businesses within the East African Region.

4.2.1 Accelerating Adoption of Clean and Sustainable Cooking & Heating

Clean cooking has been identified by the NFIs as a very important topic, because it touches RE, EE (e.g. standards), health, environment, and gender.
EACREEE has been so far exploring the following means to accelerate access to clean cooking: modernized cooking technologies, facilitating the shift to LPG, improved and thus, more environmentally friendly charcoal production methods, use of different biomass sources (e.g. pellets).

While it is true that the use of these technologies and resources would lead to improvements in cooking practices, they neither represent a shift away from often overstressed biomass resources (except in the case of biogas from waste) nor away from fossil fuels like LPG. For that reason, EACREEE will also work on electric cooking, a solution getting more attention in the energy sector. Recent research documents show a reduction of cost and a growing competitive price for electric cooking (see Report "Beyond Fire" or research generated under the Modern Energy Coocking Services (MECS) program) a tendency that will be further investigated and followed over the next years. Besides, relevant bilateral institutions such as DFID have funded ambitious programs around the electric cooking, including the £ 40 millon pounds Modern Energy Cooking Services (MECS) programme, which shows an underlying funding interest in the space. Moreover, other important actors, such as Energizing Development (EnDev) are highly interested in rolling out this topic in the region. Actors active in the modern cooking area are not yet very active in this field, so there is an opportunity for EACREEE to distinguish itself.

In terms of strategic partnerships, the Clean Cooking Alliance (CCA) is very active in the area and should be a key stakeholder to collaborate with.

On top of cooking, EACREEE will promote clean and sustainable solutions for heating, both for households and industries.

Current EACREEE´s draft Bioenergy Development Strategy and Investment Plan aim to promote sustainable production, transformation and utilization of biomass resources for cooking, heating, power generation and transportation. However, the use of biomass for power generation and transportation is under the spotlight due to the already overexploited resources and other negative environmental effects and the goal should, therefore, be to promote a more efficient use of bioenergy.

When it comes to the implementation of the strategy, EACREEE will focus especially on:

- Policy support.
- Promotion and standardization of efficient biomass-based cooking where other solutions are not viable.
- Promotion of biogas production and use from waste. Biogas use is still low in Eastern Africa, activities would include policies and regulation, promotion of technological solutions, identification of best-practice examples, and awareness-raising. A very successful example to build on top of is the East African on-going Africa Biogas Program.

- Promotion of ethanol production and use for cooking.
- Promotion of briquetting for commercial and industrial use.
- Support capacitation of stove manufacturers (in accessing finance, technology sharing, lean production).
- Support Technical and Vocational Education and Training (TVETs), Research institutions, and university in curricula development and implementation for clean cooking technology and fuels.
- Exploring new and innovative modern clean cooking solutions like electric cooking.
- Exploring connections with the blue economy, including for instance the use of hyacinths for energy production in Lake Victoria.

Particular attention will be paid in this intervention to the promotion of income generating activities and productive uses of energy.

While this strategic intervention encompasses all the five cross-cutting activities, in line with the overall vision of the BP, major attention will be given to project development and financing to support the deployment on the ground of these solutions.

4.2.2 Improving Energy Efficiency in the Built Industrial Environment

The Energy Efficient Lighting and Appliances for East and Southern Africa (EELA) project, a 5 years project funded by SIDA, implemented through UNIDO, and executed by EACREEE and SACREEE, aims to support the development of vibrant markets for EE lighting and appliances across East and Southern Africa. After 1 year of preparatory work, including conducting baseline studies, developing the theory of change for the project, consulting stakeholders, developing implementation arrangements and partnerships, the project has kicked off its implementing activities in July 2019.

The full EELA project contains several components, including policy environment (e.g. Minimum Energy Performance Standards or (MEPS)9, technical capacity building, testing and compliance, and market development. As executing partner, EACREEE is capacitated with 3 new EELA project staffs: a Private Sector Specialist, a Lead Technical Expert and a Project Assistant.

UN's Environment under the United for Efficiency (U4E) program is implementing the Rwanda Cooling Initiative project (which is currently in its closing phase). Under the project, Model regulations and Rwanda Cooling Strategy have been developed and approved by the Government. U4E now intends to support EACREEE to have these documents adopted by other EAC Partner States under the project "Building High-Level Support and National Capacities to enhance Climate and Ozone Protection through Cooling Efficiency".

The Common Market for Eastern and Southern Africa (COMESA) is implementing the project "Enhancement of a Sustainable Regional Energy Market in Eastern Africa, Southern Africa, and Indian Ocean Region". Components of the project include the enhancement of the development of RE&EE strategy, policies, and regulatory guidelines to attract investments and build capacity in clean energy". EACREEE will request COMESA to support the strategy to have it approved and owned by the EAC organs. As part of the implementation of the Strategy, the project envisages supporting PS in reviewing legislation to allow for the adoption of Common Minimum Energy Performance Standards (MEPS) as well as energy labelling for widely traded energy devices to further facilitate quick wins in energy efficiency.

Relevant actors working in similar areas include WB's Global Lighting Initiative (World Bank) and ECREEE. The latest is involved in this working line with the development of a comprehensive list of regional ECOWAS EE standards for appliances. This included the design and regional approval of MEPS for refrigerating appliances (ECOSTAND 071-1:2017) and air-conditioners (ECOSTAND 071-2:2017). New upcoming proposals on energy performance standards for appliances (fans, TV, and water heaters) were presented in 2019.

Based on these facts and existing programs, EACREEE will continue the implementation of the EELA project to advance energy efficiency for lighting and appliances, exploiting its unique role at the regional level and accompanying PS in building the right enabling environments at the national level. The promotion of solar heating water systems (very advanced topic in Kenya) will be taken into consideration.

In parallel, EACREEE shall create a new line of work in EE in the residential, commercial, and industrial sectors with a strong focus on project development and financing to support the deployment on the ground of these solutions. Capacity building to local auditors, promoting energy management and knowledge transfer of best practices will be done in the framework of the EAC Sustainable Energy Entrepreneurship Facility and it will be accompanied by project development and financing activities to facilitate TA as well as access to finance to entrepreneurs as well as facilities' owners. Partnership with on-going initiatives (i.e. SUNREF) should be sought, aiming at promoting a regional ground-breaking and investment-oriented intervention. The support provided to the industry sector will contribute to the continent-wide industrialization efforts.

EACREEE also recently signed an MoU with the Copenhagen Centre on Energy Efficiency, which envisages collaboration in the areas of (i) EE and conservation in public buildings and (ii) Improving energy efficiency through digitalization. The Copenhagen Centre has on-going programmes in these areas and the project activities will be extended to the EA region.

Connected to the previous, cities currently play a major role in the EE topic. Urban areas are considered high-power consumers and very inefficient energetically. Often EE-related areas such as transportation or heating and cooling are proving key to international on-going policy discussions but besides some good examples (e.g. water heating system policy in Kenya or industry audits) not much has yet happened in the EAC sub-region. Chapter 4.3.1. further develops the issue of cities and other urban localities as a future prospective area for EACREEE.

4.2.3 Promoting Capacity Building and Investment in Electrification via Clean Energy Mini-grids and Standalone Solutions

With the low electrification rates figures across the sub-region and at the same time the growing interest from the private sector to tap the market opportunity of supplying electricity services to the un-served population in rural areas, EACREEE is well placed to suit the opportunity by facilitating project development and financing for systems based on off-grid renewable solutions.

This programme will seek to follow a least-cost energy pathway that clearly defines the role of governments, utilities, mini-grid, and off-grid solar companies, essential to allow coordinated approaches and a cohesive vision for integrated approaches to energy policy and planning in order to identify the optimal mix of technologies and their associated costs. Best practices and high-quality, reliable, comparable, and transparent data to enable evidence-based decision making will play a crucial role.

This intervention will cover both Clean Energy Mini-Grids (CEMG) as well as standalone RE systems and will have a strong focus on supporting the deployment on the ground of these solutions by facilitating:

- Project preparation Technical Assistance (TA) to assist companies to progress until achieving financial close.
- Access to finance via different instruments (i.e. credit lines through commercial finance institutions, co-investment grants through the EAC RE Facility).

Considering the high existing potential to boost private sector activities and create local employment, project development, and financing efforts will be accompanied by the support to the improvement of the policy and regulatory frameworks, integrated energy access planning, and business enabling environment both at the regional and national level.

The EAC Sustainable Energy Entrepreneurship Facility will be the instrument to channel all the capacity building and certification activities, including on-going initiatives such as STAR-C, targeting the local private sector.

Particular attention will be paid in this intervention in the promotion of income-generating activities, local employment, and the use of productive uses of electricity including local agricultural value chains that will increase the financial viability of the off-grid systems.

In terms of strategic partnerships, the on-going collaboration with the International Solar Alliance (ISA) and the Africa - EU Energy Partnership (AEEP) will have to be continued and new partnerships built up, including national and regional industry bodies and institutions (e.g. the French Agency for Development (AFD), KFW, GET.invest or IRENA).

4.2.4 Ensuring Inclusive and Sustainable Energy Access in Situations of Displacement

The region is experiencing a significant number of displaced people, becoming a priority topic for international organizations and national governments. Sustainable energy access in camps or host communities will permit the improvement of immediate and sustainable long-term relief and development solutions, with special emphasis on women, boys, and girls.

A lot of interventions from international organizations focus mainly on food, health supplies and shelter, but apart from some important initiatives (e.g. the Moving Energy Initiative, the Global Call for Action from the United Nations Institute for Training and Research (UNITAR) or some programmes supported by EnDev) there are no yet internationally adopted energy access proven solutions or approaches to improve energy access for displaced populations and most of them do not integrate sufficiently gender approaches. International stakeholders, including foundations (e.g. Ikea Foundation), governments (e.g. bilateral aid institutions), multi-country initiatives (e.g. EnDev) or Multilateral Agencies (e.g. UNHRC) are starting to focus on this area through growing funding and aid provision, support to convene stakeholders' discussions and policy design and testing joint-approaches that work for both national governments and displaced communities.

However, among the ongoing initiatives and efforts, there is not yet an actor (or platform) of reference to reach scale and provide the solutions displaced people and host communities deserve in the EAC region.

Displacement is a cross-boundary phenomenon, hence placing EACREEE in a privileged position to make a difference in this strategic area, convening its national PS and private sector actors and coordinating actions that forge transformational change for displaced populations and with special focus on women, boys, and girls.

The Global Plan of Action for Sustainable Energy Solutions in Situations of Displacement (GPA)[17] was launched in 2018 to equip all stakeholders with the capacity to mainstream sustainable energy solutions into programming and implementation, delivering improved protection, dignity, and energy-related social, environmental, and economic benefits to displaced people. The GPA identifies five priority areas of intervention to ensure sustainable energy in situations of displacement, namely: (i) Planning and coordination; (ii) Policy, advocacy and host-country resilience; (iii) Innovative finance; (iv) Technical expertise, capacity building, and training and (v) Data, evidence, monitoring, and reporting.

EACREEE will:

- Position itself as an organization facilitating regional dialogue and knowledge exchange, promoting and raising awareness on the need for integrated energy access.
- Enable the policy and regulatory frameworks to foster investment in RE installations and supporting the creation of enabling environments for both the public and private sector to deliver services and products to displaced populations (and hosting communities) through its members or through itself.
- In partnership with national institutions and other relevant stakeholders, EACREEE will facilitate the deployment of concrete, impactful, and innovative solutions.
- Help embedding proven successful gender approaches within programmes in their design and implementation phases, hence increasing the gender impact.

Particular attention will be paid in this intervention to the promotion of income generating activities for hosting and displaced communities, as well as the productive uses of energy that communities could use to increase their life quality and the viability of the energy systems.

Taking the current challenges and needs from displaced and hosting communities, these actions could encompass both clean cooking and electricity services, including SHS or CEMG, clean mini-grids, connected with other prioritized strategic areas.

4.2.5 Fostering a Lighthouse of New Technologies and Solutions (Storage, Digitalization, Innovative RET and Circular Economy)

While some of the PS are strategically evolving towards a more dynamic and digital society (e.g. Rwanda or Kenya), there is a lot to learn and share with the rest of EAC PS and from international experiences. For this, building knowledge and capacity around important upcoming topics is important as much as integrating them into the energy space.

EACREEE is well placed to become a knowledge hub on new technologies and solutions and lead the discussion, create awareness, and build capacities among public and private stakeholders.

Four main areas have been identified (storage, digitalization, innovative RET technologies and circular economy), for EACREEE to follow closely, including their latest trends, enabling the Centre to facilitate appropriate knowledge to the PS.

17 https://unitar.org/sites/default/files/media/file/gpa_framework_final-compressed.pdf

This strategic area is also considered attractive from a business development perspective, as it may uncover some potential funding opportunities for the Centre and trigger important market reactions in some of the EAC partner states.

4.2.6 Promoting Utility Scale and Distributed Grid-connect RE

The East African region counts already with a significant number of initiatives and investments in the area of grid-connected RE and developers and investment funds are already delivering big infrastructure RE programs and solutions in several EAC countries (particularly Kenya and Rwanda). However, EACREEE can play a major role in supporting all the PS, and particularly intervening at the regional level.

EACREEE signed an MoU with the International Renewable Energy Agency (IRENA) in January 2020. In the framework of the on the on-going initiative by IRENA, "the African Clean Energy Corridor", EACREEE´s unique regional mandate positioned the centre to take the ownership, in coordination with IRENA and the East African Power Pool (EAPP), in the East Africa component of the initiative (see chapter 7.1. for more information), providing:

- Capacity building for the private sector and national utilities, including technical support and capacity reinforcement to increase utility capacity for the RE generation pool.
- Policy support, enhancing the existing planning, and enabling environments across the region to facilitate RE deployment progress.
- Bring in additional investment to accelerate the RE generation needed to compensate RE generation across the corridor.
- Coordinate efforts with other regional corridors, including WACEC in West Africa.

The East Africa component of the African Clean Energy Corridor will target both utility-scale and small scale RE generation (i.e. rooftop solar PV). All viable RET will be considered under this intervention, including technologies that are not yet widespread in the region such as off-shore wind.

4.2.7 Enhancing Women and Youth Entrepreneurship and Employment in Sustainable Energy Businesses within the East African Region

Women and men are affected differently by energy access or the lack thereof. Applying a gender lens to RE&EE energy policies, programmes and projects help to identify the different impacts and to bridge existing gaps, contributing to bigger gender equity in the energy sector.

According to ENERGIA, the often absence of a national Gender Action Plans to operationalise existing gender policies (or the lack of these) in the region, lack of accountability in results, lack of gender balance in professional and management staff and governance and the absence of a mentoring culture, the low level of female authorship and gender content in publications, insufficient gender specialists, and limited resources to implement the gender policies do require a much bigger effort in creating a broader gender institutional culture among PS and their energy institutions.

Youth does, at the same time, face enormous challenges to prove their value and to have opportunities to be capacitated as technicians or managers. This is even harder when youth are women as they face a double barrier.

Mainstreaming gender and youth policies in RE&EE cannot just help uncovering a vast amount of capacities, skills and human resources in the region but also enable the creation of opportunities for women and youth to speak up, to acquire skills and abilities to improve their life quality and to be able to start and grow their businesses.

The EA region has seen many successful piecemeal approaches. For instance, Kenya has recently passed its Gender Policy aiming to raise the level of gender awareness, change attitudes and inculcate an engendered work culture among staff in the energy sector, and sets an important milestone in the process towards ensuring affordable, reliable, sustainable and modern energy for all by 2030. However, other PS do not have yet a similar level of policies or strategic plans, hence implementing regional policy harmonization processes, delivering awareness campaigns or rolling out regional and national gender and youth capacity building for technicians, managers and entrepreneurs seem key for EACREEE to play a transforming role in this area.

4.3 Prospective Thematic Areas

4.3.1 Promoting Sustainable Energy Programmes in Cities and Other Built Environments

According to the latest "Renewables in Cities – 2019 Global Status Report" by REN 21, cities account for estimated three-quarters of human-caused CO2 emissions from final energy use while they are the top energy consumers in the EAC region. Despite their high-power consumption, this represents a minority of their energy consumption with areas such as transportation or heating and cooling surpassing it. Additionally, other challenges lie ahead, such as a high proportion of the poor population, many of which live still in slums.

However, cities are also centre of innovation, growth, and employment, hence key geographical areas for a future energy transition in the region.

Cities (primary cities but also mid and small-size urban sprawls) represent yet another layer of governance, as they involve often a different political, environmental, and socio-economic reality to those at the national level. However, underpinning a green change in cities and urban areas will have to come with additional support to transition to a RE&EE-based economy. EAC PS usually count on existing local authorities and city networks, which represent a real opportunity to engage in an existing discussion with mayors and other urban-level representatives. EACREEE could play a role in convening these and other actors in the region and facilitate coordination. EE-related actions for cities and urban areas are meant to be covered in the respective strategic area under chapter 4.2.2.

Joint collaboration with local authorities is of crucial relevance when dealing with last-mile energy challenges and especially with the cooking sector, as mayors and local authorities are considered best placed to implement strategies that have historically reached very limited success when implemented at a national level.

Another area of attention where EACREEE could make a big difference is in supporting small and medium-size cities in the region to attract private sector investment as usually the private sector concentrates around primary or capital cities. Small and mid-size cities usually struggle to compile and share market data, strategic planning documents, and convincing capacities to attract investors and private sector companies in the RE&EE space.

Besides, international and domestic funding to support urban areas is starting to grow. Some interesting initiatives include the work of GIZ in Kenya with local authorities, the EU initiative "Covenant of Mayors in South-Sahel Africa" covering more than 170 cities across the region (including for EA Nairobi and Kampala, this last one enjoying recently a funding of 6 millon Euro) looking at supporting local governments to design, integrate and implement climate change and energy access planning. Other development partners are starting to ramp up their efforts and support, including UNDP, USAID, or the UK Department for International Development (DFID).

4.3.2 Energy Efficiency and Conservation in the Transport Sector (Mass Transportation, E-mobility, Non-motorized, Standards, Fleet Management)

Transport, as a sector, is largely driven by the rate of urbanization and industrialization, particularly in the context of globalization and greater affluence in society, where the need for mobility and service delivery is fast rising. A direct proportionality between GDP growth and passenger and freight transport volume exists, where, with 2010 as the baseline, growth in GDP in non-OECD countries could be as high as 520% by 2050, with a concomitant growth in freight transport vehicles of up to 550%. This is reflective of the situation, particularly in emerging economies.

And although traditional transport industry has helped developing markets to grow, the current pattern is unsustainable in that it contributes to several other problems as increasing road accidents, congestion, air pollution (detrimental to people's health), and GHG emissions (exacerbating contributions to human-induced climate change). Only in South-Sahel African cities, transport represents 37% of total energy consumption.

The Energy-Transport-Climate Change nexus represents the role that transport could play in making more efficient use of energy and reducing greenhouse gas emissions. Moreover, addressing emissions from vehicles could significantly curb urban air pollution, especially from black carbon and other particulate matter, released by diesel cars and trucks. For this, interesting experiences are currently being piloted across Europe, Latin America and Asia including networks of rapid public buses crossing cities (e.g. Bogota, Lima or Mexico City), testing of electric or alternative low emission fuels for public vehicles such as taxis or buses or improvements in the overall fleet management, including using digital monitoring and design tools including customer information.

In the EA region, very few experiences have been tested so far, including the first experience on the electric motorcycle in Kisumu City, Kenya in 2019. Additionally, DFID is currently testing an electric transport project in rural mini-grids in Kenya. The EU program "Convenant of Mayors South-Sahel" is also encouraging cities to integrate sustainable transportation into the existing climate change and energy planning processes. UNIDO´s experience in South-Africa, China, or India on fuel efficiency or promoting cycling is also interesting.

EACREEE´s role could involve providing technical assistance to EAC PS but also normative and convening functions, including regional policy advice. Additionally, playing an industry-related supportive role across the entire transport value chains or encouraging stakeholder partnership building (including working with city mayors and other local urban institutions). This prospective area needs to be managed by EACREEE in close cooperation with the previous one in chapter 4.3.1."Promoting Sustainable Energy Programmes in Cities and Other Built Environments" as there exist significant linkages between transportation and urban areas.

4.3.3 Sustainable Energy-Water-Food Nexus Planning and Climate Change Adaptation

Although a wideemployed term and no new to the energy sector, the energy-water-food nexus has historically been seen as too-wide-too-open for clear direct policy and implementing work. However, the relevance around this strategic area has steadily grown over the past years due to the (devastating) effects of climate change, the often mismanagement of either energy, food, and water and their interrelated effects or the lack of inter-ministerial planning processes at national or sub-national levels.

Only strong political will, inter-agency and inter-ministerial mechanisms and clear approaches and methodologies that have proved to be successful in the region or elsewhere will help to move this agenda forwards. EACREEE could help to disseminate good practices and facilitating political action, ensuring gradually more cross-sectorial actions are integrated into the different ministerial agendas.

For this, some good domestic and international examples exist, mainly through grant-based schemes, such as the energy-food nexus program by the GIZ or experiences in Rwanda and Ethiopia. Additionally, almost all the programs or projects funded through domestic or international finance can integrate nexus elements. This is of crucial importance for the promotion of income-generating activities and productive uses of energy (especially those connected to agricultural economic activities) and indirectly to grow the demand and financial sustainability of DRE-based services (e.g. SHS or GMG).

4.3.4 Solar Water Heating Promotion

High electricity prices and regular power cuts among the EA region (and also cities) have generated a growing interest in solar water heating technologies. Additionally, an interesting market with the potential to grow has attracted some suppliers, offering competitive prices and a reduction of the electricity bill to many households, public buildings, and businesses (e.g. hotels are usually keen to invest in this technology).

Given the EE benefits and market opportunities, there are numerous interventions offered by various institutions like AfDB to reduce electricity consumption. The solar water heating technology in Kenya is quite popular, with an estimation of 140,000 systems installed by 2017 and a market segment estimated in 2 million units, a market stimulated by the Energy (Solar Water Heating) Regulations approved in 2012. Similar market potential exists in other EA countries, but policies and regulations will need to be designed and implemented first to promote a similar market transformation.

EACREEE could play a facilitating role, helping countries in the sub-region to harmonize best practices and standards (building from the one in Kenya). Additionally, EACREEE could collaborate with SOLTRAIN[18], a regional initiative on awareness-raising, capacity building, solar thermal technology platform catalysing and demonstration of solar thermal systems in the SADC region. The initiative is being supported by ADA.

18 SOLTRAIN - The Solar Thermal Training & Demonstration Initiative

4.4 Cross-cutting Activities

4.4.1 Policy Support

Policy support cross-cutting activities include the draft, validation, and approval of different regional policies, harmonization processes, and strategies for different thematic areas. It implies the active engagement of the EAC PS, critical for the validation and approval processes. Additionally, EACREEE will look forward to sourcing and providing technical assistance to EAC PS, aiming to integrate strategies, policies, and regulatory changes into their national political structures.

4.4.2 Knowledge Management

EACREEE will aim at brokering important and strategic pieces of learning and knowledge, directed mainly to raise awareness across EAC PS and other stakeholders, looking to support desired energy transition processes, including regional policy or strategies and their successful acceptance and integration by the PS and other regional stakeholders. Additionally, knowledge management cross-cutting activities aim also to underpin EACREEE as a regional knowledge hub. For all these reasons, studies (e.g. state of the art, best practices, thematic studies, etc.), participation in or organization of forums, conferences and/or workshops or disseminating and sharing knowledge and data will fall under the focus and goal of the prioritized programs by the EACREEE.

4.4.3 Capacity Building

This cross-cutting area considers all capacity building and learning-related actions. It includes training to public and private entities on a multitude of different topics. On-line training and tailored physical or virtual capacity building sessions as well as the co-collaboration in training materials design will also fall under this cross-cutting area. Also, EACREEE has launched an Internship Programme to support a limited number of students from diverse academic backgrounds who may be assigned to EACREEE programmes and activities, where their educational experience can be enhanced and enriched through exposure to practical work. Internships may be offered at EACREEE Secretariat or EACREEE-NFIs offices.

A qualitative analysis has been undertaken under the interview framework conducted with the NFIs. All PS have shown a significant level of interest in this cross-cutting topic. Some PS do look at it as a regional way to share knowledge and best practices, aiming to harmonise policies and regulations across the EA region. Awareness raising and technology transfer has also been observed as critical areas. More specifically, support for the private sector was requested by most PS in the form of capacity-building (e.g. Regulation requirements for investment and standardization) and raising finance. For this, PS also asked for specific public capacity building support aiming to improve existing RE&EE sector enabling environments and support the EE space through capacity building for national utilities and higher private sector involvement.

4.4.4 Project Development and Financing

EACREEE aims at mobilizing financing to advance the regional RE&EE transition. For this, the Centre focus on mobilizing either capacities for private and public sectors to prepare projects and attract additional RE&EE related financing (e.g. project preparation TA schemes) or improving

access to finance via different instruments (e.g. donor-grant support, credit lines through commercial finance institutions, co-investment grants through existing facilities).
This cross-cutting area has been flagged up as critical taking the actual regional transformation context and the need to accelerate financing coordination and mobilization to achieve the SDG7 objectives and beyond. All prioritized areas and their respective concept notes (see Annex 1) have been designed including ***Project Development and Financing*** cross-cutting activities.

4.4.5 Innovation and Entrepreneurship

This cross-cutting area aims to include activities and actions encompassing innovation (including products and services and partnership building between academic institutions and private sector organization to advance innovation) and local/regional manufacturing with the vision to create value in and for the region and employment while increasing the transformational capacity of the RE&EE sectors. This will specifically aim to empower and boost the role and technical/financial capacities of local enterprises and other stakeholders active in the entrepreneurship arena (e.g. industrial bodies or cooperatives).

Additionally, actions and activities aiming at improving the current quality of products and services (e.g. accreditation, standards, or testing laboratories) are considered important elements.

5 Organizational Capability and Implementation

Figure 5 shows the current **EACREEE institutional and governance structure** is in line with other GN-SEC Centres.

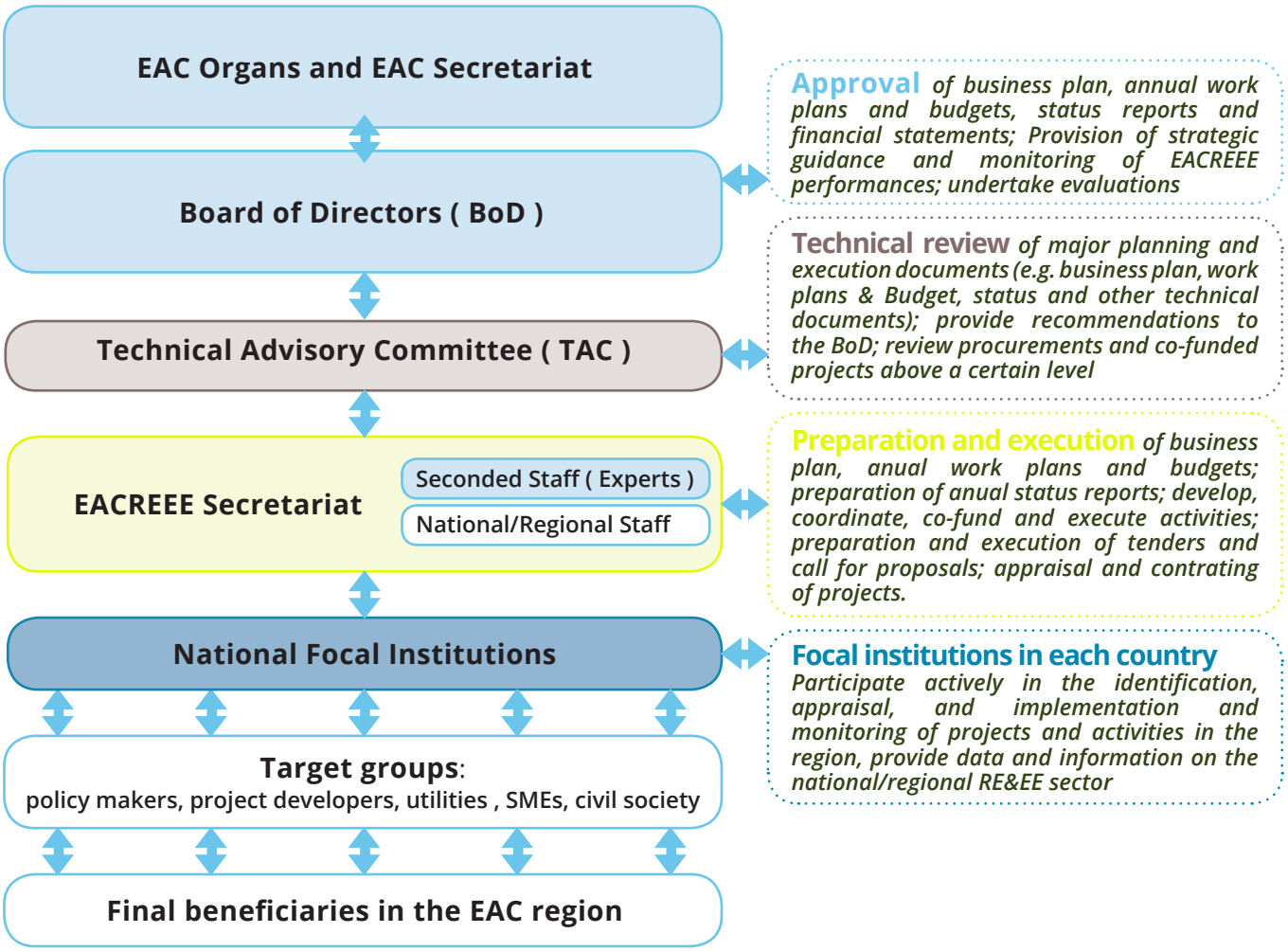

Figure 5. EACREEE Institutional and Governance Structure

5.1 Staffing Strategy

The following Figure 6 shows the planned uptake of the staff and its assignment to the interventions.

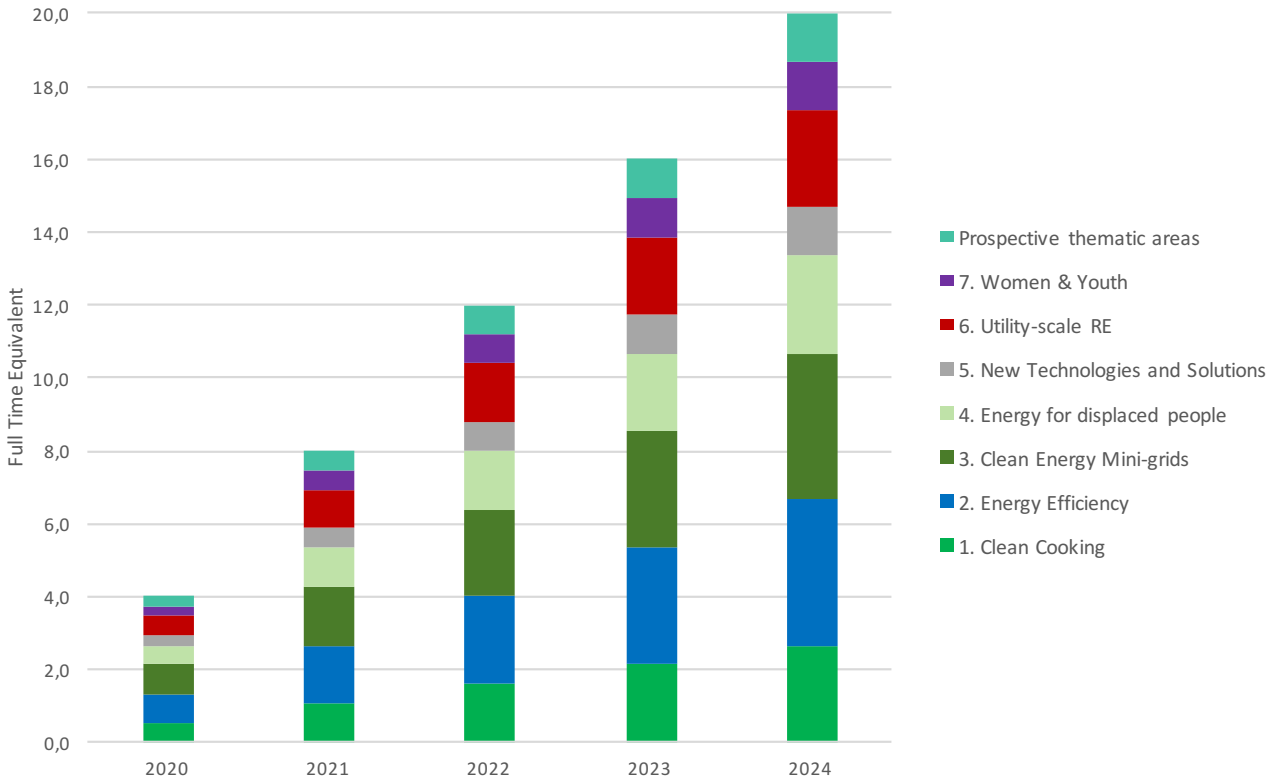

Figure 6. FTEs per Year and Work Area

The following assumptions have been taken:

- The target number of 20 Full-Time Equivalent Staff (FTE) to be reached by 2024 with an average linear increase of 4 staff members per year.
- The number of FTEs per each of the seven strategic areas (as well as for the prospective thematic areas) is aligned to the programmatic interventions designed for each respective area. This means that the time availability and expertise of the personnel will be in line with the requirements of the tasks defined for each respective area in order to achieve the outputs defined for the areas successfully by 2024.
- The proportional share of each thematic area stays constant across all years.
- Hiring key experts supported by cross-thematic administrative and support staff is the emphasized strategy: the 20 FTEs do include both technical as well as an administrative staff together, with an average rate of one administrative staff per three technical employees (in 2024, this would mean 15 technical and 5 administrative staff).
- Additionally, it is expected that EAC, in the framework of the recognition of EACREEE as an EAC institution from latest 2023 onwards (see also the section on fund mobilization below), funds a growing number of technical and admin staff, the backbone of the Centre personnel, which will be complemented by program funded staff.

The split of technical vs. admin and senior vs. junior staff are shown in Figure 7 (the number of FTEs multiplied with the average salary levels make up the personnel budget described in section 6.1.).

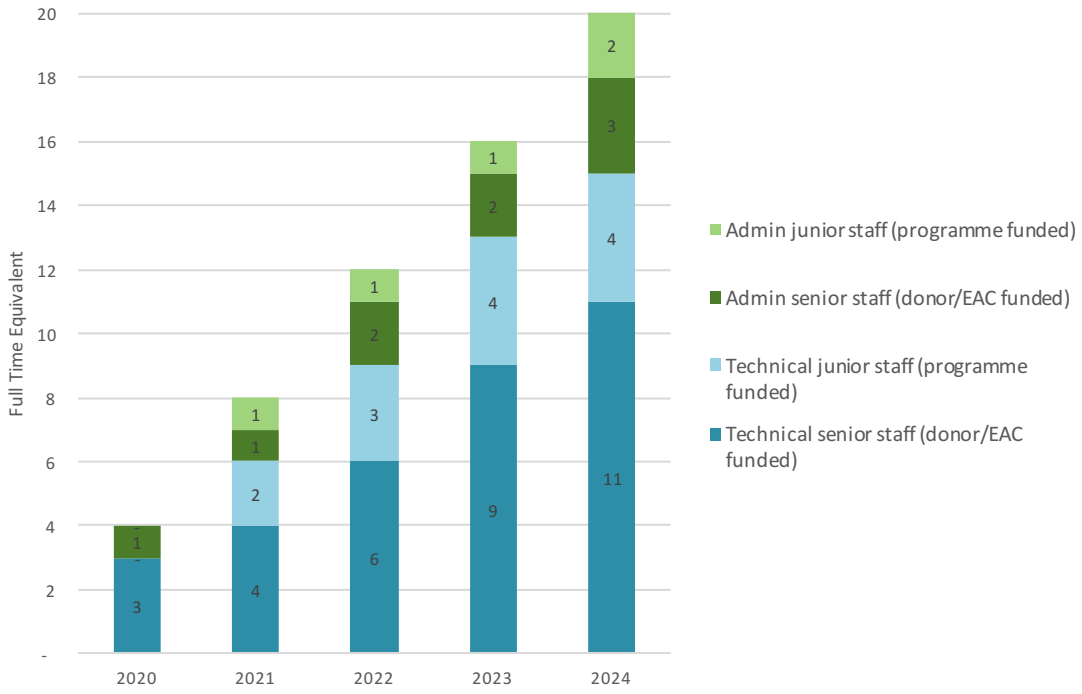

Figure 7: FTEs per Year, Technical vs. Admin and Senior vs. Junior Staff

5.2 Organizational Chart and Staffing Levels

Given the strategic programmatic areas defined in this business plan, the programme managers (see Figure 8 for distribution of senior programme managers per strategic area) are assigned to each of the selected strategic areas under the responsibility of the "Head of programmes". In the years 2020-23, recruited senior programme managers will be assigned to more than one strategic area, hence adapting to the foreseen growing programmatic work of EACREEE. In 2024 yet certain managers will have to take care of two programmes at once. These employees, together with the Executive Director, make up for the eight technical senior staff members. Over the years there will be in total 4 technical junior staff members hired, acting as a pool of technical back-up to the 7 strategic areas and the prospective thematic areas.

By 2024, the finance and administrative department will consist of three senior and two junior staff members.

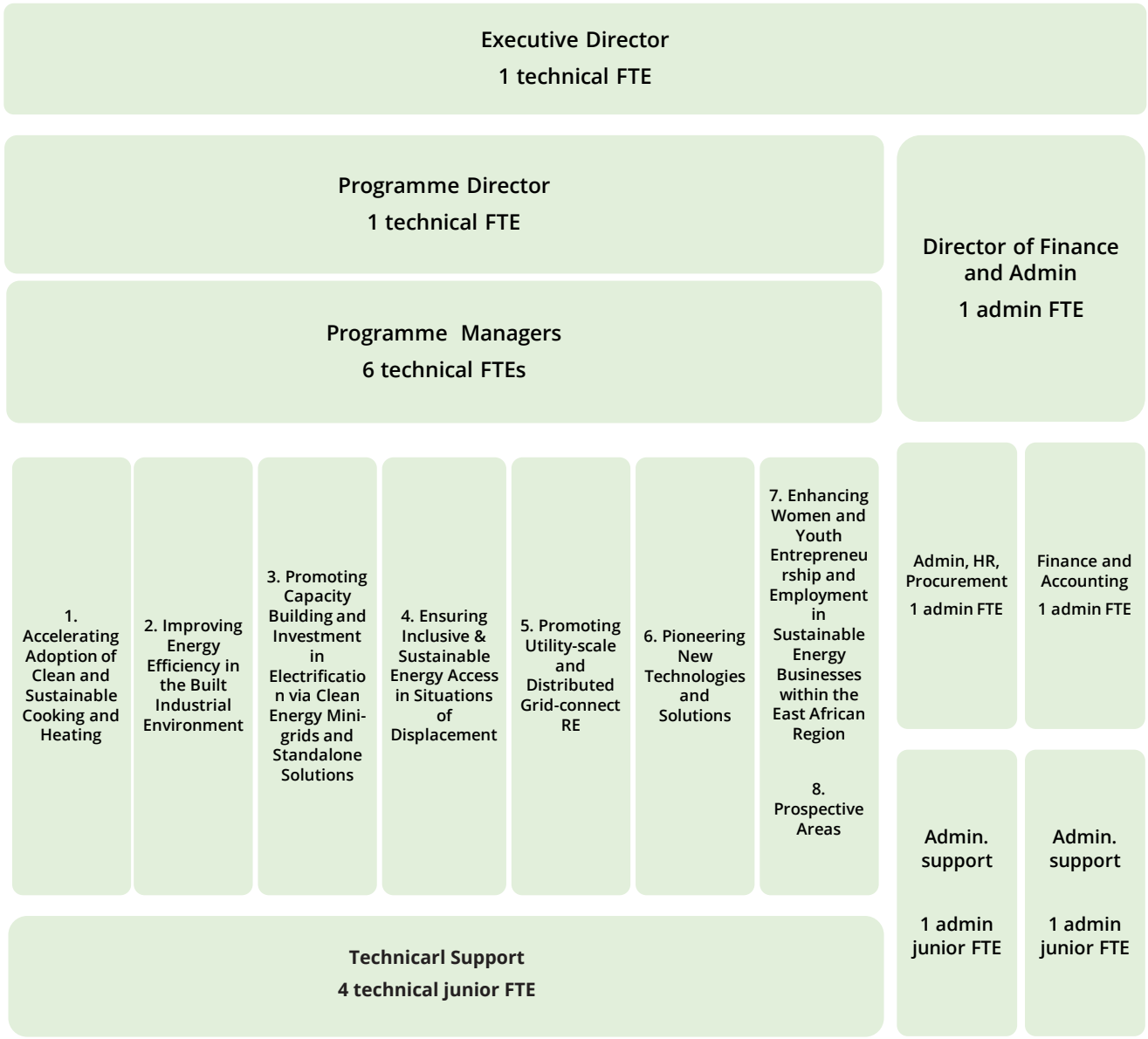

Figure 8. EACREEE Organizational Chart in 2024

It should be noted, however, that while staff remains to be hired, the hierarchical structure should be as slim as possible to avoid inefficient decision-making processes and increase cost-efficiency for the EACREEE´s operations. Therefore, the technical junior staff members are organised as a pool of experts who can work on different projects according to the necessities and workload.

As described under the gender strategy in section 2, the goal should be to incentivise the recruitment of women across all positions, i.e. including management, administrative and technical senior/junior staff.
The following Figure 9 provides a broader understanding of EACREEE´s integration within the EAC structure once the integrated process has successfully been undertaken.

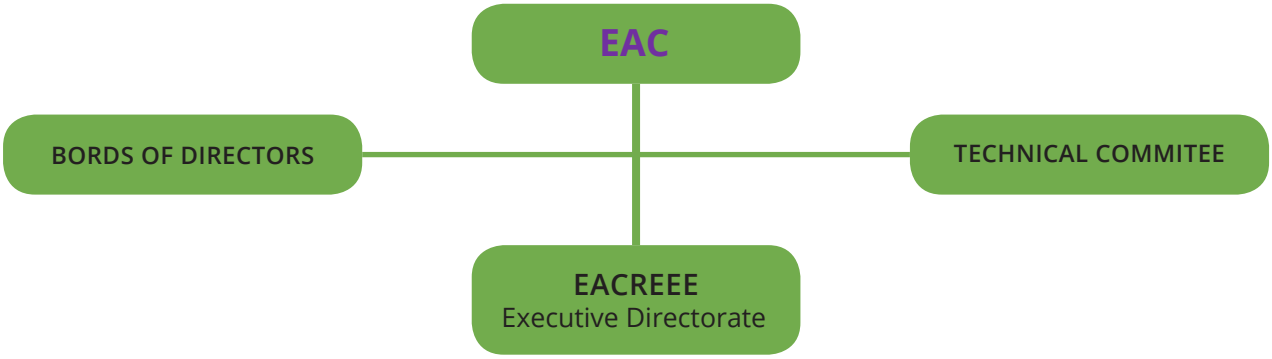

Figure 9: EACREEE within EAC Structure

5.3 Internal Procedures

While the overall responsibility and the strategic direction lie with the BoD, the annual workplan of EACREEE will be proposed by the Executive Director together with the Programme Director, the Director of Finance and Administration, and, to a lesser extent, with the programme managers. The workplan requires approval by EACREEE´s Executive Board.

The Executive Director is also in charge of external relations to stakeholders, acquiring new funding sources, and ensuring alignment with EAC and the PS. Business development and source mobilisation with international donors will be led by the Executive Director in close partnership with the Programme Director. Tight coordination in this regard will be established with each of the programme managers when required.

The Programme Director oversees the programmes and ensures that EACREEE is carrying out its activities and is reaching its operation targets according to the Business Plan and the annual planning. This figure will also shift and assign support staff according to workload or operational necessities.

The Programme Managers are coordinated by the Programme Director together with their support staff who will report to their Program Managers. In case hurdles are faced, such as tight deadlines, capacity shortages, or technical issues, Program Managers will consult with the Programme Director to take appropriate actions.

The Director of Administration and Finance is responsible for the administrative and financial tasks which include supporting day to day EACREEE´s operations and its technical activities.

The Executive Director and both Programme Director and Director of Finance and Administration will form the Senior Management Team, with regular meetings aiming to provide strategic coordination for the rest of the team.

Other internal procedures related to EACREEE´s staff are described in detail in the EACREEE Staff Regulations and Rules, approved by the first BoD meeting.

It is important to keep the procedures efficient and straight forward to avoid employees spending too much time on internal issues which do not constitute a value-add for the programmes. Target size of 20 staff members should be manageable with a maximum of 3 hierarchical levels.

6 Sustainable Business Model

6.1 Financial and Economic Viability

6.1.1 Operational Costs

The operational costs include all costs to run the EACREEE office (including staff salaries and office running costs). Figure 10 shows the expected growth in EACREEE´s budget over the next five years based on the proposed strategy. It starts with k$ 214 in 2020 and reaches k$ 845 in 2024. The total operational budget for the five-year amounts to $ 2.581 million :

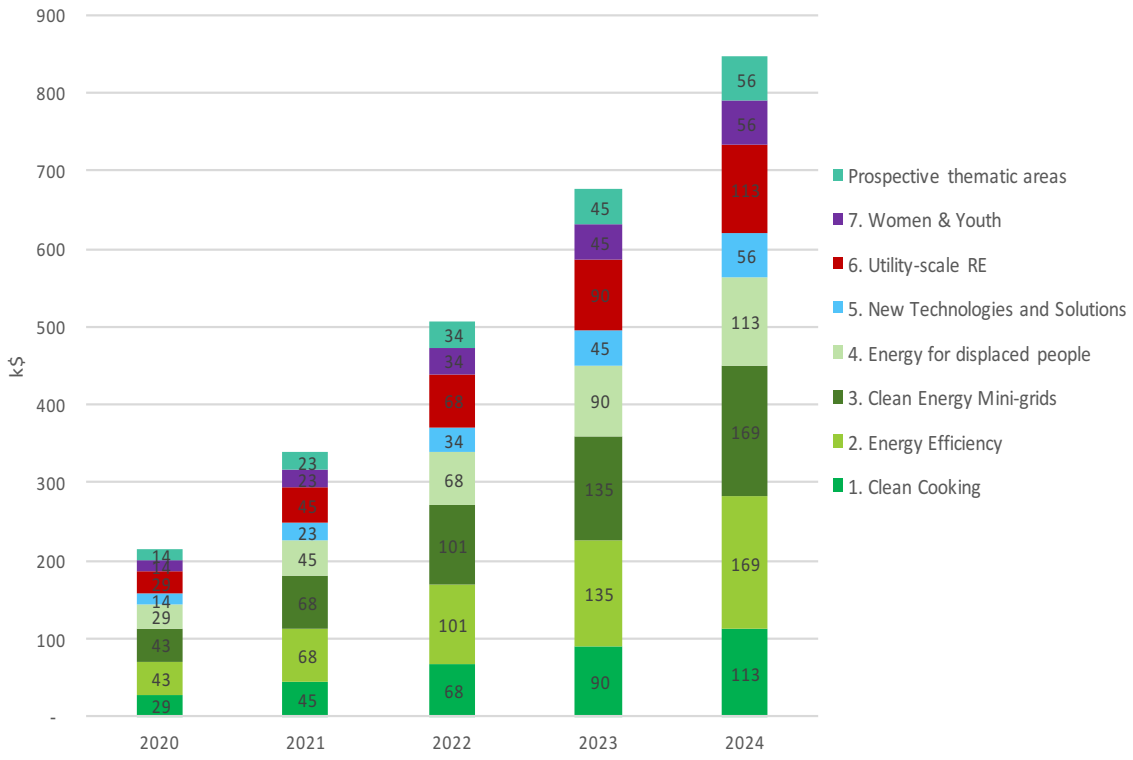

Figure 10. EACREEE Operational Budget

The following assumptions were taken:

- The costs shown in the previous figure are proportional to the staff uptake described in section 5.1 (i.e. Staff numbers are multiplied with the assumed costs per type of FTE (i.e. senior or junior staff)).
- Salary levels are set according to the EACREEE Staff Regulation and Rules (February 2019).
- However, as the exact salary levels of the future employees also depend on their qualifications, two average salary levels have been assumed: For senior staff $ 50,000 / year and for junior staff $15,000 year.
- These average salaries levels were marked-up by 7% to reflect other operational costs like equipment, rent, IT, travel, etc.

Zero-net building for EACREEE

EACREEE plans to construct a new office building which will host the envisaged increase of staff members as well as provide for meeting and training rooms. The idea is to build a state-of-the-art plus-energy building that would also showcase the use of RE technologies combined with EE measures providing for a high degree of comfort and energy savings.

As a detailed cost estimation is not available yet and also the funding is not yet secured, the expenses for this building have not been included in the operation budget graph (Figure 10) above. However, a preliminary estimated budget of $ 1 million is considered for the years 2020 and 2021.

6.1.2 Technical Program Costs

The uptake of the technical program budget is shown in Figure 11. It starts at k$ 375 in 2020 and reaches $7.580 million in 2024. The total programmatic budget over the five years amounts to $19.910 million.

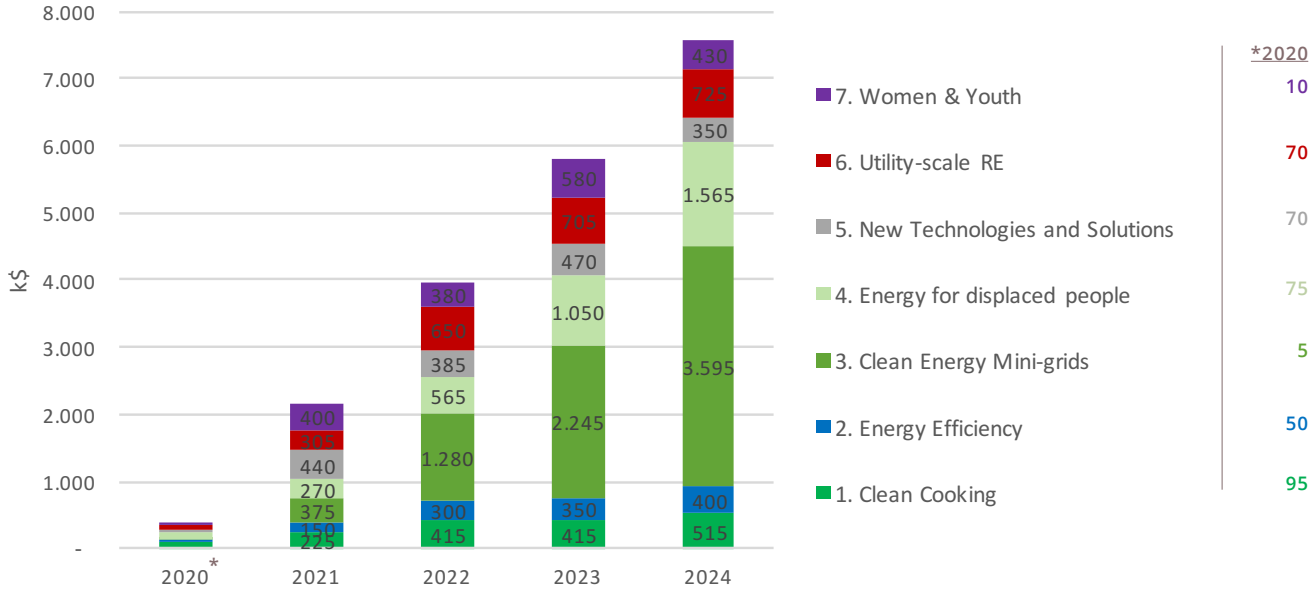

Figure 11. EACREEE Programmatic Budget

The technical program budget is based on the following assumptions:

- The programmatic costs have been annually estimated per strategic area (Figure 11) and assigned to the different cross-cutting areas (Figure 10) for each year considering the priorities and the concrete activities proposed per strategic area.
- For more details see programme concept notes in annex 1.

Figure 11 shows the investment facility in electrification via CEMGs and standalone solutions (strategic area in chapter 4.3.3), representing the highest costs throughout the 5 years period, significantly growing over the last 3 years. This is due to the expected mobilisation of private investment as a result of the seed-funding initially mobilized by EACREEE.

For other strategic areas, such as the clean cooking or the displaced people, the last three years also represent a significant mobilisation of seed-funding and private financing capital, hence responsible for the sharp increase in their technical programmatic budget.

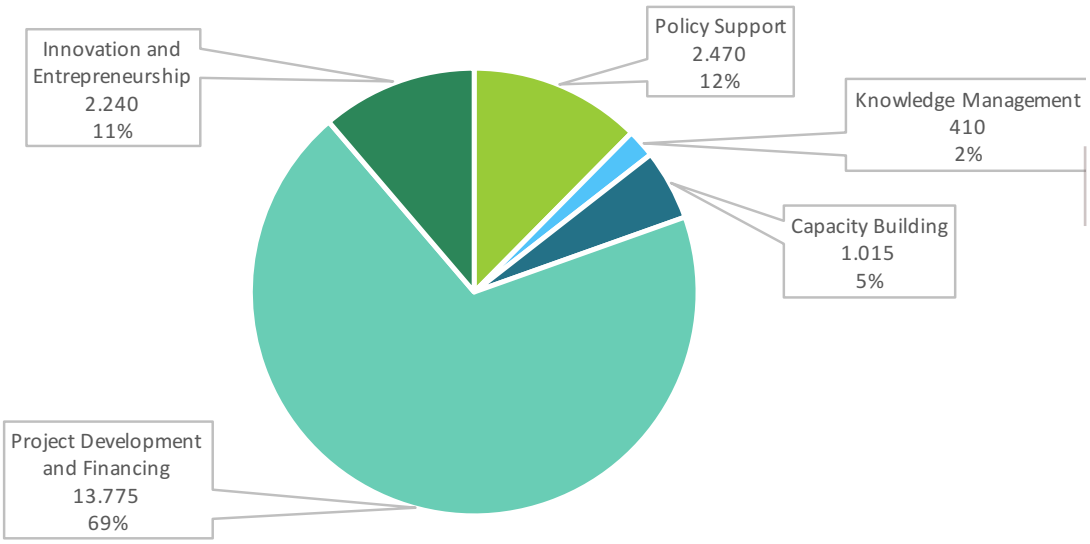

Figure 12. EACREEE Programmatic Budget by Cross-cutting Area

Total EACREEE´s budget consisting of operational and programmatic costs together is shown in Figure 13. In 2020, the total budget is $1.089 million, by 2024 it will have reached 8.425 m$. The total budget over the five years amounts to $23.491 million.

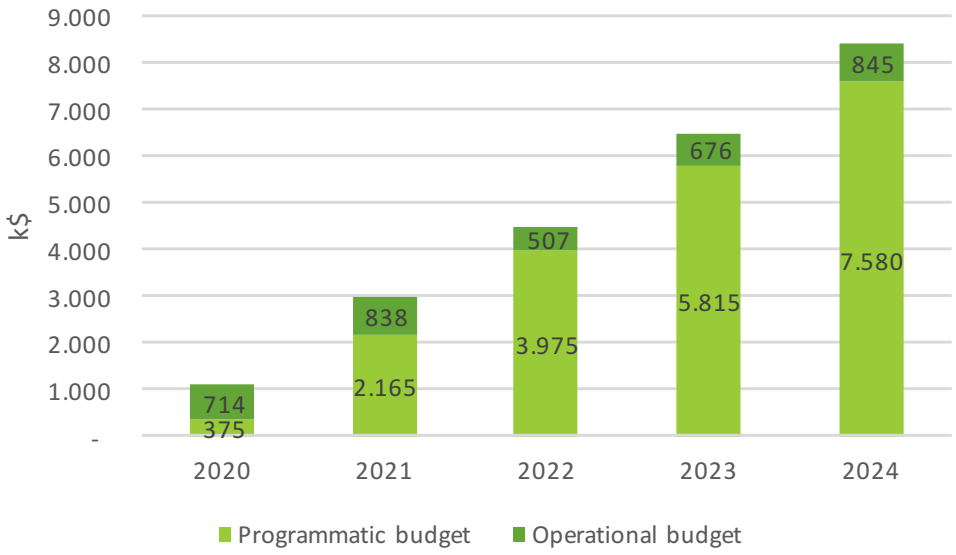

Figure 13. Total Budget (Operational and Programmatic Budgets Together)

As Figure 13 shows, the programmatic budget exceeds the operational budget (ratio 9:1 for the years 2022 to 2024), in line with best practices. It should be noted that the budget does not include in-kind contributions from EAC PS like hosting events or providing the current EACREEE offices. In the future, it may be considered to quantify these contributions to make them more visible.

6.2 Fund Mobilisation Strategy

The Fund mobilisation strategy aims to mobilise enough funding to cover the proposed staff and programmatic budget as well as other expenditures required for delivering the proposed strategic areas and their activities.

The Funding Strategy thus reflects the intended growth of EACREEE. The interviews with stakeholders and donors were used to gauge the willingness, conditions, and support levels of potential donors and funders to support EACREEE´s coming five (5) years.

Funding includes cash or in-kind contributions (e.g. staff delegations, facilities, equipment). The potential funding sources are the following:

- **International donors** (e.g. ADA, UNIDO, KfW, AFD, GIZ, DFID, USAid, EU, and others): These include bilateral and multilateral aid agencies. This category also includes multi-country initiatives active in the region (e.g. EnDev, AECP). These are grants, both from open calls, particularly in the first phase of implementation of the BP, and then gradually shifting toward funding agreements as EACREEE advances with the process of registration as an EAC institution. They will initially cover the bulk of the investment in 2020 (75%) decreasing their relative share down to 55% - while increasing in absolute terms.
- **EAC**: The contribution by EAC is the result of funding annual streams by the EAC PS to the EAC[19]. It is assumed that EAC funding will only be available from 2023 onwards even though EACREEE might be integrated within the EAC organisational set-up at an earlier stage. However, PS are requested to exploit possibilities to provide additional funds (in-kind or cash) to EACREEE over the BP period, be it through member state budgets or the EAC budget.
- **CSR, corporate foundations and foundations**: (e.g. Rockefeller Foundation, IKEA Foundation, Shell Foundation, Mott Foundation): This includes the Corporate Social Responsibility Programs (CSR) from corporates, as well as programmes and projects from corporate foundations and non-corporate foundations/charities whose mission is aligned with EACREEE's, thus leveraging and complementing their funds and efforts.
- **Fees-for-services**: hosting of conferences or events, training and capacity building workshops, or delivering consulting.

With regards to the programmes fund mobilisation, the following assumptions are proposed:

- The general strategy of EACREEE is that, considering EACREEE will become an EAC regional institution by the latest 2023, at least the senior staff members should be financed by EAC. Additionally, it is expected that once EACREEE has been registered under EAC, this regional institution will cover at least 20% of the total estimated annual budget of EACREEE.
- It is also assumed that grants currently provided by UNIDO and ADA will either be continued or, in case they are phased out, can be substituted by at least a similar amount from other donors. All junior staff (or the equivalent thereof) will be financed by donors unless EAC can provide enough funding itself.
- It is assumed that any additional funding from private or public international and/or domestic donors or through own revenues will come on top of the minimum funding. These additional funds may also cover other expenses incurred by the Centre.
- The final 5% of the total budget is expected to come through the fees-for-service offered by EACREEE in different forms and shapes (see chapter 6.2.1.2. for more information).

19 Resources (grants, donations) from energy ministries or other EAC member states institutions may be provided to EACREEE (e.g. ministries of water and agriculture due to the energy-water-food nex us). However, as these are difficult to predict, they are not shown in a separate category.

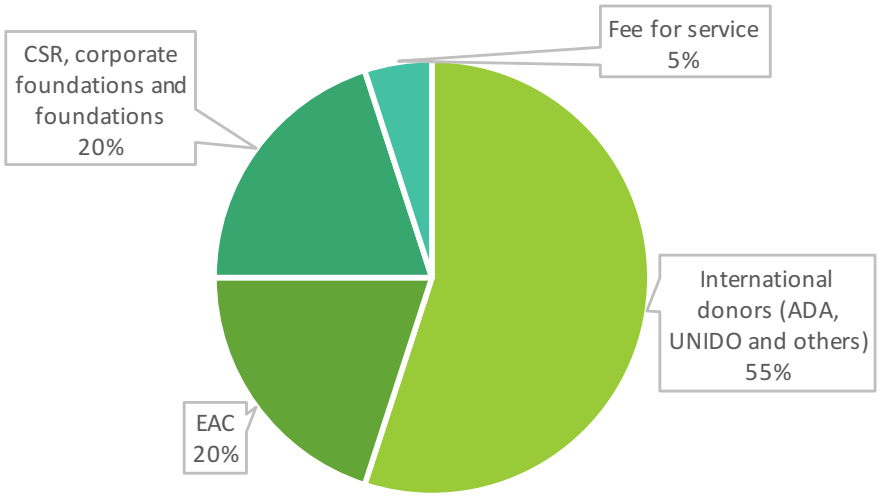

Figure 14. Share of Funding Sources

Based on these assumptions, the annual funding required by funding source is depicted in Figure 15.

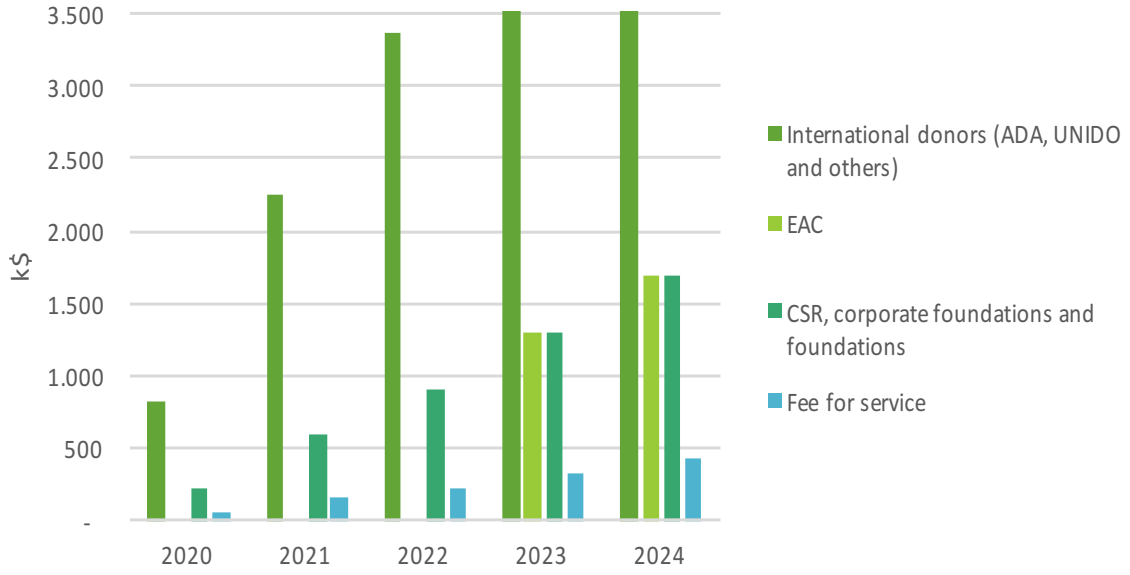

Figure 15. Funding by Source per Year

It should be noted that the yearly share of the contribution is likely to change in the course of the 5-year.

The figures show that securing initial support from EAC in 2023 will be an important landmark for the Centre in its future financial sustainability beyond 2025. The long-term growth of the EACREEE will be very much based on a strategic partnership with the EAC, plus this will contribute to enhancing the ownership of EACREEE by the EAC PS.

CSR, corporate foundations, and foundations will play a critical role in the near future of EACREEE´s financial sustainability. However, the level of business development efforts required by those entities must be paired by an intensive public relationship involvement by EACREEE´s program business developers and a clear strategic complementary intervention.

6.2.1 Partnership and Projects Financing Structure

Strategic areas - and their related proposed concept notes have been designed following similar patterns towards achieving market maturity status across a variety of thematic areas. While in the first stage of the interventions proposed EACREEE will build up in-house and external expertise, knowledge, policy frameworks, and capacities for the areas, the later stage of the strategic areas look towards levering enough private investment to enable the private sector to deliver the programmes at scale.

For this, teaming up with leading financing partners will be crucial for EACREEE. The Centre will lookout for the right level of organizational and strategic support from potential financing partners, able to contribute to EACREEE´s journey through the different stages of the programs. This trend is becoming a mainstream one in international development and aims to ensure important financing decisions are integrated rightly in the development and delivery of the suggested programs.

EACREEE will not just act as a funding recipient from donor partners but will become a thought leadership and strategic platform where international partners will be provided room and space for discussion and contribution. This will enhance donors' and partners´ ownership of EACREEE´s decisions and increase chances for the Centre to secure longer funding terms.
Additionally, EACREEE could help establishing a dedicated regional EAC fund, meant to support EACREEE's mission, objectives, and projects.

6.2.2 Generating Revenues

EACREEE seeks to play a role consistent with its public mandate along with the seven (7) proposed areas. To ensure its sustainability, increase its economic self-reliance and financial viability in the long-term, through borrowing from some public research and academic institutions' practices, EACREEE will offer the following services in a day-to-day basis. Some of the areas shall generate revenues for the Centre through a dedicated department to ensure clear separation between commercial undertakings and public services. The commercial services will follow government commercial business rules in terms of taxes, including VAT, etc. In some cases, where the clients may directly request EACREEE to offer some services (without going through the competitive bidding), the centre may consider offering such services at cost without making any profit but also without making losses in as long as the requested services fall within the EACREEE's mandate. Such practices have been widely exercised by several public universities and research institutions for a long time now.

Different potential clients comprise the entire public and private stakeholders in the RE&EE sector operating in the EA region. This includes national public agencies and institutions, bilateral and multilateral institutions, investors, private sector, academia, and NGOs.

- **Coordination, development, execution, and monitoring of regional programmes** and projects in the EAC sub-region along or in partnership with other stakeholders.
- **Funding mobilization for RE&EE programs and projects** in the EAC sub-region through calls for proposals and donor consultations, including co-funding provision foreseen within the strategic areas (chapter 4) for demand-driven initiatives, programmes, and projects by public, private or third sector stakeholders.
- **Service provision to clients**, including specific services under contract to private entities and fee-for-service activities.

- **RE&EE knowledge and data management and dissemination**: Through EACREEE´s Energy Access Explorer, the GIS data portal, but also through the expertise and data generated through the proposed areas and programs, the Centre will be able to provide access to a range of information, including RE&EE potential assessments, studies, analysis, national energy markets data, global market data, technology assessments, GIS maps, and related data.
- **RE&EE networking and capacity building agent**: Service offering under the organisation of conferences, workshops, including the convening force of EACREEE to invite and mobilise stakeholders to participate and collaborate, and the execution of the capacity building.
- **Advisory, advocacy, and consultancy services for RE&EE in East Africa andinternationally**: EACREEE serves as a source of analysis that advances understanding and knowledge among the region's policymakers, business leaders, non-governmental organizations, and academic institutions. Moreover, the Centre provides policy inputs to international and regional policy processes and interlinks with the RE&EE lobby and pressure groups.

While some of the previous generating revenue areas are crucial for EACREEE to grow and help the Centre ramping up their initial efforts in the RE&EE areas, some others remain to be tested. Additionally, EACREEE needs to build technical credibility around a variety of thematic areas before the centre can realistically offer content-based and strategic fee-for-services. For this, consultancy, knowledge, data, and other technical service provisions are intended to be offered once the technical added value is ready to be provided. While this is a reality for some areas, other strategic areas will need to be built up first.

6.2.3 Fund-raising Proposed Strategies

EACREEE will integrate both reactive and proactive fund-raising actions to its day-to-day operations.

Reactive fund-raising includes research of grant opportunities, particularly relevant in the first phase of the implementation of the BP, when EACREEE can leverage the opportunity of its current NGO status to apply to dedicated calls. For this, EACREEE will have to conduct daily research for existing calls for project proposals from domestic or international donors and institutions. EACREEE will check periodically large donors and countries' websites (e.g. EU[20], UK[21], France[22]) as well as multilateral donors' grant opportunities (e.g. the Global Environmental Facility (GEF) small grants programme[23]). For efficient and effective use of resources, EACREEE will register and use call for application portals (e.g. Devex[24]) as well.

When applying for these calls, it is important that EACREEE analyses its added value on a case-by-case basis and particularly try to avoid the risk of crowding-out local stakeholders that might as well be eligible. Instead, the Centre must promote partnership building with other institutions where EACREEE plays a partner and complementary role within a consortium, including both regional and international stakeholders. Institutional support provision by PS (e.g. letter of support) when engaging with donors and partners is likely to facilitate the obtention of the funds.

20 https://ec.europa.eu/info/research-and-innovation/funding/funding-opportunities/funding-programmes-and-open-calls_en
21 https://www.gov.uk/international-development-funding
22 https://www.afd.fr/en/are-you-looking-financing
23 https://sgp.undp.org/
24 https://www.devex.com/

Proactive fund-raising includes 1 to 1 engagement with institutional donors, partners, and foundations. To create opportunities for these types of engagements, EACREEE must increase its visibility in the sector both in the region and internationally, with the implementation of a tailor-made marketing and communication plan.
Key senior EACREEE staff will be invited to attend and speak at international conferences and EACREEE will organize annually or biannually a flagship regional event to promote the RE&EE market in the region while at the same time gaining visibility. An excellent example of this is the ECOWAS Sustainable Energy Forum organized by ECREEE every year. However, also less costly activities, such as organizing and actively participating in webinars and on-line discussions and creating and disseminating valuable documents and reports, will help EACREEE gaining visibility, particularly in the first years of the BP.

The increased visibility will allow the EACREEE to engage with like-minded partners, potentially interested in funding both its operation and programs. Once the contact is established, key senior staff will proactively follow-up with the potential partners, employing the concept notes in annex 1 as a reference but flexibly adapting them to the funding opportunities and the partners' funds requirements. EACREEE will continuously and proactively pursue the identified opportunities with potential partners, perseverance is a key for success in fund-raising processes that can last months and sometimes years before the funds are disbursed. Another crucial aspect is the flexibility in understanding the partners' funds requirements.
EACREEE will be smart in understanding not only each partner´s interest to finance but also what their limitations are. While the ideal partner is the one interested in long-term commitment and to become a core donor, thus contributing to both operation and programmatic budgets, EACREEE is interested, particularly in the first phase of implementation of the BP, to engage under any kind of reasonable funding arrangement, including but not limited to secondment of experts and in-kind contribution as well as direct funding of events and conferences.

Levering on existing strategic partnerships (e.g. UNIDO, ADA, or IRENA), EACREEE is well placed to organize closed-doors donor roundtables, where to showcase and present existing ideas to be funded and additional strategic support requested. For efficiency purposes, these roundtables could be organized as back-to-back events of major EACREEE´s organized events, proving leadership in the space.

In a sector where there is a significant increase in fund-raising competition, partnership building is key. The joint fund-raising with well-recognized partners will certainly add strategic and specific added value to the proposals.

As previously indicated, fees-for-services are potentially an interesting source of financing and EACREEE will explore innovative ways to engage in EAC regional consultancy opportunities. For this, EACREEE will analyse its added value on a case-by-case basis and particularly will try to avoid the risk of crowding-out local stakeholders that might as well be eligible to provide those services. EACREEE will, therefore, engage in selective consortiums and only when adding a clear regional added value towards the RE&EE sectors in the region. Few institutions and NGOs are dually implementing consultancy and programmatic work at the same time.

Some examples include the Alliance for Rural Electrification (ARE), Practical Action (PA), or GIZ. Some key lessons learned from their experiences are the importance of having enough and well skilled and qualified staff ready to devote to the consulting services (which are to be delivered under constrained conditions and tight schedules usually following very short notices) as well as the need of a clear institutional and accounting separation between the two arms of the

organizations to avoid any confusion with external stakeholders. While the overheads generated by these consulting services might have a limited impact on the overall budget funding, they will contribute positively to it if the cost-effectiveness of such resource investments is carefully managed.

7 Strengthening Cooperation

7.1 Collaboration with EAC Regional Stakeholders

7.1.1 East African Community (EAC)

Conscious of the need to harmonise the energy policy, legislation, regulation, and standards across the EA PS and continue progressing on the East African regional integration, EAC Secretariat initiated the creation of EACREEE in 2013. Today, EACREEE is registered at Makerere University as an NGO and has not yet been officially integrated as one of the EAC's Institutions.

Owing to the objective of EAC in creating EACREEE and considering the mandate of EACREEE, the institution must get integrated within EAC as one of the community centres. This would open more opportunities for EACREEE's growth in terms of visibility with wider continental and global partnerships and support, subsequently benefiting the community member states.

7.1.2 Eastern African Power Pool (EAPP)

EAPP was established in 2005 with the signing of an Inter-Governmental Memorandum of Understanding (IGMOU) by seven Eastern Africa countries, namely: Burundi, Democratic Republic of Congo (DRC), Egypt, Ethiopia, Kenya, Rwanda and Sudan. In a further development, EAPP was adopted as a specialized institution to foster power system interconnectivity by the heads of states of the COMESA region. Tanzania, Libya, and Uganda have joined EAPP in March 2010, February 2011 and December 2012 respectively. EAPP´s mandate is the optimum development of energy resources in the region and to ease the access to the electricity power supply to all people of the countries in the Eastern Africa Region through the regional power interconnections.

EACREEE´s objectives and mandate are aligned with EAPP´s Master Plan Scenario, from which the Centre would benefit from the experience of the power pool in covering the EAC PS.

7.1.3 Energy Regulators Association of East Africa (EREA)

EREA was founded in 2008 through the MoU entered into by the then Chief Executive Officers of the Energy and Water Utilities Regulatory Authority (EWURA) of Tanzania, Energy Regulatory Commission (ERC) of Kenya, Electricity Regulatory Authority (ERA) of Uganda, Rwanda Utilities Regulatory Authority (RURA) of Rwanda and a Representative of the Ministry of Energy and Mines of Burundi.

The primary function of the association has been to pool expertise in regulatory matters relating to the energy sector, including but not limited to facilitating the development of good policy proposals and legislation on energy regulation, in line with international trends and best regulatory practices. EACREEE would hugely benefit from the Association's experience.

7.1.4 EA Renewable Energy Federation (EAREF)

EAREF was launched in Kigali in 2018 at a meeting of East Africa Renewable Energy Associations [25].

25 https://energypedia.info/wiki/East_Africa_Renewable_Energy_Federation_Launched.

It is composed of the Burundi Renewable Energy Association (BUREA), Kenya Renewable Energy Association (KEREA), Rwanda Energy Private Developers (EPD), Tanzania Renewable Energy Association (TAREA) and Uganda Renewable Energy and Energy Efficiency Alliance (UNREEEA). It was given the mandate of working closely with East Africa Community (EAC) reflecting regional local interest.

EACREEE could collaborate with EAREF in the course of implementation of mutual obligations, supporting the private sector and taking its view into EACREEE´s programmatic intervention.

7.1.5 East African Science and Technology Commission (EASTICO)

EASTECO is a semi-autonomous institution of the East African Community (EAC) with the mandate of coordinating and facilitating the activities of the Partner States and national science and technology institutions (including the relevant National Commissions/Councils) as well as promoting the development and application of science, technology, and innovation.

7.1.6 African Union and African Energy Commission (AFREC)

AFREC was officially launched in 2008, in Algiers, at the end of a conference of African Ministers in charge of energy [26]. Being an African Union institution, it was created to ensure, coordinate and harmonizing the protection, conservation, development, rational exploitation, marketing and mainstreaming of energy resources on the African continent. It also has the mandate to foster the initiation and development of energy cooperation at the sub-regional and regional levels.

Among the functions assigned to AFREC[27], it is to assist in the development and utilization of new and renewable sources of energy. To this effect, EACREEE would benefit greatly from AFREC's experience and network in several areas including capacity building, staff secondment, studies related to Africa in general and East Africa in particular. The African Union Commission is already implementing a number of activities in collaboration with EACREEE and other SECs in Africa

7.1.7 Common Market for Eastern and Southern Africa (COMESA)

COMESA comprises 21 African Member States that came together to promote regional integration through trade and the development of natural and human resources for the mutual benefit of all people in the region31.

In 2019, COMESA endorsed the validation of the final draft of the RE&EE Strategy and Action Plan for from Eastern Africa Southern Africa and the Indian Ocean region (EA-SA-IO)[28].
One of the expected results of COMESA's undertakings is the enhancement of the RE&EE strategy, policies, regulatory guidelines, and actions to promote energy efficiency and facilitate investments as well as build capacity for renewable energy in the region[29].

26 https://afrec-energy.org/En/african_energy.html
27 Convention of the Energy African Commission, Lusaka, Zambia, on 11 July, 2001 https://afrec-energy.org/Docs/En/PDF/2012/convention_en.pdf
28 https://www.comesa.int/renewable-energy-strategy-validated/
29 https://www.comesa.int/services/enhancement-of-a-sustainable-regional-energy-market-in-eastern-africa-southern-africa-and-indian-ocean-region-esrem-esa-io/

Among stakeholders COMESA regards as relevant, two GN-SEC Centres, namely EACREEE and SACREEE, are listed. EACREEE can benefit from the vast experience of COMESA in terms of capacity building through its human resource base and especially its network on the continent.

7.2 Collaboration with EAC Partner States

Collaboration between EACREEE and EAC PS go beyond the network of NFIs (National Focal Institutions) as other relevant national public institutions and agencies may play a relevant role in the implementation of programmatic interventions and bilateral efforts. Additionally, a bilateral collaboration is expected between EAC PS and EACREEE, where the last is seen as the facilitator of a potential regional involvement and collaboration by EAC PS.

7.3 Collaboration with Private Sector

The private sector in the East African region has demonstrated to be key in contributing to some national governments implementing national strategies, including SDG7 and others. This is currently of high relevance for Kenya, Rwanda, or Tanzania, where the private sector has played a critical role to enhance the energy access rates or to innovate and pilot some ground-breaking innovative digital solutions. For this, EACREEE will lever on existing and new local and international private sector organisations to implement some of the proposed prioritized strategic programs (see chapter 4), and especially to reach transformation at scale.

EACREEE plans to leverage collaboration with the Private sector by[30]:

- Promoting RE&EE technology and services in the EA region by offering/facilitating targeted technical support to the EAC, national governments, local governments, civil society organizations, and private sector organization that contribute to the achievement of the SDGs.
- Mobilising private and public investment for the (local) private sector in small and medium-scale technologies and services (e.g. testing innovative productive uses of energy, services for displaced settings, testing market readiness in electric cooking. Innovative funding provision will also be tested, including RBF models).
- EACREEE through EAREF could strengthen its collaboration with its member associations (BUREA, EPD, KEREA, TAREA, and UNREEEA) or the Africa Mini-grid Developers Association (AMDA).
- Provision of capacity building in new topics where private sector is requested.

7.4 Collaboration with Academia and Civil Society

Based on the initial aim underwritten under EACREEE´s Strategic document to act as a trainer of trainers and to collaborate with existing relevant actors to help to advance the prioritized programs, EACREEE is well placed to collaborate with relevant actors and, as stated in the same Strategic document, to build on existing academic resources in order to support the progress of the prioritized strategic actions.

On this line, some actions would include capacity building in energy-saving devices including Improved cookstoves and other clean cooking devices (e.g. Electric cooking, biogas or LPG), recent technological advances (e.g. Pay as you cook or bank digital services) including relevant

30 STRATEGIC PLAN (2019-2023), EACREEE, https://www.eacreee.org/sites/default/files/documents/files/Strategic%20Plan%20%282019-2023%29%20approved.pdf, March 2019

technical, financial off-grid and grid-connected RE electricity solutions (e.g. GMGs), innovative technologies and solutions (e.g. Electricity storage or waste to energy) and policy and regulatory aspects.

7.5 Collaboration with Development Partners

EACREEE will seek to mobilize funds for its activities from development partners, including bilateral and multilateral agencies and other international organizations[31] as well as from the EAC and eventually in-kind support from the rest of EAC PS in the mid-long-term. For this, EACREEE will initiate and maintain appropriate contacts with the relevant donor(s), and manage resource mobilization activities, including outreach activities to close the funding gap through building new and enhancing existing relationships with donors.

Beyond ongoing EACREEE´s partnership with UNIDO and ADA, other development partners that have an interest in EACREEE's activities include the WB, EUC, UNECA, AfDB, ENABEL, GiZ, ADF, Power Africa, MCC or DFID. This includes existing strategic partnerships with the International Renewable Energy Agency (IRENA), the International Solar Alliance, the International Centre for Hydropower or the Copenhagen Centre on Energy Efficiency. Additionally, new alliances and partnerships with international institutions and organisations will be needed to advance on the programmes and areas described in this BP.

7.6 Collaboration with Other Regional Sustainable Energy Centres

There is a network of regional organizations and international bodies focusing on similar fields and with closely similar objectives to those of EACREEE. Generally, their agenda includes exchange and collaboration with like-minded organizations. EACREEE can, therefore, utilize this wealth of potential collaboration to accelerate its agenda and development and find the right complementarities. Those organizations include: in South-Sahel Africa, ECOWAS Regional Centre for Renewable Energy and Energy Efficiency (ECREEE) and SADC Centre for Renewable Energy and Energy Efficiency (SACREEE), in the Arab region, the Regional Centre for Renewable Energy and Energy Efficiency (RCREEE)[32], in the Caribbean region, the Caribbean Centre for Renewable Energy and Energy Efficiency (CCREEE)[33], in the Pacific region, the Pacific Centre for Renewable Energy and Energy Efficiency (PCREEE)[34], in Central America, the SICA Regional Centre for Renewable Energy and Energy Efficiency (SICREEE)[35], and in the Hindu Kush Himalaya region, the Regional Renewable Energy and Energy Efficiency Centre for the Hindukush-Himalaya (REEECH)[36].

7.7 Collaboration with National Focal Institutions (NFIs)

With the establishment of the EACREEE, a network of NFIs was also created, aiming to support the implementation of EACREEE´s activities, hence interlinking EACREEE´s Secretariat with all EAC PS. The purpose of the NFIs network is to increase the impact, ownership, and effectiveness of programmes, projects, and activities developed, coordinated, co-funded, and/or implemented

31 STRATEGIC PLAN (2019-2023), EACREEE, https://www.eacreee.org/sites/default/files/documents/files/Strategic%20Plan%20%282019-2023%29%20approved.pdf, March 2019
32 https://www.rcreee.org/
33 https://www.ccreee.org/
34 https://www.pcreee.org/
35 https://www.sicreee.org/
36 http://www.icimod.org/?q=33317

under the leadership of the EACREEE[37]. NFIs act as EACREEE´s focal points in the country, channelling, and sometimes implementing EACREEE´s interventions at the national level.

7.8 Collaboration with EACREEE Technical Advisory Committee

EACREEE´s technical advisory board is composed of NFIs coordinators and high technical representative members of EAC Partner State agencies and hence, it is a crucial body in the decision-making process of EACREEE´s technical decisions. For this reason, the collaboration between the BoD and the Technical Advisory Committee is utterly important.

To broaden the collaboration scope and transparency provided by the Technical Advisory Committee, EACREEE will invite a diverse range of EAC partner state representatives as well as a minimum representation of civil society, private sector, and academic representatives.

37 STRATEGIC PLAN (2019-2023), EACREEE, https://www.eacreee.org/sites/default/files/documents/files/Strategic%20Plan%20%282019-2023%29%20approved.pdf, March 2019

8 Monitoring and Evaluation

8.1 Quality and Appraisal Framework for the Technical Operations

BP's quality and appraisal framework consist of a qualitative and a quantitative assessment. It presents the progress of the planned activities in accordance with the stated schedule and explains any occurred unforeseen modification or delays.

Quantitative assessment

The quantitative assessment follows up on the progress in the implementation of the Business Plan, particularly programmatic and operational budget, staff development, and funding.
Apart from that, quantifiable deliverables of activities defined under the seven strategic areas must be tracked and when possible aggregated (e.g. numbers of conferences organised, number of downloads of relevant documents from EACREEE´s website or participants in workshops and conferences).

Qualitative assessment

The qualitative assessment follows up on the execution of the activities (i.e. evaluating if the defined deliverables – for instance, reports to be published or policy documents to be approved – were available on time and with the right quality).

It will be evaluated internally by the Programme Director as well as a peer-Project Manager and qualitative assessments will be produced as per if referred activities and deliverables did achieve the changes and impacts they aimed to (e.g. a strategic policy report did change the policy views of national stakeholders or did help shaping a policy later); for external evaluation, the Programme Managers request feedback from external stakeholders (donors, national NFIs, partners in the programme implementations) which is reported back to the Programme Director who, together with the Programme Managers, will define measures and take decisions accordingly for continuous improvement of EACREEE and its programmes.

Moreover, the qualitative assessment includes the critical review of the progress made with regards to the outcomes defined in the six work areas:

- Clean and sustainable cooking and heating practices are dominating, and the use of biomass largely decreased in the region, resulting in reduced stress on the environment and improved health conditions.
- To enhance the competitiveness of manufacturing industries in the EAC PS while reducing GHG emissions.
- By 2030 Enough public and private sector financing has been mobilized to achieve universal energy access in off-grid areas.
- Policy and financial incentive frameworks to promote energy access through off-grid services in displaced and hosting communities established.
- EACREEE is a "NEW TECHNOLOGIES" regional hub.

- Ensure that the RE development and use in the region meets the member states' social-economic development plans in a sustainable manner, small and medium enterprises (SMES) in RE flourishing in the region.

In addition, cross-cutting goals include:

- Contributing to achieving gender balance.
- Contributing to the development of the EAC in accordance with the Sustainable Development Goals.
- Contributing to the deployment of RE technologies and services as well as the implementation of EE measures.

Frequency

Quantitative figures and qualitative developments will be tracked every quarter and reported to the BoD twice per year, with a complete annual status report at the end of the business year, and a shorter mid-year report which highlights key achievements, main challenges and suggested corrective measures.

Next to an annual EACREEE internal appraisal meeting, the EAC national focal points and other stakeholders will be interviewed to give their feedback on how much EACREEE contributed to getting closer or achieving these outcomes. The findings are included in the annual status report.

8.2 Logical Framework Matrix/Results Framework

The results of EACREEE´s activities must be monitored and tracked following a results framework. It contains the outputs, activities and deliverables (means of verification) of the proposed six strategic areas (see annex 1. for the 7 programme concept notes) together with the expected schedule indicating by which year the activity must be performed. For each activity, only one responsible person must be indicated, as well as any additional tracking information and comments.

Additionally, the results framework must also include a "Financials &Staff Tracking" that allows comparing planned vs. actual numbers on an annual basis.

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RE and EE Strategic Programs Concept Notes

9 Annex 1. RE and EE Strategic Programs Concept Notes

9.1 Concept Note 1. Accelerating the Adoption of Clean & Sustainable Cooking and Heating

Background

EAC countries continue to rely ostensibly on traditional biomass for cooking. Across the region, national data indicates the rely on traditional biomass is currently over 80% of the population, with a direct estimated 16,600 yearly premature death for Kenya (and 4,900 children)[38] and 6,000, 32,000, and 20,000 in the cases of Rwanda, Tanzania, and Uganda. Given the scale of the problem and the insufficient funds and resources mobilized in the region to end this problem, EACREEE seems to have a window of opportunity to play a major role in helping to solve it.

Shifting to cleaner cooking is a growing tendency in the EAC sustainable cooking sector. The recent increase in cleaner biofuels – charcoal/biochar, biodiesel, biogas, pyrolytic oil, ethanol –, cooking efficiency and recently, electric cooking solutions, show the range of alternatives in the space. With electrification rates growing in the EAC region, electric cooking looks like a game-changer that could facilitate clean cooking but also accelerate electricity access rates. Recent research shows a reduction of cost and a growing competitive price for electric cooking[39], an important tendency that could offer a feasible solution for millions of African households over the coming years.

With the use of biomass for power generation and transportation under the spotlight due to the already overexploited resources and additional negative environmental and health effects, the *promotion and extension of cleaner fuels, coupled with growing electric cooking seems to be the way forward.* The *efficient use* of bioenergy where it cannot be substituted and the *promotion of new and innovative sustainable cooking technologies* (e.g. electric cooking or commercial biogas solutions) should be in the focus to gradually transition towards a truly sustainable, inclusive, affordable & decarbonised energy system.

Goal

The goal of this program is improving the situation of unsustainable cooking practices that have negative effects on health and the natural environment as well as to ensure sustainable use of bioenergy resources.

In the long run, the programme will support the transition towards sustainable and efficient cooking and heating practices.

Expected Results and Outcomes

Clean and sustainable cooking and heating practices are dominating, and the use of biomass largely decreased in the EAC region,

38 Clean Cooking Alliance (CCA), https://www.cleancookingalliance.org/country-profiles/focus-countries/4-kenya.html

39 Based on the report "Beyond the Fire" or the research generated under the MECS program.

resulting in reduced stress on the environment and improved health conditions.

Indicators

- Cleaner biofuels and electric cooking strategy and goals defined.
- Cleaner biofuels, including electric cooking knowledge site/repository implemented.
- Pilot project concepts designed, funded ,and developed.

Main Actors

EAC Secretariat (EACREEE) in collaboration with the EAC Partner States, national institutions (research & investment), national and international private sector associations, developers, banks & DFIs.

Estimated Budget and Duration

Duration		5 years
Budget (Total)		1.665.000 $
Budget per cross-cutting area	Policy Support	115.000 $
	Knowledge Management	30.000 $
	Capacity Building	50.000 $
	Project Development and Financing	1.370.000 $
	Innovation and Entrepreneurship	100.000 $

9.2 Concept Note 2. Improving EE in the Built Industrial Environment

Background

According to the International Energy Agency (IEA), the industry sector is responsible for 36% of global final energy consumption and 24% of direct total CO2 emissions[40]. However, if the indirect contribution is included (e.g. emissions from electricity generation employed in the industrial process) the total (direct and indirect), industries contribute about 37% of the global greenhouse gas emissions. This shows that there are large opportunities for a reduction in greenhouse gases emissions through improving EE in the manufacturing industries.

The East African region generally still has very low industrialization levels and the industrial sector contributes to less than 10% of the total primary energy consumption. However, since the region is embarking on implementing a very ambitious policy (the East African Community Industrialisation Policy 2012 – 2032), the industrial sector is expected to grow rapidly. However, most of these striving industries generally employ old and inefficient technologies, which result in very high industrial energy intensities.

Goal

To enhance the competitiveness of manufacturing industries in the East African Community (EAC) Partner States while reducing GHG emissions by improving and harmonizing national policies and regulatory frameworks and institutional capacity building for industrial EE and the implementation of the energy management system.

Expected Results and Outcomes

Regional mechanism and platform are established to coordinate actions on improvements of the industrial EE in EAC Partner States.

Indicators

- Enhanced enabling environment to promote investments in industrial EE.
- Industries in the EAC region have adopted Industrial Energy Management Standards compatible with ISO 50001.
- Energy savings achieved GHG emissions reduced through EE Investments.
- The capacity of Energy Service Companies (ESCOs) and Energy Management Professionals enhanced.

Main Actors

EAC Secretariat (EACREEE) in collaboration with the EAC Partner States, national institutions (research & investment), national and international private sector associations, developers, banks & DFIs.

Estimated Budget and Duration

Duration	3 years
Budget (Total)	1.250.000 $

40 (Energy Technology Perspectives 2017).

9.3 Concept Note 3.
Promoting Capacity Building & Investment in Electrification via Clean Energy Mini-grids & Solar Home Systems

Background

EAC countries suffer generally from low national electrification rates, a problem exacerbated in rural areas where access to electricity is extremely low: South Sudan (1%), Burundi (6%), Rwanda (13%), Tanzania (33%) or Uganda (23%).

Taking yet the low electrification rates figures across the sub-region and at the same time the growing interest from the local private sector to tap on the market opportunity of supplying electricity services to the un-served population in rural areas, EACREEE is well placed to suit the opportunity. This can be achieved by providing capacity building to (local) private developers, national and regional public agencies, and local technicians while facilitating project development and financing for systems based on off-grid renewable solutions.

Goal

The goal of this strategic program is to catalyse and lever private investment through capacity building and mobilizing on initial public funding & financing so that Clean Energy Mini-grid (CEMG) and other off-grid local private sector companies can expand their business operations and reach scale in the off-grid market segment. By achieving economies of scale, the price of off-grid electrification will significantly fall permitting off-grid solutions and services to reach out to the last mile and help to achieve universal access to electricity under current EA national goals.

Expected Results and Outcomes

Enough public and private sector financing have been capacitated and mobilized to achieve universal energy access in EAC off-grid areas.

Additionally, local off-grid private sector companies are prepared to engage and secure finance from domestic and international investors. Entrepreneurship Support Facility is established, and financing resources channelled.

Indicators

- Capacity building to local developers, agencies & local enterprises database.
- Project support Technical Assistance provided.
- Technical training and regional certification schemes.
- The investment plan validated and approved by NFIs.

Main Actors

EAC Secretariat (EACREEE) in collaboration with the EAC Partner States, private sector associations, local developers, banks & DFIs.

Estimated Budget and Duration

Duration		5 years
Budget (Total)		7.500.000 $
Budget per cross-cutting area	Policy Support	120.000 $
	Knowledge Management	25.000 $
	Capacity Building	300.000 $
	Project Development and Financing	7.055.000 $

9.4 Concept Note 4. Ensuring Inclusive & Sustainable Energy Access in Situations of Displacement

Background

According to UNCHR, there are nearly 70.8 million displaced people around the world. In East Africa and the Horn of Africa regions alone, an estimated 8.1 million remained internally displaced and 3.5 million refugees and asylum-seekers are hosted in the region. According to the Moving Energy Initiative[41], an estimated 80% of the 8.7 million displaced people who currently live in refugee camps have minimal access to modern sources of energy, with a high dependence on traditional biomass (e.g. firewood and charcoal) for cooking while having no access to electricity.

And yet, the interventions undertaken in refugee camps follow a piecemeal approach, lack of consistency and coordination, and in best cases employ dubious approaches that rarely drive to sustainable and transformative pathways.

Goal

Piloting innovative and sustainable energy access services in displaced communities through direct support to local enterprises will generate knowledge, experience, and momentum for the local and international private sector to start transforming local displaced settings and energy-related markets. Coupled with an active mobilization of international public and private investment, EACREEE will also play a central role in boosting a regional policy dialogue, improving the national DRE enabling environments, and generating additional interest and growth in financing provision for the displaced people.

Expected Results and Outcomes

Policy and financial incentive frameworks to promote energy access through off-grid services in displaced and hosting communities established.

Indicators

- Regional off-grid energy access in displaced and hosting communities' road map validated and published.
- Off-grid energy access best practices in displaced and hosting communities´ publication created and published.
- Investment plan and pilots delivered.

Main Actors

EAC Secretariat (EACREEE) in collaboration with the EAC Partner States, local and international developers, banks & DFIs.

Estimated Budget and Duration

Duration		5 years
Budget (Total)		3.525.000 $
Budget per cross-cutting area	Policy Support	165.000 $
	Knowledge Management	15.000 $
	Project Development and Financing	3.130.000 $
	Innovation and Entrepreneurship	215.000 $

41 https://mei.chathamhouse.org/

9.5 Concept Note 5.
Fostering of a Lighthouse of new Technologies & Solutions - Storage, Digitalisation, Innovative RET & Circular Economy

Background

While some of the Partner States are strategically evolving towards a more dynamic and digital society (e.g. Rwanda or Kenya), there is a lot to learn and share with the rest of EAC partner states and from international experiences. For this, starting to build internal knowledge and capacity within EACREEE but also regionally around important upcoming technological opportunities and solutions is important as much as integrating them into the energy space.

Storage: Market growth in electrical storage has massively accelerated in recent years and battery prices keep on reducing and diversifying their raw materials. Coupled with the "electrification" of other energy sectors such as transport and cooking, it leaves storage as one of the most prominent technology markets in Africa.

Digitalization: Africa is undoubtedly benefiting from digitalization and customers are an important driving force to the market through mobile payments and customization of digital products (such as applications banking, energy, agriculture, and others).

Digitalization of African power grids will be an important transition in the next decade, as has already started in many countries in order to combat some of the challenges that some countries have been experiencing[42] (in particular in Sub-Saharan Africa) concerning real-time management, load-shedding and power cuts, transmission and distribution losses, load balancing, grid stabilization and dynamic pricing.

EACREEE is well placed to become the knowledge hub on new technologies and solutions and lead and shape the discussion, create awareness and build capacities among public and private stakeholders.

Goal

The objective of this program is to harmonize the uptake of new technologies across all the EAC countries, identify, disseminate and build local capacity on best practices and current state-of-art for each new technology among all members and become "the" one-stop-shop (regional knowledge hub) on new technologies and solutions

Expected Results and Outcomes

EACREEE becomes a regional knowledge hub and a broker for upcoming and relevant technological opportunities within EA, including but not limited to electrical storage, digitalization, innovative RET and circular economy by 2025.
Additionally, EACREEE provides market analysis and policy support around these topics.

Indicators

- Key markets strategy and goals defined, validated, and published.
- Full feasibility studies completed with a clear investment prospectus.
- Pilot projects funded, implemented and E&M undertaken through local developers.

Main Actors

EAC Secretariat (EACREEE) in collaboration with EAC Partner States, DFIs, and local academic and research institutions.
Estimated budget and duration

Estimated Budget and Duration

Duration		5 years
Budget (Total)		1.715.000 $
Budget per cross-cutting area	Policy Support	240.000 $
	Knowledge Management	120.000 $
	Capacity Building	175.000 $
	Project Development and Financing	1.000.000 $
	Innovation and Entrepreneurship	180.000 $

42 https://www.genewsroom.com/press-releases/ge-power-releases-whitepaper-digitization-energy-transmission-distribution-africa

9.6 Concept Note 6. Promoting Utility-Scale& Distributed Grid-Connect RE

Background

With rapid advances in RE reliability, efficiency and cost-competitiveness, Africa in general and EAC offer an opportunity to increase energy access and security without necessarily having the environmental and economic costs associated with fossil fuels.

Although RE targets have been set, there is a lack of clarity on how those targets are to be implemented, highlighting partner states' ambition rather than achievable goals. Kenya's 2013 plan of having 5,000 MW of renewable power capacity by 2016 has been hampered by financial constraints, inadequate infrastructure, and a lack of public buy-in. To date, only 586 MW of renewables has been added to the country's grid. Under its 2015 Energy Sector Strategic Plan 2013–2018, Rwanda set a target of adding 450 MW of power capacity by 2018, of which 200 MW was to be met with renewables. By end-2015 only 156 MW of installed capacity had been reached. Tanzania's 2014 Electricity Supply Industry Reform Strategy and Roadmap envisages adding 200 MW of wind, 100 MW of solar, and 200 MW of geothermal by 2025. Uganda is making good progress in meeting its target of increasing the share of RE in total energy consumption to 61% by 2017; by end-2014 the share of RE was 25%, up from 4% in 2007.

Accounted for 65% of the EAC region's total installed, grid-connected power generation capacity in 2015, as compared to 28.6% in the ECOWAS region and 23.5% in the SADC region. By the end of 2015, 3 gigawatts (GW) of the EAC's region's installed grid connected electricity came from RE.

The growing demand for energy, as well as new fossil fuel and RE discoveries in East Africa, document the critical moment that exists today to chart a course of sustainable or unsustainable regional growth and resource management. It is therefore important to examine the mix of energy resources currently in use and discuss energy resources that are available to supply energy sustainably across the community PS.

Goal

EACREEE must to take stock of the potential clean energy sources across the regional community going by the capacity, potential, and resource sustainability vis a vis the partner states' priority in the development plans of these resources and provide the necessary support accordingly.

Expected Results and Outcomes

Ensure that the RE development and its use in the region meets the member states' social-economic development plans sustainably manner. Additionally, to support small and medium enterprises in RE flourishing in the EAC sub-region.

Indicators

- Policy-based support to EAC PS.
- Accessible information portal with relevant RE data.
- Local experts capacitated.
- Financing mechanisms in place.
- Contracts with private small and medium entrepreneurs in RE.

Main Actors

EAC Secretariat (EACREEE) in collaboration with EAC Partner States, DFIs, and small and medium entrepreneurs in RE.

Estimated Budget and Duration

Duration		5 years
Budget (Total)		2.455.000 $
Budget per cross-cutting area	Policy Support	200.000 $
	Knowledge Management	130.000 $
	Capacity Building	160.000 $
	Project Development and Financing	220.000 $
	Innovation and Entrepreneurship	1.745.000 $

9.7 Concept Note 7. Enhancing Women & Youth Entrepreneurship & Employment in Sustainable Energy Businesses Within the EA

Background

EA sub-region still suffers from the endemic energy poverty, with yet a vast reliance on traditional biomass and insufficient access oo electricity and other modern energy sources. Socio-cultural dynamics and norms in the region still consider cooking, fetching water, or procuring firewood for the households, just to cite some, as chores for women and girls. They are responsible for the vital role they play in household energy supply, hence bearing more of the brunt of energy poverty. Moreover, the effects of climate change are further lengthening the distance travelled to fetch wood or water as this resource continues to grow scarce in areas climate affected regions.

Time invested in tedious activities has relevant personal, professional and social cost for women, depriving them and their communities of opportunities to improve their lives and future development and even putting their lives in risk, as many of them face sexual violence and harassment when having to walk long distances.

Goal

The current programme aims to close the gender gap & lack of opportunities for youth that exist in the RE&EE sector by addressing gender disparities at the supply side and the end-users so that the benefits of the EAC region's energy interventions are equally shared among men and women.

Expected Results and Outcomes

- Address gender inequality in energy access through innovative policy instruments.
- Create a critical mass of gender-aware policymakers and empowered women entrepreneurs and technicians.
- Bridge knowledge gaps among gender and energy practitioners.
- Transform business ideas in energy into real, commercially viable enterprises.

Indicators

- Awareness campaign strategy designed, validated, and established.
- Business fund created and delivered to support women& youth entrepreneurs.
- Training of trainers' workshops.

Main Actors

Collaboration with EAC Partner States, DFIs, gender, and youth expert institutions and entrepreneurs.

Estimated Budget and Duration

Duration		5 years
Budget (Total)		1.800.000 $
Budget per cross-cutting area	Policy Support	380.000 $
	Knowledge Management	90.000 $
	Capacity Building	330.000 $
	Project Development and Financing	1.000.000 $

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Annex 2
Framework Matrix Template
Financials & Staff Tracking

10 Annex 2. Framework Matrix Template Financials & Staff Tracking

	2020		2021		2022		2023		2024	
	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual
Program Budget										
1. Clean Cooking	95		225		415		415		515	
2. Energy Efficiency	50		150		300		350		400	
3. Clean Energy Mini-grids	5		375		1.280		2.245		3.595	
4. Energy for displaced people	75		270		565		1.050		1.565	
5. New Technologies and Solutions	70		440		385		470		350	
6. Utility-scale RE	70		305		650		705		725	
7. Women & Youth	10		400		380		580		430	
Total / year	**375**	**-**	**2.165**	**-**	**3.975**	**-**	**5.815**	**-**	**7.580**	**-**

Operational Budget										
1. Clean Cooking	29		45		68		90		113	
2. Energy Efficiency	43		68		101		135		158	
3. Clean Energy Mini-grids	43		68		101		135		158	
4. Energy for displaced people	29		45		68		90		105	
5. New Technologies and Solutions	14		23		34		45		53	
6. Utility-scale RE	29		45		68		90		158	
7. Women & Youth	14		23		34		45			
Prospective thematic areas	14		23		34		45		53	
Total	**214**	**-**	**338**	**-**	**507**	**-**	**676**	**-**	**797**	**-**

Funding Sources										
International donors (ADA, UNIDO and others)	817		2.252		3.362		3.570		4.634	
EAC	-		-		-		1.298		1.685	
CSR, corporate foundations and foundations	218		601		896		1.298		1.685	
Project finance	-		-		-		-		-	
Fee for service	**54**		**150**		**224**		**325**		**421**	

Technical vs. admin and senior vs. junior staff [FTEs]										
Technical senior staff (EAC funded)	3		4		6		9		11	
Technical junior staff (programme funded)	-		2		3		4		4	
Admin senior staff (EAC funded)	1		1		2		2		3	
Admin junior staff (programme funded)	-		1		1		1		2	
Total	**4**	**-**	**8**	**-**	**12**	**-**	**16**	**-**	**20**	**-**
Number of women - senior staff			3		4		5		6	
Number of women - junior staff			1		2		3		4	
Total	**-**	**-**	**4**	**-**	**6**	**-**	**8**	**-**	**10**	**-**

Results Framework				Timelines						
Outputs	Activities	Deliverable / Means of Verification	Responsibility	2020	2021	2022	2023	2024	Tracking: started, processing, finished	Comments on status with date
1. Accelerating Adoption of Clean and sustainable cooking and heating										
Output 1.1: New and innovative modern clean cooking solutions explored including electric cooking	1. Reach out to policy makers to raise awareness on opportunities of electric	Meetings with policy makers and NFIs documented								
	2. Define an electric cooking strategy and goals together with policy makers of	Electric cooking strategy and goals defined								
	3. Support – where requested by member states – the elaboration of	Policies and incentives defined								
	4. Collect information and evidence of electric cooking benefits, barriers and	Electric cooking knowledge site / repository								
	5. Organize workshops and/or side-events on electric cooking in the context of	Workshop/events organized								
	6. Develop concepts of pilot projects in electric cooking: a) urban pilot(s), b) mini-	Pilot project concepts developed								
	7. Search for and mobilize funding for pilot projects electric cooking solutions	Funding for pilot projects secured								
	8. Launch a monitoring and evaluation mechanisms for the pilot projects (2021-24)	Pilot projects started (and evaluated by year 2023)								
	9. Support the development and testing of innovative financing solutions,	Electric cooking financing solutions developed on a								
	10. Identify suppliers of electric cooking solutions and develop marketing strategy	Supplier and stakeholder network established								
	11. Convene with developers and suppliers of mini-grids and SHSs to	Stakeholder strategies developed (especially supply								

3. Promoting Capacity Building and Investment in electrification via clean energy mini-grids and standalone solutions

Outputs	Activities	Deliverable / Means of Verification	Responsibility	2020	2021	2022	2023	2024	Tracking: started, processing, finished	Comments on status with date
Output 1.1. Local off-grid private sector companies are prepared to engage and secure finance from domestic	A.1.1. Harmonization of off-grid policy and business enabling environment across the	Off-grid policy support workshops with EAC Partner								
	A.1.2. Contracting project preparation Technical Assistance (TA) to support local	TA support report								
	A.1.3. Promoting financial, business development and commercial capacity	Capacity building report and local enterprises data base								
	A.1.4 Capacity building provision to local off-grid companies on the topic of	Capacity building report and local enterprises data base								
	A.1.5. Coordination with national RE industry bodies (including international	Stakeholder coordination meeting minutes								
Output 1.2. Entrepreneurship Support Facility established, and financing resources channeled	A.2.1. TA contracting to design an Entrepreneurship Support Facility to	Investment plan draft								
	A.2.2. Validation and approval by the NFIs of the Entrepreneurship Support Facility to	Investment plan final document validated and								
	A.2.3. Undertake fund-raising activities with core and non-core international	TdR for the call for proposals								
	A.2.4. Call for proposals of co-investment grants and conditional subsidy schemes	Application documents								
	A.2.5. Mobilization of additional commercial finance through a credit line									
	A.2.6. Establishing a M&E unit to follow up off-grid awarded projects (2021)	Final evaluation report from awarded project								

3. Ensuring Inclusive and Sustainable Energy Access in Situation of Displacement

Outputs	Activities	Deliverable / Means of Verification	Responsibility	2020	2021	2022	2023	2024	Tracking: started, processing, finished	Comments on status with date
Output 1.1. Regional road map for off-grid energy in displaced areas approved	A.1.1. TdR for TA designed and TA available to develop a regional the off-grid energy	TA available								
	A.1.2. Agenda for Inception workshop and Kick-off meeting developed, and	Inception Workshop Agenda and Report								
	A.1.3. Regional off-grid energy access in displaced and hosting communities´ road	Draft road map								
	A.1.4. Regional off-grid energy access in displaced and hosting communities' road	Validation workshop report								
	A.1.5. Regional off-grid energy access in displaced and hosting communities' road	Published regional off-grid energy access in displaced								
Output 1.2. Regional investment vehicle established to support private sector in displaced communities	A.2.1. Publication of off-grid energy access best practices in displaced and hosting	Off-grid energy access best practices in displaced and								
	A.2.2. Drafting an investment plan for off-grid energy access in displaced and	Investment plan draft								
	A.2.3. Regional validation workshop to validate the drafted investment plan for	Investment plan final document								
	A.2.4. Approval of regional draft investment plan (2021)	Convening event report								
	A.2.5. Mobilization of a first grant scheme as result of the investment plan to support									
	A.2.6. Convening regional private sector and governments through the co-	TdR for the call for proposals								
	A.2.7. Designing the ToR and call for applications for private sector to pilot	Application documents								
	A.2.8. Contracting 1 staff to monitor and evaluate the projects awarded (2022)	Final evaluation report from awarded projects								

5. Lighthouse of new technologies and solutions (storage digitalization, innovative RET and circular economy)

Outputs	Activities	Deliverable / Means of Verification	Responsibility	2020	2021	2022	2023	2024	Tracking: started, processing, finished	Comments on status with date
Output 1.1: EACREEE	1. Reach out to policy makers to raise awareness on opportunities on new	1. Meetings with policy makers and NFIs documented								
Output 1.2: EACREEE is seen as a recognize leader	2. Define medium-term to long-term strategies on 2 key markets such as	2. 2 key markets strategy and goals defined								
	3. Support – where requested by member states – the elaboration of	3. Policies and incentives defined								
	4. Collect information and evidence on 2 of the new technologies, their benefits,	4. Workshop/events organized with clear								
	5. Organize workshops and/or side-events focusing on any of the new	5. 2 full feasibility studies completed with a clear								
	6. Issue 2 call for proposals (CfP) for "Feasibility Studies" on pilot projects of	6. Funding for pilot projects secured								
	7. Search for and mobilize funding for pilot projects (2021-23) that may derive	7. Pilot projects started by 2023								
	8. Launch a monitoring and evaluation mechanisms for the pilot projects (2023-24)	8. Supplier and stakeholder network								
	9. Evaluate market readiness and economic opportunities for suppliers.	9. Evaluated data on the 2 pilot projects (as a result								
	10. Convene with developers and suppliers of new technologies (waste-to-	10. Meeting minutes and next steps defined								

6. Promoting utility scale and distributed grid-connect RE (including East Africa component of the African Clean Energy Corridor)

Outputs	Activities	Deliverable / Means of Verification	Responsibility	2020	2021	2022	2023	2024	Tracking: started, processing, finished	Comments on status with date
Output 1.1. Priority RE initiatives within the region with clear strategies and targets	A.1.1.1. ToR of consultancy bureau to convey the policy evaluation report (2020).	ToR documents								
	A.1.1.2. Regional policy assessment report implemented aiming to evaluate best	Contract with the consultant bureau								
	A.1.1.3. Regional policy assessment report validated and approved by EAC and EAC	Regional policy assessment report								
	A.1.1.4. Support provision to EAC partner states to adopt best policies and RE	Validation Workshop report and Agenda								
Output 1.2. Geographical areas with high RE resource potential	A.1.2.1. Taking stock of all the key, relevant and necessary information from the region	Policy-based support provision to EAC partner								
	A.1.2.2. Creating an information portal where member states would access it as	Mapping of RE resources in the region								
	A.1.2.3. Partnership with external relevant organizations that undertake similar	Signed partnership Agreements (e.g. MoUs, etc)								
Output 1.3. Capacities for National and	A.1.3.1. Assessment of needed capacity building for national and regional	Information portal with relevant RE data to be used								
	A.1.3.2. Capacity building for public officers and public and private operators to plan,	Lists of RE local experts capacitated								
Output 2.1. Public and private sector	A. 2.1.1. Having in place enabling frameworks for investment that open	Financing mechanisms in place								
	A.2.1.2. Clouded-in private sector with clear investment incentives to come in with own	Private sector workshop and agenda								
Output 2.2. National and regional young entrepreneurs	A. 2.2.1. Encouraging member states to come up with innovative ways of engaging	MoUs with existing and established incubators								
	A.2.2.2. Designing the ToR and call for applications for young-led private sector	ToR document								
	A.2.2.3. Contracting 1 staff to monitor and evaluate the projects awarded (2022-2024).	Contracts with private small and medium entrepreneurs								

7. Enhancing Women and Youth Entrepreneurship and Employment in Sustainable Energy Businesses within the East African Regions

Outputs	Activities	Deliverable / Means of Verification	Responsibility	2020	2021	2022	2023	2024	Tracking: started, processing, finished	Comments on status with date
Output 1.1. Gender and youth in Energy Programs and Projects mainstreamed	A.1.1. Development of regional policy for gender mainstreaming and youth in energy	Regional policy								
	A.1.2. Organize regional policy validation and adoption meetings (2021)	Inception Workshop; agenda and report								
	A.1.3. Organize national stakeholder consultations (2022)	Consultations								
	A.1.4. Develop national strategies and organize national validation workshops,	Validation workshop report								
	A.1.5. Organize training workshops for policy makers and other stakeholders on	Trainings workshops for policy makers and other								
	A.1.6. Develop national gender and youth awareness strategy targeting policy	Awareness campaign strategy								
Output 2.1. RE&EE women's Business	A.2.1. Together with other regional and national institutions, develop and publish	Case Studies publication								
	A.2.2. Design, establish and develop a Business Fund call for proposals for	Design of business fund; proposals and project								
Output 2.2. Women's Technical and managerial and	A.2.3. Develop training materials, guidelines for developing clean energy	Training materials and guidelines								
	A.2.4. Organize training of trainers' workshops –regional and national	Training agenda and lists of participants								
	A. 2.5. Identify/select training centres in the region and outside the region.	MoUs and partnership agreements signed with								

	2020		2021		2022		2023		2024	
	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual
Program Budget [k$]										
1. Clean Cooking	95		225		415		415		515	
2. Energy Efficiency	50		150		300		350		400	
3. Clean Energy Mini-grids	5		375		1,280		2,245		3,595	
4. Energy for displaced people	75		270		565		1,050		1,565	
5. New Technologies and Solutions	70		440		385		470		350	
6. Utility-scale RE	70		305		650		705		725	
7. Women & Youth	10		400		380		580		430	
Total / year	**375**	-	**2,165**	-	**3,975**	-	**5,815**	-	**7,580**	-

Operational Budget [k$]										
1. Clean Cooking	29		45		68		90		113	
2. Energy Efficiency	43		68		101		135		158	
3. Clean Energy Mini-grids	43		68		101		135		158	
4. Energy for displaced people	29		45		68		90		105	
5. New Technologies and Solutions	14		23		34		45		53	
6. Utility-scale RE	29		45		68		90		158	
7. Women & Youth	14		23		34		45			
Prospective thematic areas	14		23		34		45		53	
Total	**214**	-	**338**	-	**507**	-	**676**	-	**797**	-

Funding Sources										
International donors (ADA, UNIDO and others)	817		1,652		2,465		3,570		4,634	
EAC	-		601		896		1,298		1,685	
CSR, corporate foundations and foundations	218		601		896		1,298		1,685	
Project finance	-		-		-		-		-	
Fee for service	54		150		224		325		421	
Total	**1,089**	**-**	**3,003**	**-**	**4,482**	**-**	**6,491**	**-**	**8,425**	**-**

Technical vs. admin and senior vs. junior staff [FTEs]										
Technical senior staff (EAC funded)	3		4		6		9		11	
Technical junior staff (programme funded)	-		2		3		4		4	
Admin senior staff (EAC funded)	1		1		2		2		3	
Admin junior staff (programme funded)	-		1		1		1		2	
Total	**4**	**-**	**8**	**-**	**12**	**-**	**16**	**-**	**20**	**-**
Number of women - senior staff			3		4		5		6	
Number of women - junior staff			1		2		3		4	
Total	**-**	**-**	**4**	**-**	**6**	**-**	**8**	**-**	**10**	**-**


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