Proceedings of the Workshop on Enhancing the Capacity of CSOs to Play a Meaningful Role in the Realization of Energy Access for Sub-Saharan Africa

(White Sands Hotel, Dar es Salaam, Tanzania)

17-18 November 2022

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ABBREVIATIONS

AfCFTA	African Continental Free Trade Area
API	Application Programming Interface
COP	Conference of Parties
COVID	Corona Virus Immune Disease
CSO	Civil Society Organisations
DFI	Development Financial Institution
EAE	Energy Access Explorer
EE	Energy Efficiency
EGI	Energy Governance Initiative
FI	Financial Institution
GIS	Global Information System
ICT	Information and Communication Technologies
IEP	Integrated Energy Plan
M&E	Monitoring and Evaluation
MC-E4I	Mercy Corps and Energy for Impacts
MoE	Ministry of Energy
NDC	Nationally Determined Contribution
NZE	Net Zero Emission
PUE	Productive Use of Energy
PURE	Productive Use of Renewable Energy
R&D	Research and Development
RE	Renewable Energy
REA	Rural Energy Agency
SDG	Sustainable Development Agency
SE4ALL	Sustainable Energy for All
SEF	Sustainable Energy Forum
SESCOM	Sustainable Energy Services Company
SME	Small and Medium Enterprises
SSA	Sub-Saharan Africa
TA	Technical Assistance
TANESCO	Tanzania Electric Supply Company
TANGSEN	Tanzania Gender and Sustainable Energy Network
TAREA	Tanzania Renewable Energy Association
TaTEDO-SESO	TaTEDO –Sustainable Energy Services Organisation
USA	United States of America
WRI	World Resources Institute

1.0 INTRODUCTION

While significant progress has been made over the last decade in delivering access to energy, the 2021 Energy Progress Report released by the International Energy Agency (IEA), the United Nations and other agencies paints a worrying picture. Although current global energy access rates have reached 90%, 760 million people still live without electricity. 75% of those currently unelectrified reside in sub-Saharan Africa (SSA), with the majority (84%) found in the rural parts. This has far-reaching implications for the region's development and realization of its economic growth.

Access to clean energy is central to the delivery of social and economic growth. Without electricity, delivery of the region's development ambitions as captured in Africa Union's (AU) agenda 2063, including the realization of the goals of the African Continental Free Trade Area (AfCFTA) will not be possible. Driving SSA's rural economies through enhanced agricultural production, as well as the growth of industries to promote livelihood and increased resilience for the rural economies, will require massive investment in energy access interventions, particularly in the productive use sectors. Additionally, access to affordable and reliable energy for community facilities including schools and health clinics will be central to the delivery of needed services, thus impacting positively the well-being of underserved populations.

2.0 ROLE OF CSOs IN REALIZATION OF ENERGY ACCESS AMBITIONS IN SSA

Civil Society Organizations (CSOs) have a critical role to play in the realization of the energy access agenda – both in influencing policy and regulatory changes. However, limited technical understandings of energy planning by most of these organizations inhibit their full participation, particularly when provided with such opportunities.

As such, building the capacity of these institutions and their networks on energy planning, including an in-depth understanding of the development of Integrated Energy Plans (IEPs) – including the place of quality data in energy planning; the multiple benefits of Productive Use of Renewable Energy (PURE) – realization of energy access goals, increasing energy consumption, promoting SSA's economic growth etc; and understanding of the governance of electricity sector for increased accountability and delivery of quality services; and, the need to triple funding efforts for energy access sector by development partners, including Multi-lateral Development Banks for increased investment in energy access – among others, will be critical to the realization of SSA's energy access ambitions.

WRI, in collaboration with TaTEDO-SESO, mobilized key CSOs working in the energy access, as well as climate change space, built their technical expertise to better understand and engage with the energy access planning and financing space. The capacity-building exercise focused on five key areas:

i. Broad understanding of the energy planning process in Tanzania (and around SSA), and the critical role of data in the development of inclusive and data-driven integrated energy planning process
ii. The critical role of Productive Use of Renewable Energy (PURE) in promoting increased access to, and consumption of clean energy, as well as enhancing rural economic growth & development
iii. Understanding the Energy Sector Governance – using the Electricity Governance Initiative (EGI) lenses
iv. Financing energy access for development
v. The role of, as well as how CSOs can engage with, and influence the above areas

3.0 WORKSHOP

3.1 Objectives

The CSOs workshop aimed:

a) To build the technical expertise of African CSOs on matters of energy access, including the development of inclusive and Integrated Energy Plans (IEPs), PURE, energy access financing, and electricity sector governance
b) To identify concrete and strategic opportunities for CSOs to engage with, and influence energy access planning and financing at sub-national, national, and regional levels
c) To craft a strategy for engagement and influencing

3.2 Venue and Participation

The two-day capacity building exercise took place between 17thto 18th November 2022 at White Sands Hotel Dar-es-salaam, Tanzania. The event targeted around 40 representatives drawn from:

i. Advocacy-oriented CSOs (working in agriculture and climate change)
ii. Organizations involved in implementation work
iii. Youth and women's organizations
iv. Community-based organizations
v. Local research organizations

While most of the representatives came from Tanzania, the event also brought a few additional participants from other Southern African regions. The full list of the targeted institutions is included in annex 2.

3.3 Methodology

The workshop brought together Civil Society Organisations (CSOs) for a training workshop on Enhancing the Capacity of CSOs to Play a Meaningful Role in the Realization of Energy Access for Sub-Saharan Africa. The workshop focused on exploring the possibility that the CSOs can use to realize and influence the development of Energy Access in their country. WRI and TaTEDO performed this workshop to strengthen the capacity and skills of CSOs for influencing increased access to energy services by improving the environment in which CSOs operate, to strengthen the effectiveness of CSOs by improving their accountability, as well as to share information on the existing civil society.

The workshop was therefore distributed over two days, each with four parts. The workshop sessions started from 9:00 to 16:30 hours for all participants. This was on the first day distributed into opening session, papers on energy access, energy planning and energy governance, group discussion and closing of the first day. The second day started with the recapitulation of the first day, the sessions on productive use of energy and unlocking finance for energy access, panel discussion, group discussion and closing session. To achieve the set of objectives stipulated for this workshop, the timetable was prepared to lead discussions among the participants (see Annex I). The workshop papers were presented and discussed through plenary sessions.

4.0 OPENING SESSION

4.1 Preamble

First of all, we are here as CSOs to discuss energy access in Sub-Saharan Africa. The workshop is organized by the World Resource Institute (WRI), in collaboration with the TaTEDO-Sustainable Energy Organization (TaTEDO-SESO) and in this workshop we are talking about only one sector which is the energy sector. The theme of the workshop is enhancing the Capacity of CSOs to Play a Meaningful Role in the Realization of Energy Access for Sub-Saharan Africa. Although Sub-Saharan Africa is the habitat of more than a billion people and comprises of 53 countries, only six countries of Kenya, Tanzania, Ethiopia, Malawi, Zambia and Zimbabwe, have been represented in this workshop.

Sub-Saharan Africa is a diverse region offering human and natural resources with the potential to yield inclusive economic growth in the region. The region is composed of low, lower-middle, upper-middle, and high-income countries. Economic growth in Sub-Saharan Africa (SSA) is set to expand by 3.6 percent in 2022.

Concerning Energy Access in Sub-Saharan Africa,

- This is a region, which is rich in energy resources (solar, hydro, wind, biomass, gas, etc) but most of them are unexploited,
- This is Region with low Economic growth at an estimated 2.8% percent
- Sub-Saharan Africa (SSA) has the lowest energy access rates in the world.
- Electricity reaches only about half of its people, while clean cooking only one-third;
- 890 million cooks with traditional fuels (mostly biomass) and inefficient traditional technologies.
- Most women and children are silently dying due to indoor air pollution
- This dramatic lack of energy access suppresses economic growth and sustainable development in the region

Despite promising technology and market trends, today's policies and patterns of finance and investment are off-track. They do not recognize the transformative potential of modern energy solutions to deliver clean energy access, nor do they incorporate the potentially huge social and economic benefits of electricity access and clean cooking

Solutions exist in the form of centralized and decentralized energy systems (both electricity and fuels), and clean cooking options range from improved biomass to LPG and from LPG to Electricity. What is needed are appropriate data/information and proper energy planning from the national to the local levels. CSOs have a critical role to play in the realization of the energy access agenda, both in influencing policy and regulatory changes, providing research, capacity building and awareness raising on how to move out of this situation.

TaTEDO and WRI would like to welcome all participants from Dar es Salaam, mainland regions and those who have come from Malawi, Zambia, Kenya, Ethiopia and Zimbabwe for this training and to discuss energy access in SSA.

4.2 Overview of the Workshop (*Benson Ireri, Africa Lead (EAP), WRI)*

Good morning

Welcome to the Workshop on Enhancing the Capacity of CSOs to Play a Meaningful Role in the Realization of Energy Access for Sub-Saharan Africa. It is indeed a great honour for me and the other WRI and TaTEDO staff to welcome you.

It is great to see several participants from Tanzania and other Southern African Countries. WRI is working with TaTEDO on a project for enhancing local-level planning and Mango Huzi Solar Water pumping and Irrigation Project. Among the activities, WRI planned a workshop on CSOs Capacity Building training on Energy Access. We know that many of you have travelled great distances to be here with us today, and we are privileged to have you join us.

Access to clean; reliable energy is one of the greatest challenges to sustainable development in Africa which also make it a very important component for bringing economic growth in Sub-Saharan Africa. Africa is a continent which has low access to clean energy services. More than two third of people who

are living without electricity and clean fuels for cooking in the continent are found in Sub-Saharan Africa. The Covid-19 crisis in SSA put an end to several years of continued progress and worsened the already low energy purchasing power of households in Sub-Saharan Africa.

Efforts for universal access to clean energy in SSA are very important and the appropriate solutions for most of the off-grid areas are decentralized systems, which will play an important role to meet the SDGs.

CSOs have roles to play to leverage the situation and increase access to sustainable energy services. Thank you for coming to this important workshop to discuss and create capacity for the realization of energy access in SSA.

4.3 Welcome Remarks (*Eng E.N. Sawe-TaTEDO-SESO)*

- *Representative of the Government,*
- *Friends, Distinguished participants,*
- *Ladies and Gentlemen.*

On behalf of colleagues from WRI and TaTEDO, the organizers of this Capacity building workshop on *Enhancing the Capacity of CSOs to play a meaningful Role in the realization of Energy Access for Sub-Sahara Africa*, I wish to take this opportunity to warmly welcome all of you from within and outside Tanzania. I am grateful for getting the opportunity to give these welcome remarks.

Ladies and Gentlemen

It is a great pleasure to have you here as important participants as well as key stakeholders ranging from the government, development partners from the WRI, USA, Kenya, Ethiopia, regional participants from Zambia, Malawi and Zimbabwe and CSOs involved in the energy sector and climate change from within Tanzania. Sincerely, I thank you all for accepting our invitations Your presence serves as a clear indication that, we all recognize the importance of collaborative efforts to contribute to addressing the current challenges of inadequate energy planning, low access to modern energy services and limited production use and clean cooking by the majority in Tanzania and the region in general.

Ladies and Gentlemen

As, we are probably aware, in recent years, globally there has been significant progress in energy access in particular access to electricity. However, the majority of people in SSA have no energy access, a situation which is even worse for clean cooking. This situation has far-reaching implications for social services development and the realization of economic growth.

Access to sustainable, affordable and reliable energy is critical to social and economic development. Enhancing rural economies, through improving agricultural productivity, as well as the growth of industries to promote livelihood and increased resilience for rural economies will require increased investment in modern energy access. Likewise, access to modern energy services will improve the quality of social services, thus impacting positively the well-being of the marginalized population.

Distinguished Participants

Civil Society Organizations have an important role to play in the realization of the energy access goals through fostering enabling environment and providing support services such as micro-financing, capacity building, awareness creation and promotion, research services and lobbying and advocacy. However, due to their limited capacity in the energy sector, they have had limited contributions to the energy sector development. As such, developing their capacity, in integrated energy planning will significantly contribute to the efforts of achieving energy access goals as per the SE4ALL and SDG7.

In that regard, WRI and TaTEDO have organized this capacity-building workshop for the CSOs from the energy sector and climate space to contribute to the efforts of building their expertise to better understand and engage with energy access information, planning and financing. The specific objective of this capacity-building workshop is, therefore:

- To build the technical expertise of CSOs on matters of energy access, including the development of Inclusive and Integrated Energy Plans, PURE, energy access financing and electricity sector governance.
- To identify concrete and strategic opportunities for CSOs to engage with and influence energy access planning and financing at sub-national, national, and regional levels
- To draft a strategy for engagement and influencing how energy is planned at the national and local levels.

Distinguished Participants,

The capacity building workshop has been organized through a partnership between WRI and TaTEDO as part of a larger project entitled: "Building Local Capacity for Local Energy Planning" which has undertaken among other activities:

- Collected initial data from the Project districts of Chamwino and Kongwa, Ministries and agencies as input in the preparation of the Local Level Energy Planning Handbook.
- Created awareness and organized training on local-level energy planning for staff at Chamwino and Kongwa districts.
- Drafted a handbook of Local Level Energy Planning which include the Energy Access Explorer, a web-based energy access planning tool and use other participatory planning tools
- Developed and installed a Solar water pumping and drip irrigation system for a proposed 750 acres Mango farm at Chamwino District, Huzi area of which 200 acres are already producing mango fruits and 25 acres are irrigated through the drip irrigation system.

I would also like to specifically thank my colleagues from WRI and TaTEDO, as organizers of this workshop led by Benson, Mr Shukuru and Shuma for all of their efforts to ensure this capacity training workshop is successfully conducted today and tomorrow.

It is indeed clear, through this capacity building workshop, an important opportunity has been availed to the energy access and related CSOs in and outside Tanzania to address some of the opportunities and challenges around integrated and development-led energy planning and indeed, the success of this training will be measured by the quality of the outputs which will emerge, and thereafter be effectively implemented collaboratively towards achieving higher access to sustainable modern energy for socio-economic development with a high positive impact on poverty reduction thus contributing to achieving the SE4ALL goals and the SDG 7 and related development goals.

Please, let me wish you a fruitful and enjoyable capacity-building workshop.

Thank you for your attention.

5.0 DELIBERATIONS

5.1 Discussed Papers

5.1.1 **Energy Access in SSA -Understanding SSA's Energy Access Landscape** *(Benson Ireri – Africa Lead (EAP)- WRI))*

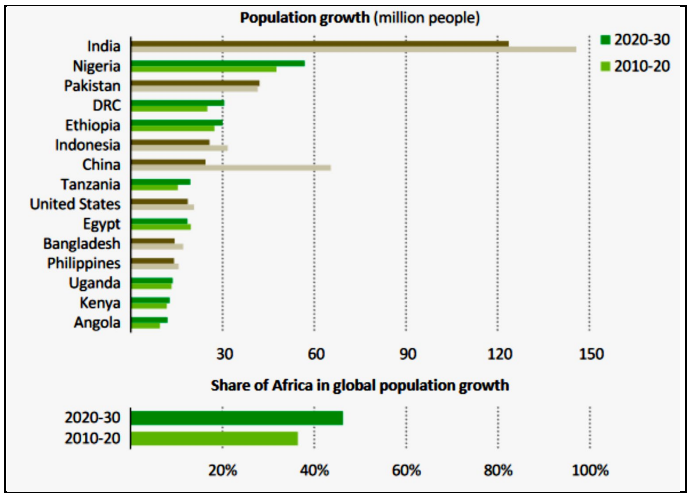
i). Background

Africa has the world's fastest-growing population. Almost one-in-two people added to the global population over the next decade will be African. Eight of the world's 15 countries with the biggest population increase to 2030 are in Africa. Combined with increasing economic activity and household incomes, this will drive up demand for energy services.

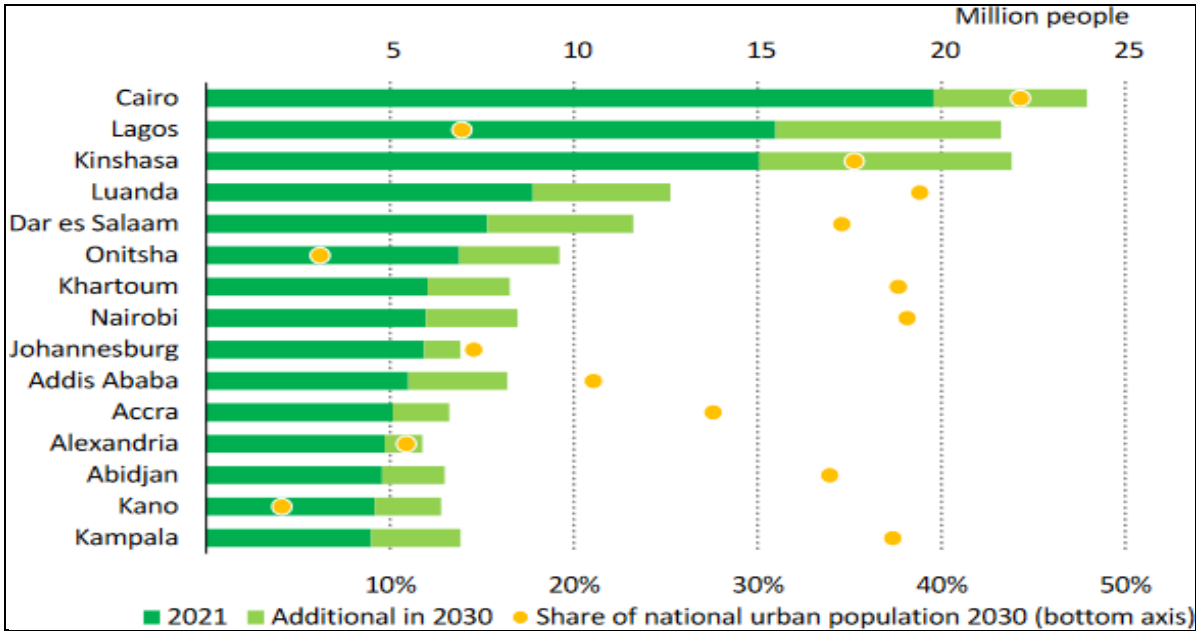
Yet, many Africans will remain energy poor, despite the region's vast energy resources -unless policy action to stimulate investment and make modern energy affordable is taken urgently.

Africa will be home to five mega-cities in 2030 – two more than today –collectively accounting for 11% of Africa's urban population.

Population growth in top 15 countries and Africa's share of global population growth, 2010 -2030



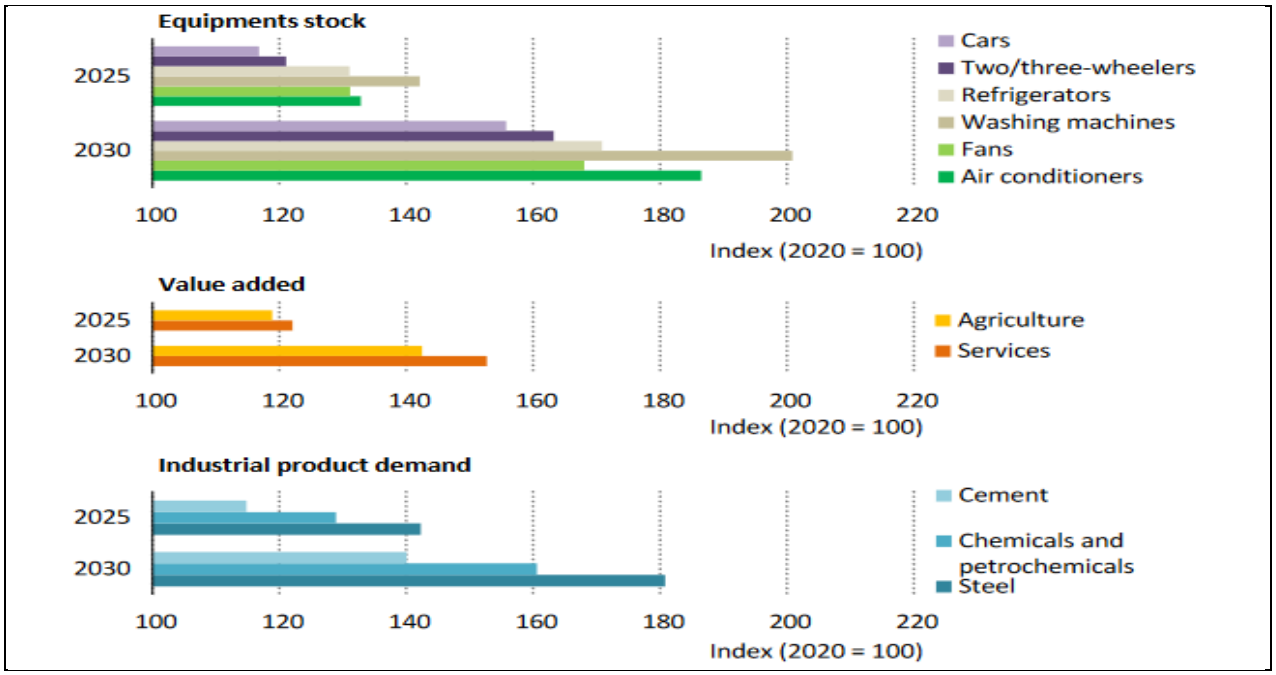
ii). The Populations in the 15 Largest Cities in Africa, 2021 - 2030



Source: Demographia

Demand for energy services in Africa is set to expand rapidly between 2020 -2030, with stocks of air conditioners and washing machines doubling. There is also going to be significant growth in energy demand for electric vehicles starting with two and three and later four-wheelers, value addition for agricultural products and services

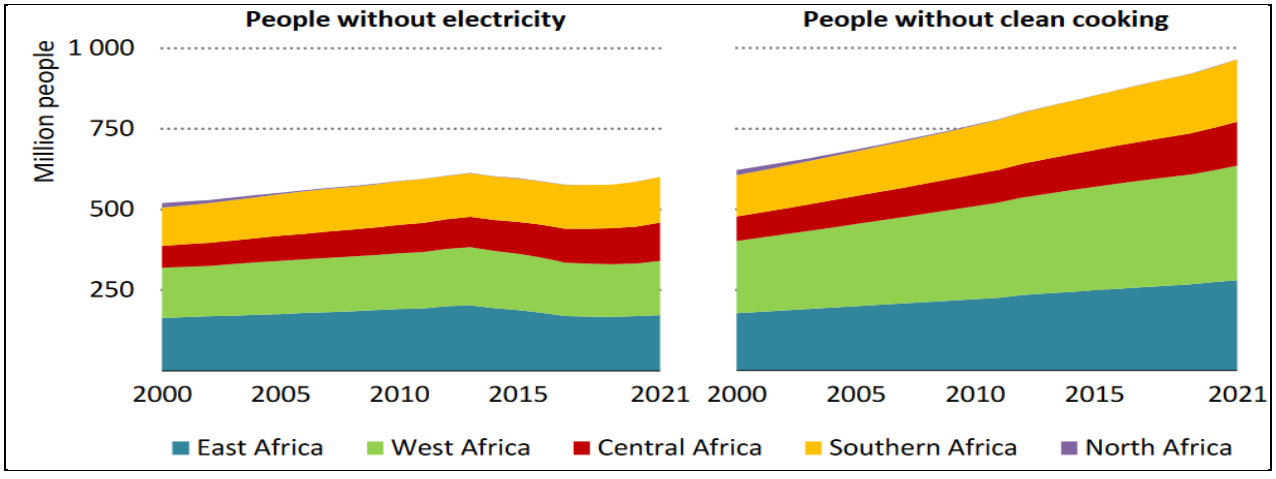
iii). Growth in Selected Energy-Related Economic Activities in Africa in the Sustainable Africa Scenario, 2020 -2030



Source: *IEA's Sustainable Africa Scenario (SAS)*

iv). Global Commitments and Impacts of the COVID-19 Pandemic

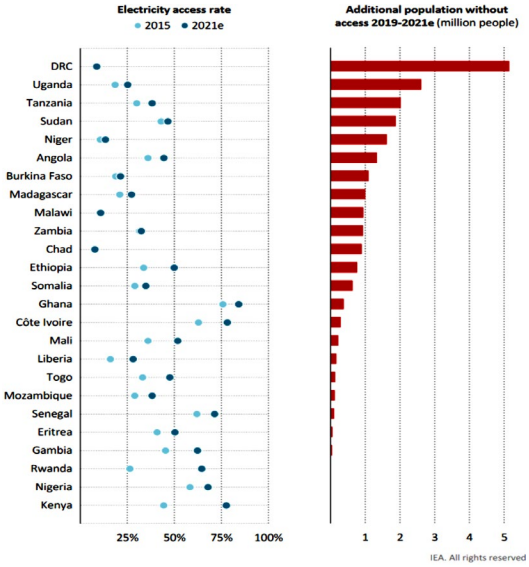
UN's SDG7 aims to "ensure access to affordable, reliable, sustainable and modern energy for all". However, by 2019, Africa was already off-track to reach SDG7 for access to electricity and clean cooking. The COVID-19 pandemic worsened the situation and project delays, lowered households' incomes, as well as financial difficulties for utilities and equipment suppliers which resulted in the slow rate of both new grid and off-grid connections. The number of people without access in Sub-Saharan Africa is estimated to have increased by 4% in 2021 relative to 2019. In 2021, almost 43% of Africa's population which is around 600 million people, is still lacking access to electricity and about a 590millin are in Sub-Saharan Africa.



More than 25 million additional SSA populations may be pushed to extreme poverty by the end of 2022 taking the total number to around 465 million due to COVID-19 impacts, the Ukraine/Russia war and related inflation. At the beginning of 2022, 10 million people in Sub-Saharan Africa who gained access to electricity service were no longer able to pay.

v). Access to Electricity and COVID-19-Related Impacts in Selected African Countries

In Africa, more than 970 million people which is three-quarters of the entire population of Africa have lacked access to clean cooking facilities in 2021



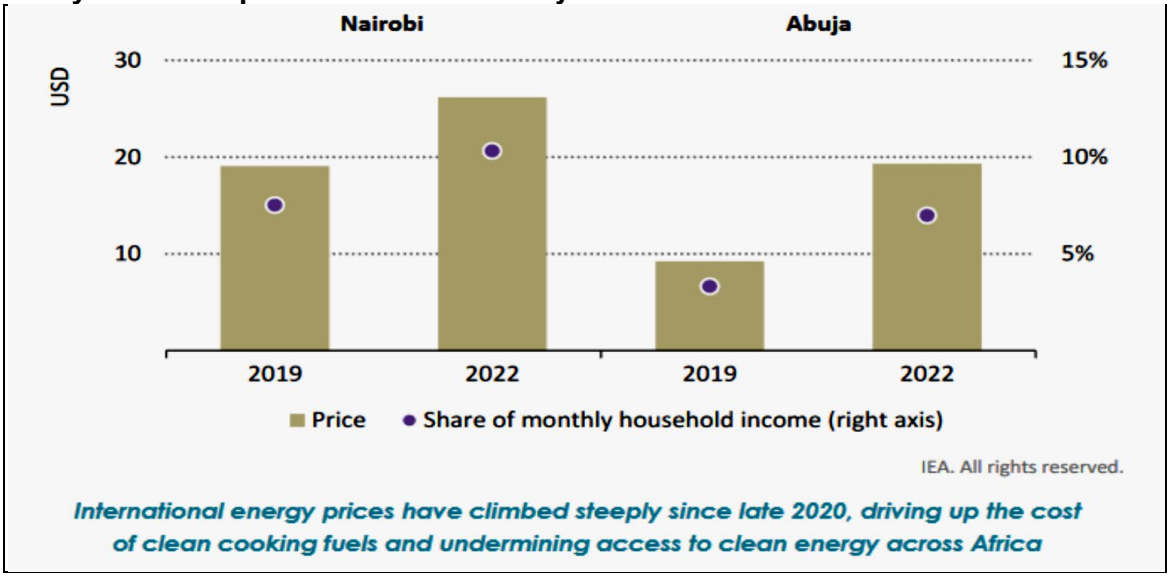
The COVID pandemic has accelerated this trend and the number of people without access to clean cooking fuels and technologies increased annually by around 2.5% (20 million) in 2020 and 2021. At the beginning of 2022, around 5 million were no longer able to afford modern cooking fuels such as LPG due to increased poverty and the impacts of the COVID-19 pandemic. In addition to COVID-19 impacts, new access failing to keep pace with the expanding population has also contributed to slow access.

The trends mask some marked differences across countries. While some have seen continued progress in improving access to both electricity and clean cooking fuels, others have seen an acceleration in the numbers and share of the population lacking access. Almost half of Africans without access to electricity today live in the Democratic Republic of Congo, Ethiopia, Nigeria, Tanzania and Uganda.

vi). Affordability Challenges

Long-standing concerns about the affordability of energy in African countries have intensified over the last couple of years. The uneven recovery of the global economy and disruptions to supply chains and investment cycles have caused the prices of all types of energy to rise

LPG cylinder retail prices in Nairobi and Abuja



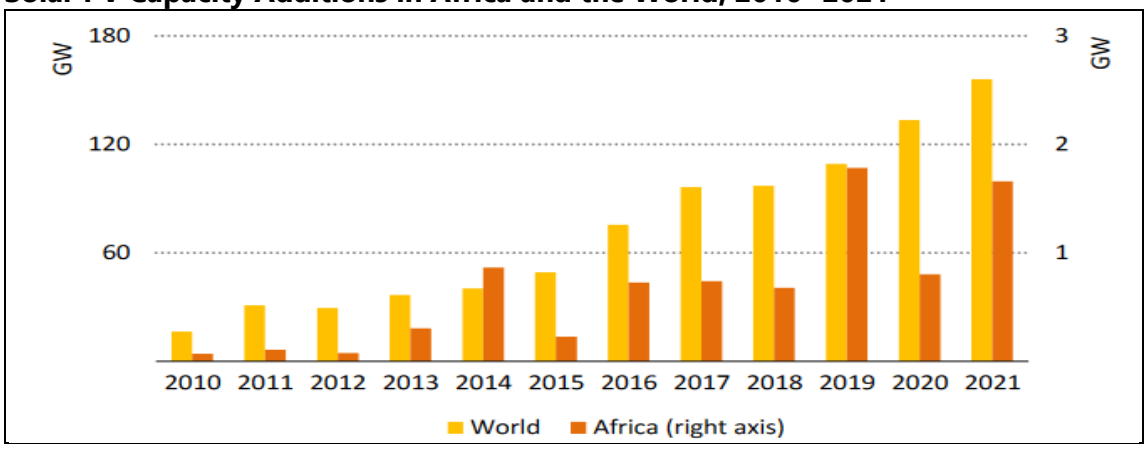
International energy prices have climbed steeply since late 2020, driving up the costs of clean cooking fuels and undermining access to clean energy across Africa.

vii). The Slowdown in the Development of Energy Infrastructure

There are uncertainties about economic prospects and energy prices are clouding prospects for investment in large-scale energy infrastructure projects in Africa. The worsening financial health of most electric utilities in Africa is leading to a slowdown in the additions of new power

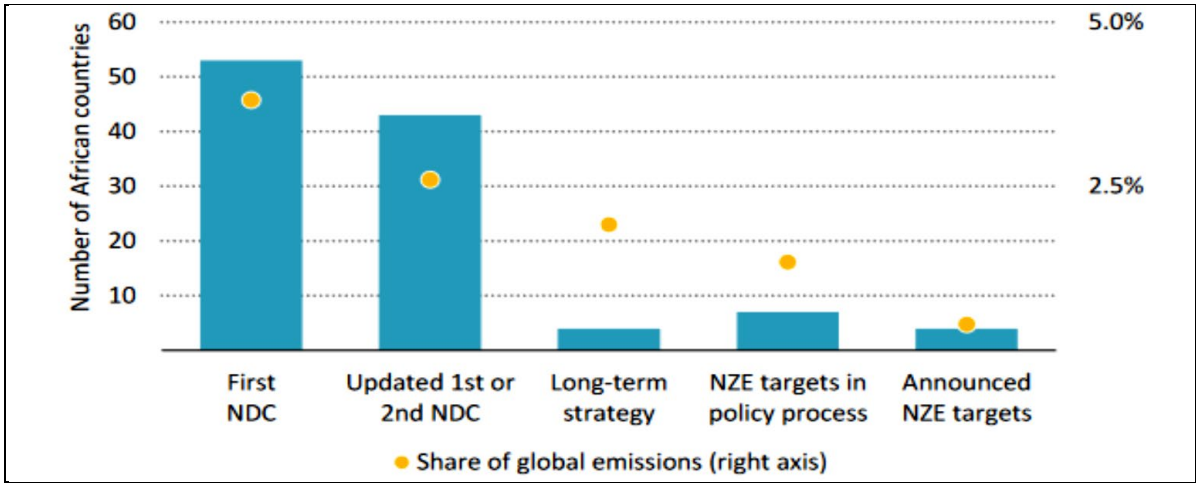
generation capacity across the continent. Solar PV installations continued to rise globally in 2020 and 2021, but they fell sharply in Africa in 2020.

Solar PV Capacity Additions in Africa and the World, 2010 -2021



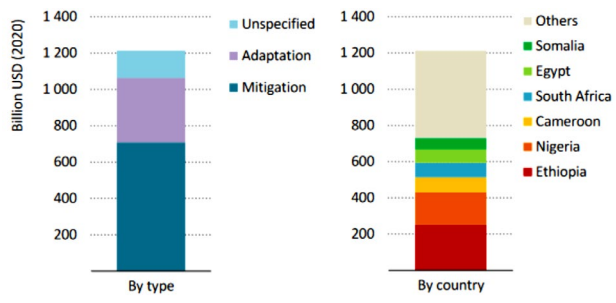
viii). Implications of Climate Commitments

As of May 2022, 53 African countries had submitted a Nationally Determined Contribution (NDC). Twelve African countries have reached, or have pledged to reach net zero emissions (NZE). Some of the NDCs are conditional and require financial support from development partners.

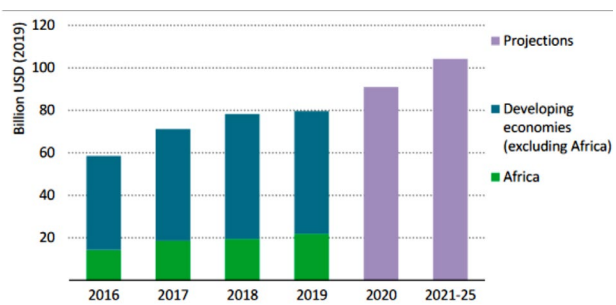


African countries have requested over US$ 200 billion of international financial support for the implementation of their NDCs, around 60% of which is for mitigation actions. Climate Change commitments by type and coverage as a share of energy-related CO_2 emissions in African countries, 2020

Finance Requested for Implementation of NDCs to 2030 by Type of Actions and Country



Climate Finance Flows to Developing Economies



Only a marginal increase in climate finance from developed countries to Africa is seen in recent years, which is failing to meet targets set by both donor and recipient governments

5.2.2 **Introduction to Integrated Energy Planning** *(Dimitrios Mentis– Manager, Energy Access Mapping, WRI)*

Energy Access Explorer (EAE) is an integrated, data-driven approach to achieving Universal Access to Energy Services. EAE provides the data and tools necessary to create a future where all people have access to affordable, reliable and modern energy.

i). **Energy Access and Sustainable Development Outcomes**

Energy is interconnected with 125 (74%) out of 169 SDG targets. A holistic framework is required to address the interlinkages of energy with other SDGs, including a set of indicators and reliable data. Efforts towards universal energy access should be dramatically scaled up. The pace of progress has slowed in recent years because of the disruptions by the COVID-19 crisis and now the Ukraine/Russia war as well as the growing complexity of connecting remote and poorer people increasing, the challenge to ensure that no one is left behind. Notably, close to 80% of the global population without access to electricity live in Africa. If the current pace persists, only 92% of the world's population will be electrified in 2030. Energy's interlinkages with other SDGs need to be quantified and tracked to strengthen the foundation for evidence-based decision-making. Understanding better the impact of these inter-linkages and triggering increased action on them requires identifying potential indicators which can adequately capture progress on energy's inter-linkage with other SDGs. Moreover, the dearth of data and lack of consistency in data collection on energy's interlinkages with other SDGs must be addressed.

ii). **Without Access to Electricity**

There will be no good modern health services, education will be limited to daylight and kerosene lights, difficulty in water supply, traditional inefficient cooking and limited productive use of energy services

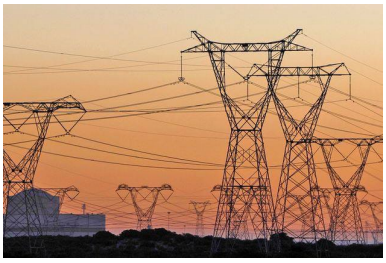
iii). **With Access to Electricity**

There are better health services, the use of ICT facilities and night lights for education, modern and clean cooking services and the use of electricity productively.

Access to affordable, reliable, and modern energy in schools critically improves the quality of, and accessibility to, education. Access to affordable, sustainable, and clean energy is a precondition for the achievement of SDG 5 on gender equality and the empowerment of all women and girls. Africa remains the least energized region, While significant efforts have increased electrification, the rate is not enough to close the continent's energy access deficit rapidly. Despite its abundant clean energy resources potential, with over 40% of global solar irradiation falling on Africa, deployment of renewable energy on the continent remains very small,

iv). **Importance of Integrated Energy Planning**

Integrated Planning is essential for matching supply with the growing demand, incorporating decentralized and cost-effective renewable energy production into a region's energy mix.



v). Importance of Inclusive Energy Planning

Inclusive Planning is essential for:

- Accounting for varying, cross-sectoral stakeholder perspectives
- Assessing energy needs from the bottom up
- Linking energy systems at different geographic levels

vi). Treat Demand and Supply as Equal

There are large differences and imbalances in energy consumption, and there is a strong spatial correlation between socio-economic requirements and electricity consumption. The adequacy and rationality of supply-demand balance are the keys to determining the operational efficiency of energy systems. Electricity is supplied by hydropower plants, solar PV mini-grids and farms, wind energy farms, gas turbines, etc. The demand points for energy include industries, small and medium enterprises, institutions (health centres, schools, etc) and residential households.

EAE tool reduce reliance on GIS and programming expertise for data users

EAE functions as a dynamic geographic information system and data repository which reduces software engineering and data transaction costs for both data providers and users. Its unique backend infrastructure comes with an easy-to-navigate Content Management System and allows administrative users with limited or no GIS and programming expertise to add data and metadata in a simple manner.

vii). Deploy an Open-Source Dynamic Information System for Data Providers

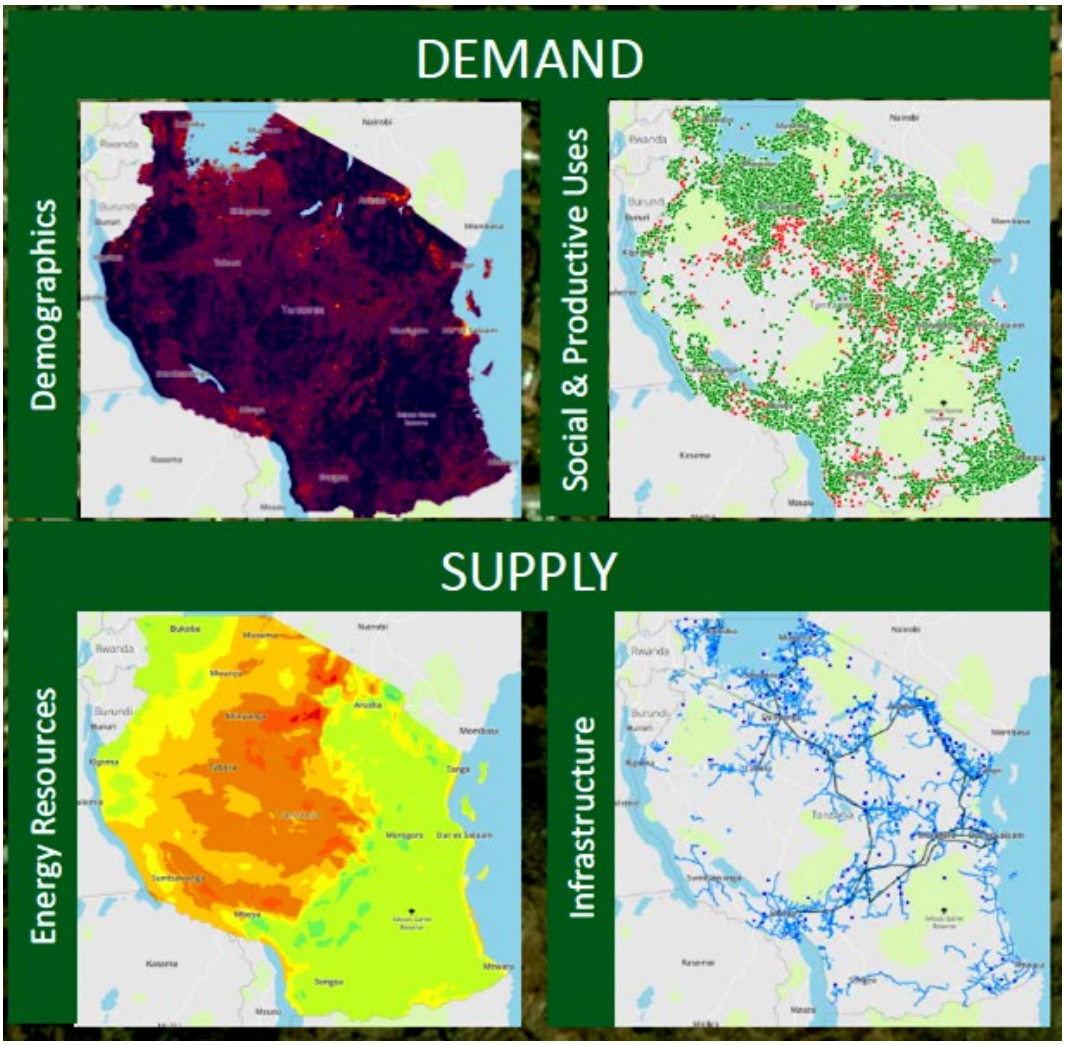
EAE is a Dynamic Geographic Information System, with an open-source, adaptable web architecture. Beyond its visualization and analytical capabilities, EAE's unique backend infrastructure provides:

- Automated Data Processing to minimize resource requirements when it comes to harmonizing and integrating new data.
- Dynamic database and efficient data storage to optimize data transactions and configurations.
- Customized Content Management System which allows admin users to better process, store, manage and update EAE cost-effectively.

- A modular API that connects the backend of the application with the front end and enables users to generate rapid, high-resolution visualizations and prioritization analysis on-the-fly.
- Variety of Baseline Maps including names of places, satellite imagery and other.

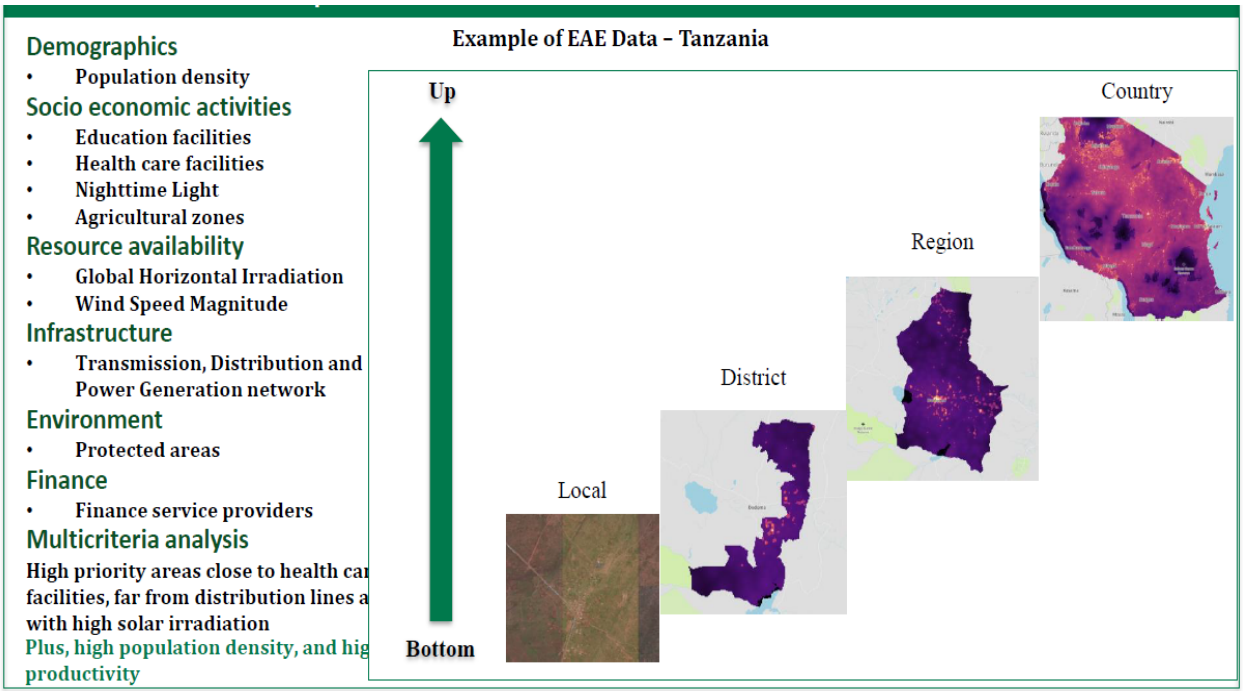
EAE Provides geospatial data and analysis necessary to create a future where all people and institutions have access to affordable, reliable and modern energy for socio-economic development.

The EAE has spatial data infrastructure which captures data from different sources, in different scales and formats such as data from open census, satellite, global, national and sub-national levels. It is an open online interactive customizable with both the demand and supply sides of the energy sector.



Energy Access Explorer enables:

- Strategic & Integrated Energy Planning
- Expansion of clean energy markets
- Impact investment
- Bottom-up assessment of energy needs



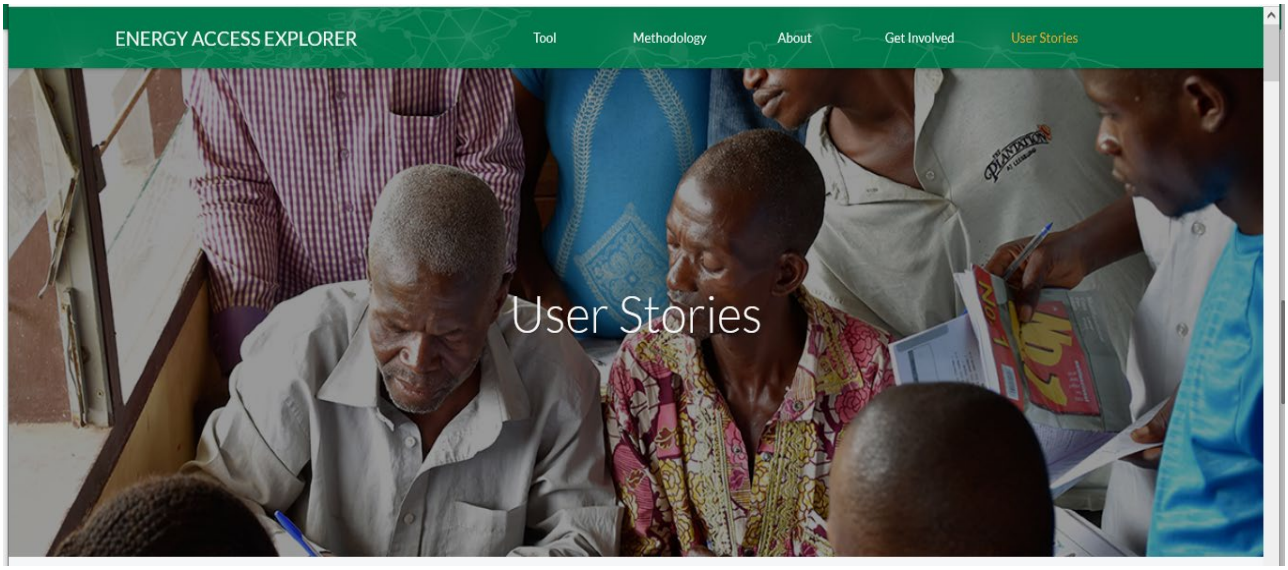
viii). An Integrated, Data-Driven Approach to Achieving Universal Access to Energy

- The EAE tool covers countries with 32% of the total unserved population globally
- Originally prototyped for 3 countries and is now being developed for 15 geographies, at both national and sub-national levels. Some of them are:

- It has been upgraded in close partnership with more than 100 stakeholders and users.

- It has more than 10,000 users
- It has more than 7 million USD in-kind contributions

ix). A Mapping Platform to Connect SDG 7 and Sustainable Development Outcomes



https://www.energyaccessexplorer.org/user-stories/

x). Selected Users Stories

Yiheyis Eshetu (Director for the Energy Policy, Strategy and Information Directorate, Ministry of Water and Energy, Ethiopia)

'Energy Access Explorer is a vital source for electrification planning in Ethiopia'.

Bart Minsaer (Ethiopia Solar Energy Development Association (ESEDA) Board Member and CEO for Hello Solar)

'It is the first time I have seen a tool that offers different selections of data layers in the energy space in Ethiopia. As part of the digitization strategy of the country, coupled with the government's objective for universal electrification, EAE will help us know who should go where to provide electricity.

Tadesse Biru (Senior Electrical Engineer, Ethiopia Electric Power (EEP))

"EAE has the potential to become the go-to platform which integrates and analyzes energy planning related information from multiple institutions".

Rekik Bekele (Ethiopia Solar Energy Development Association(ESEDA) Board Member and CEO for Green Scene Energy)

"There is a high cost-saving saving benefit to using a tool like EAE. The fact that one can sit at their desk and generate essential information on demand and target market supply is exciting. This is going to change the energy sector".

Jason Wamulume (Assistant Director Physical Planning and Medical Technologies, Ministry of Health of Zambia)

"EAE is a powerful tool for initial development planning. The Ministry of Health in Zambia, for example, can use it to look at data such as catchment populations, to help us determine where the next health facilities should be constructed".

Interested in learning more or contributing to the development of EAE? Please contact Dimitrios.Mentis@WRI.org (Lead, Energy Access Explorer).
Website: energyaccessexplorer.org
Code: GitHub.com/energyaccessexplorer

5.2.3 **Electricity Governance Initiative (EGI)** *(Benson Ireri – Africa Lead – Energy Access Programme, WRI)*

i). Why Electricity Governance?

- Decisions made in the electricity sector have repercussions with fundamental impacts on the public and their interests. The decision to revise an electricity tariff affects the affordability of electricity supply.
- The social, environmental and economic importance of the electricity sector is well recognized by closed political processes and politically powerful groups often give limited attention to sustainable development objectives and public interest in decision-making.
- For reforms to be politically sustainable, the public must have confidence in their benefits, and this is best supported by transparency.

ii). Challenges in SSA Electricity Governance

- Lack of public participation in decision making
- Lack of transparency in decision making
- High cost of power –high tariffs
- Poor compensation in energy projects e.g., hydropower projects etc
- Poor prioritization of government and donor interventions

iii). **Goals of the EGI Initiatives**

EGI is an operational framework to assess governance and evaluate progress over time. It improves communication and creates space for environmental and social voices. The tool builds the capacity of major groups and governments to practice good governance. The initiatives complement efforts to advance the public interest.

iv). The Electricity Governance Initiative (EGI) Toolkit

EGI indicator toolkit presents a framework to assess and promote good governance in the electricity sector. It assesses the extent to which decision-making processes in national electricity sectors are transparent, allow for public participation, remains accountable to the public interest and permits access to redress. EGI seeks to assess institutional capacity to adequately meet the requirements of good processes.

The toolkit comprises a set of qualitative research questions, whose answers generate indicators that assess decision-making processes to develop a metric to conceptualize good governance. This sounds like an understanding of the decision chain and potential points for leverage and mutual benefits is critical for effective civil society engagement in the electricity sector. By approaching the social, environmental and economic challenges confronting the electricity sector through questions of governance, these issues can be addressed from their root causes. The toolkit consists of a baseline survey of key attributes of the electricity sector, and 64 indicators assessing questions of good governance in the sector.

Many of the indicators are applied to case study policies, regulatory processes, or sector projects. For each research question, indicator values of (i) Low; (ii) Low-Medium; (iii) Medium; (v) Medium-High or (v) High are possible. Each value is based on a documented explanation of the extent to which particular attributes of electricity governance have been met.

Policy Processes (PP)	*Institutional*	*Policy Formulation*	*Implementation*	Environmental & Social (ES) Issues
Regulatory Processes (RP)	*Institutional*	*Operations*	*Implementation*	

v). Principles of Good Governance

a) The Transparency and Access to Information

This is the process of revealing actions and information so that outsiders can scrutinize them. The attributes of transparency include:

- Comprehensiveness
- Timeliness
- Availability
- Comprehensibility of information

Whether efforts are made to make sure information reaches affected and vulnerable groups as appropriate.

b) **Principle of Participation**

These diverse and meaningful public inputs help decision-makers consider different issues, perspectives, and options when defining a problem. Elements of access to participation include:

- Formal space for participation in relevant forums
- Use of appropriate or sufficient mechanisms to invite participation
- Inclusiveness and openness of such processes
- The extent to which the gathered input is considered

c) Accountability and Redress Mechanism

This process of access to justice and redress is necessary to hold governments and actors in the private and public sectors accountable. Accountability includes:

- The extent to which there is clarity about the role of various institutions in sector decision-making
- There is systematic monitoring of sector operations and processes
- The basis for basic decisions is clear and justified
- Legal systems are in place to uphold public interests

d) Capacity

This refers to the government's social, educational, technological, legal and institutional ability to practice good governance and the ability of the CSOs to engage in decision-making. Capacity includes:

- The capacity of the government and official institutions to act independently and autonomously
- Availability of resources both financial and human, to provide energy access
- The capacity of CSOs to analyze the issues and act effectively.

e) Success Stories -The Indonesia Experience

The Indonesia Assessment has Improved Transparency. As a result of the engagement, the website of the Indonesian House of Representatives was improved to include the following features:

- Agenda
- List of work in progress
- List of legislation passed
- Public message board for participation.

5.2.4 Understanding the Productive Use of Renewable (PURE) Sector *(Mr Edward Masawe, E4I)*

i). Definitions

- According to World Bank, "productive uses" of energy involve the utilization of energy–both electric and non-electric energy in the forms of heat, for activities that enhance income and welfare. These activities are typically in the sectors of agriculture, rural enterprise, health and education. Examples of such activities are pumping water for agriculture, agro-processing, lighting, information and communications, and vaccine refrigeration
- According to the framework of Efficiency for Access, productive uses encompass any and all technologies that have relevance for economic and social impacts. We focus on addressing the notable shortfalls in market intelligence, improving cost and efficiency, exploring off-grid design considerations, and enhancing our understanding of a technology's unique relevance in off-and weak-grid contexts.
- "Any use of energy that generates income for the user.
- " Defining a technology as productive use should take into account not only the direct impact of energy on raising incomes but also the indirect impacts that energy can have on other development issues.

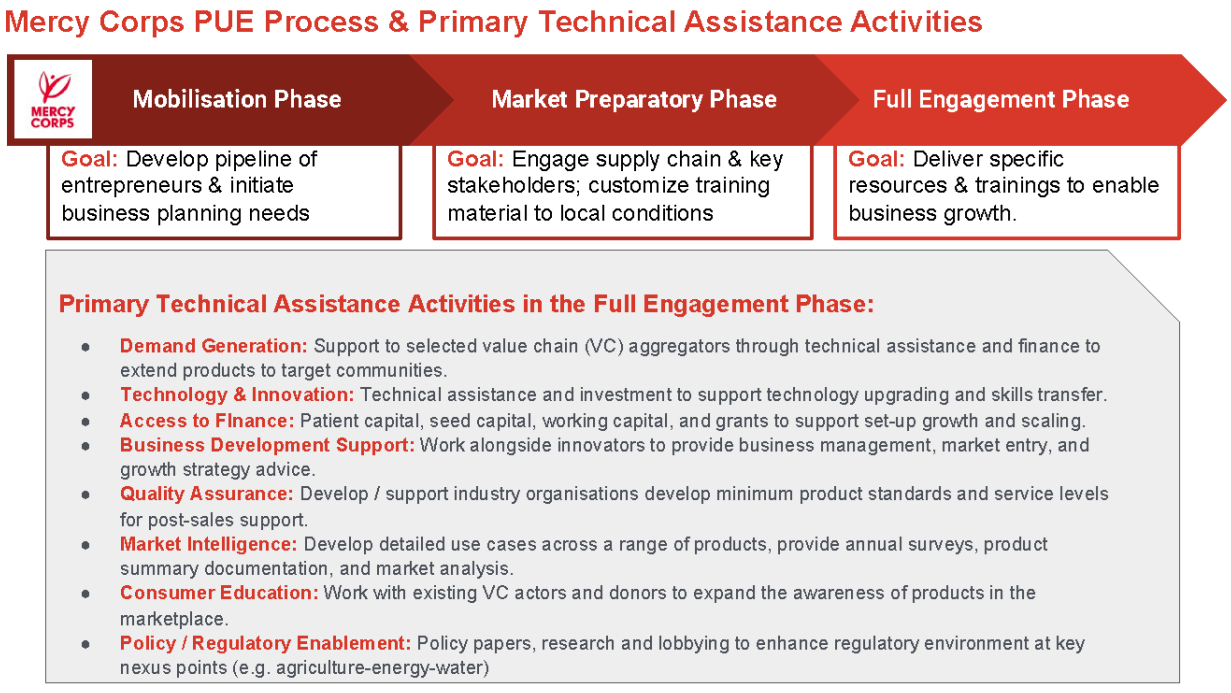
ii). How we do it

Productive use enterprise building

- PUE demonstration road-shows
- Recruitment of client enterprises
- Support enterprises via mentoring, TA on equipment specifications and procurement, advice on RTM and business model implementation, and capital access.

iii). Utility capacity strengthening ranges from:

- Electricity demand estimations and growth projections through on-ground surveys and analysis of findings
- Support tariff structuration including targeted subsidies.
- Facilitate electrification market linkages including on-bill financing of PUE equipment and electric cooking



vi). Advisory Services in PUE

Type of TA	TA focus areas
Strategy, business and financial advisory	• Viable business models • Financial modelling • Investment-readiness • Market entry analysis • Market development • Sales and marketing strategies • Manufacturing • Supply chain analysis • Logistics • Consumer credit • National laws, regulations and standards by country • National fuel supply infrastructure • Enterprise development • Pilot design • Cooking as a productive business • End user analysis
Performance monitoring & compliance	• Support in impact measurement • Support in developing M&E framework

Type of TA	TA Focus Areas
Fundraising	• Understanding funding needs • Identifying and analysing suitable funders • Reviewing pitch decks and financial models • Supporting grant applications • Introducing potential funders (including raising awareness of other donor matchmaking events) • Support in transaction preparation (due diligence, negotiation support) • Support in crowdfunding • End user financing

Partnering	• Identifying partnership needs
	• Identifying potential partners:
	  • Distribution and route to market
	  • Payment systems
	  • Remote monitoring
	• Introducing potential partners (including raising awareness of other donor matchmaking events)
	• Help in structuring partnership agreement

vii). PUE Project Stages

Objectives:

- To deliver meaningful results in Mbeya and Arusha regions in terms of promoting and enabling productive use of electricity, particularly by stimulating investments in income-generating equipment
- To demonstrate the effectiveness of coordinated efforts among relevant PUE stakeholders that can be replicated and scaled up during the expected expansion of the electricity grid to other rural areas in Tanzania.

Stage 1 - Mobilization

This stage involves the following steps:

- Mobilization and launch of the project,
- Site assessments of villages,
- PUE champions selected,
- Catalogues of shortlisted PUE appliances (power rating, price, distributor) developed,
- Establish financial access map,
- Collaboration agreements with financial institutions (FIs) reviewed,
- Review the PUE promotion video and training materials,
- A baseline survey conducted,
- Review M&E framework and M&E Tools,
- Kick-off meeting with REA –to set expectations/objectives, discuss and agree on key activities, the work plan, deliverables, roles and responsibilities,
  i). Training REA and TANESCO appointed PUE Team
  ii). Quarterly steering committee

Stage 2 – Market Preparatory Phase

The second stage of productive use of energy consists of the following steps:

- Work with village government leaders and PUE champions to increase awareness raising on income generation and job creation and various rural value chains
- Implementation of PUE clinics -- PUE trucks to showcase PUE equipment (juice blenders, popcorn-making machines, fridges, hair dryers and printers, etc.)
  i). REA and TANESCO participation in field activities (quarterly)
  ii). Quarterly steering committee meeting

Stage 3 – Full Market Engagement Phase

- Cluster approach to business mentoring: business case assessment, economic analysis, value chain analysis, and financial needs assessment
- Entrepreneurs are supported on technical skills, access to technology, access to markets/ customers and access to finance.
- Linkage to appliance suppliers/ appliance supply chain engagement
- Collaboration with FIs to enhance access to credit/
- Implementation of COVID-19 protective measures
- Monitoring, Evaluations and Lessons Learned (MELL)

i). REA and TANESCO participation in field activities (quarterly)
ii). Quarterly steering committee meeting
iii). Handover of lessons learned report and roll-out plan

viii). Success Factors

A successful PUE project must have the following conditions
- Committed and self-motivated entrepreneurs (entrepreneurship and business acumen),
- Available and good quality power supply, equipment and market for products from PUE enterprises,
- Competent implementation team to oversee capacity building, including handholding entrepreneurs, market development and coordination among stakeholders,
- Understanding of the market opportunities, capacities and challenges to develop PUE enterprises.
- Means of financing PUE equipment and appliances, operations,
- Clear goal(s), objective(s), interventions, implementation plan, realistic estimates and schedules,
- Enough time to realize long-term objectives such as building track records for credit appraisals,
- Stakeholders' involvement,
- Early risk analysis and ongoing risk management,
- Proactive issue resolution; including addressing grievances, and community accountability.

ix). Challenges in PUE Projects

Limited availability of good quality and affordable appliances and equipment

- Access to reliable sources of finance-FIs are in town centres and far from rural settings
- Poor quality equipment in the market leads to frequent breakdowns and high maintenance costs
- Limited after-sale services from suppliers
- Guarantee and warranty issues
- Insufficient spare parts for some appliances
- Size of the appliances Vs Market demands

Difficulty Conditions to acquiring loans
- Limited access to financial services in rural areas: most FIs are in town centres and far from rural settings
- Historical background in defaulting the loans –FIs are reluctant to go to some of the areas like borders places and islands
- Level of loans offered by FIs
- Limited cash flows
- Missing documentation to get loans.

Electricity supply outages and low quality

- Power outage –electricity blackout, power rationing or poor quality of supply forces business to be closed and reduce the income
- Size of the power needed –In Mini-grids user demand is high compared to the capacity of the mini-grid capacity
- Low quality of the materials installed
- Over changing of the tariffs

Entrepreneurs' limitations
- Illiteracy level of entrepreneurs
- Limited participation of women
- Ability to engage and market their products
- Limited business management skills
- No clear succession plan
- Limited use of business premises as per their rental conditions

x). Potential Roles of CSOs in PUE Value Chains

Value chains, mainly in agriculture – the most dominant economic activity in rural areas

Agri-value chain Inputs Level	Production Level	Transport Level	Storage and handling level	Vale added processing Level	Transport &logistics level	Marketing &Distribution level	End User level
Seed	Of-Farm mechanization	Farm to collection centres	cold storage	Drying	Warehouse	New market	Cooking
Irrigation/Pumping	Reduction in labor	Collecting center to processing facilities	Moisture Control	Grinding	Road and other mode of transport	Packaging	Transport
Livestock feed	increased operation efficiencies		Mechanized sorting	Milling		Retail	Household appliances
Fertilizer			Packaging			Refrigation	

xi). Potential Roles

Role of CSO in service value chain				
Reseach and development	Raw material suppliers	Manufactures	Distributors	End users
Product qulity	Key raw materials Identification	Key players identificaton	Chanel of distribution	End user identification
Patent valuation	Suppliers and partners identification	Production analysis	Identifying key distributors in Ecosytem	Key application areas
License	Analyzing suppliers agreements	Branding positioning analysis in the market	Pricing analysis	Customer mapping and survey
	Cost and price varience			Usage level of products
				Brand awareness and upgrading

xii). Other Roles

- Access to finance.
- Capacity Building, training PUE enterprises, and mini-grid/utility operators including mentoring and coaching
- Market development strategies and implementation.
- Analysis and recommendations on effective business models.
- PUE activities coordinate and bring actors together.
- Research and Development on PUE applications such as solar milling
- Contribute to policy dialogues via sharing lessons and experiences that can enhance PUE

xiii). Mercy Corps Energy 4 Impact (MC-E4I) | Platform Overview

a) Who we are

The MC-E4I Platform was created out of the merger of two leading organizations:
Collectively, MC-E4I offers:

- Innovative, market-based programming in energy access, grid maximization and productive use of energy, agriculture, youth employment, financial inclusion, governance, and humanitarian response.
- Deep local footprint in 22 countries in sub-Saharan Africa.
- Active energy programming in EA/CA: Ethiopia, Kenya, Uganda, Tanzania, DRC, Rwanda, Malawi; SA: Botswana, Mozambique, Namibia; WA: Benin, Senegal, Burkina Faso, Nigeria, Sierra Leone, Liberia, Niger.
- 5,400+ staff globally | 84% local.

b) MC-E4I PUE Approach

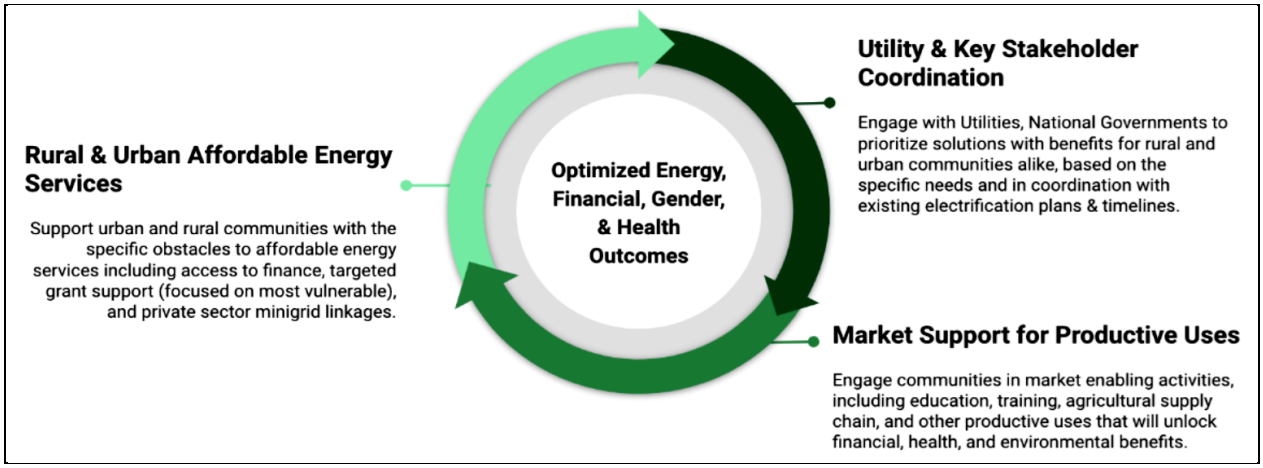
In an electricity distribution scheme, an additional 10% additional investment in "soft" activities can result in a 40% higher uptake of connections.

c) Our view

We believe there is a strong case for investing not only in the poles and wires in electrification projects but also in the community's capacity to capitalise on the opportunities offered by access to electricity.

d) What we do

- Support the expansion of national electricity and mini-grids.
- Promote new connections and stimulate local economic activities and productive use of electricity, to ensure the widespread benefit of expanded grids.



5.2.5 Unlocking Finance for Energy Access Space *(Adugna Nemera – Senior Associate, Energy Access Finance, WRI Africa)*

Part 1: Overview of Renewable Energy Financing in SSA

i). Renewable (Sustainable) Energy Financing in the Sub Saharan Africa

- Financing is one of the largest barriers to the development of sustainable energy in Africa;
- The deployment of renewable energy sources and the realization of energy efficiency projects often require substantial amounts of money, to plan the project, purchase and install the equipment, as well as to train staff for the operation and maintenance of the system installed;
- Renewable energy (RE) and energy efficiency (EE) projects have so far had a rather poor reputation with the financing community as they are still viewed as higher-risk investments, resulting in stiffer requirements for investors and developers alike.

ii). Why Limited Financing for Renewable Energy in SSA?

Market-related issues

- RE and EE potential is often only roughly estimated;
- A limited number of feasibility studies are available;
- There are few RE/EE project developers active in the market;
- Market information is still largely unavailable.

Political and policy-related issues:

- Most African country policy documents do not prioritize RE/EE;
- Undeveloped regulatory and operational frameworks (Subsidiary policy instruments);
- Operational risks and regulatory uncertainty.
- Most state-owned utilities are running their business with vast annual deficits

Technology

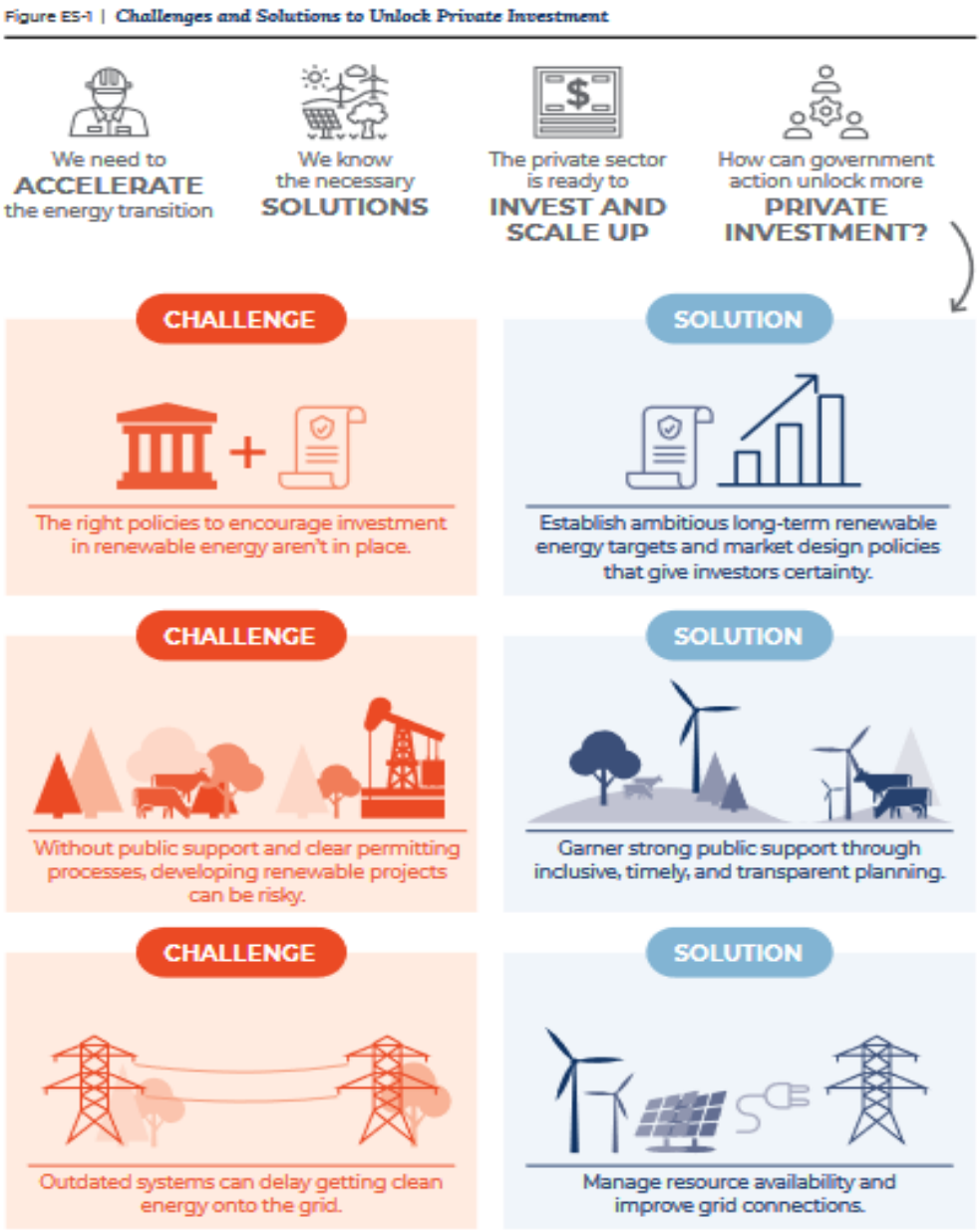
- High up-front costs of RE/EE projects compared to conventional energy sources;
- Inadequate access to finance for research, development and manufacturing;
- Perception of high investment risks by financiers.

Inherent Nature of Projects

- Governments have traditionally been the main investors in energy and have tended to focus on centralized power projects, whereas the greatest potential for RE and EE is in decentralized projects;
- Small-scale nature of the projects.

Discussion Question

- What strategic roles can CSOs play to overcome such RE financing challenges?
- What kind of laws, policies, regulations, and incentives could better facilitate or convince financial institutions to actively participate and support the renewable energy sector in the respective SSA Countries?



Part 2: Overview of the Current State of Energy Access Financing for SSA

i). Current State of Energy Access Financing for SSA

The level of investment required to close energy access gap in sub-Saharan African countries is estimated to be US $27 billion per year (2018-30) according to IEA (2018).

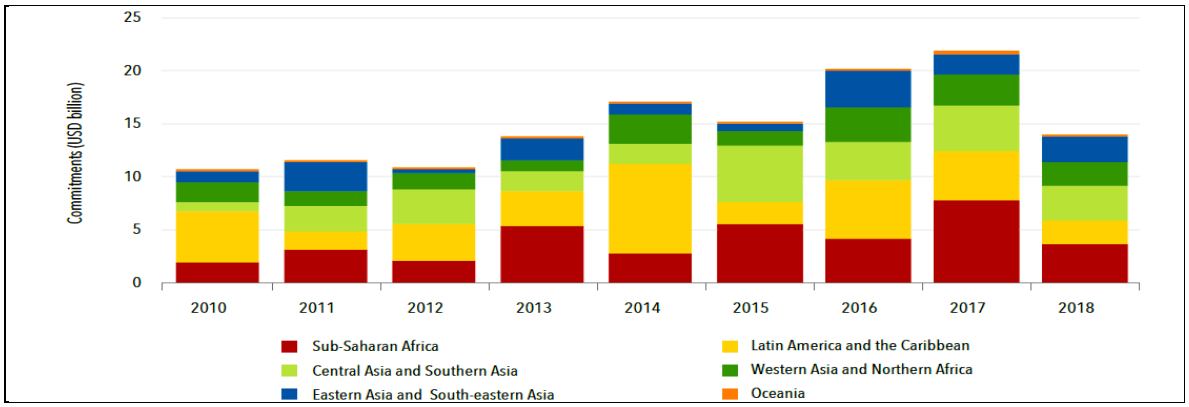
	This includes about:	
$13 billion for mini grids;	**$7.5 billion for grid and**	**$6.5 billion for off-grid investments.**

ii). Sub-Saharan African Funding Needs for Universal Access to Energy in Perspective

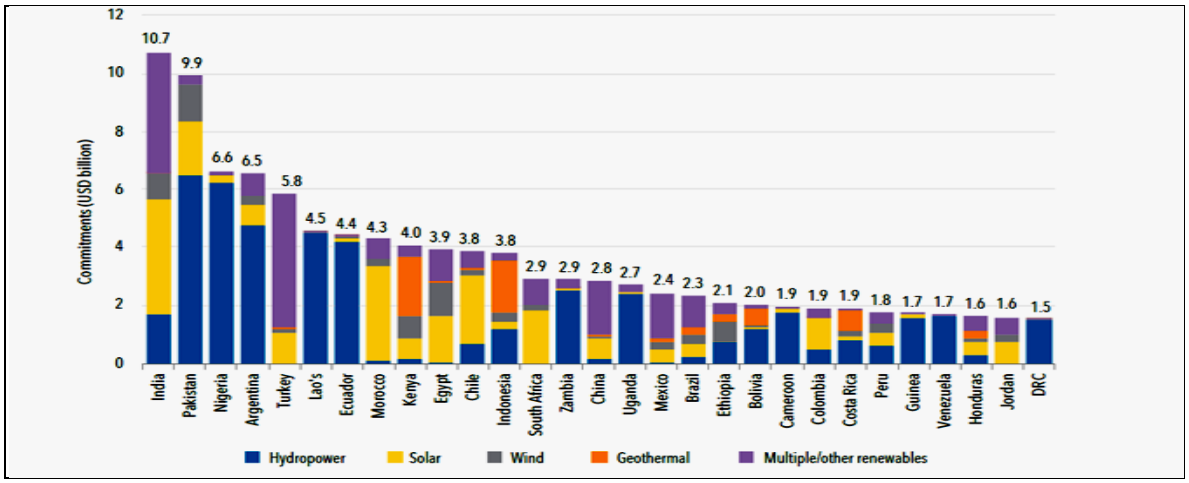
	Electricity	Clean cooking
Total investment needs, 2018–2030, billion (US $)	350	23
Average investment needs per year, billion (US $)	27	1.8
Average investment needs per year, $ per capita (entire population)	$25.05	$1.67
Average investment per year, $ per capita (population without access)	$46.55	$2.00
Investment as a share of PPP GDP in 2018 (sub-Saharan Africa, %)	0.65%	0.04%

iii). Energy Access Financing – Regional and Country Highlights

International public financial flows in support of clean energy to developing countries dropped across all technologies and regions in 2018, except in Eastern and SEA, where commitments grew by 43 percent over 2017

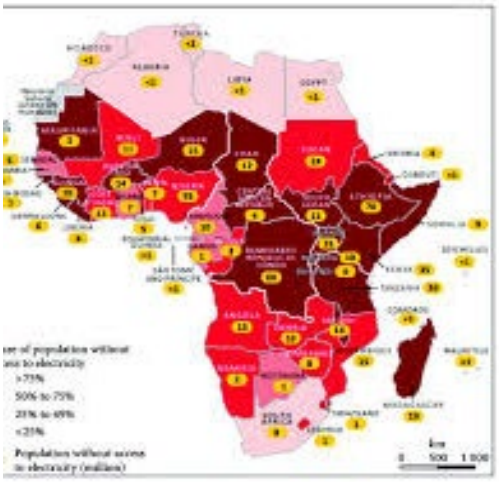


International financial flows to developing countries in support of clean energy over 2010–18 continue to be concentrated in a few emerging economies including India, Pakistan, Nigeria, Argentina, and Turkey. Together, these five countries received 30 % of total commitments.



iv). Country Highlights

Countries like the Democratic Republic of the Congo and Ethiopia, where 95% of the population lacks access to clean cooking, receive less than 1 % of the annual investment.



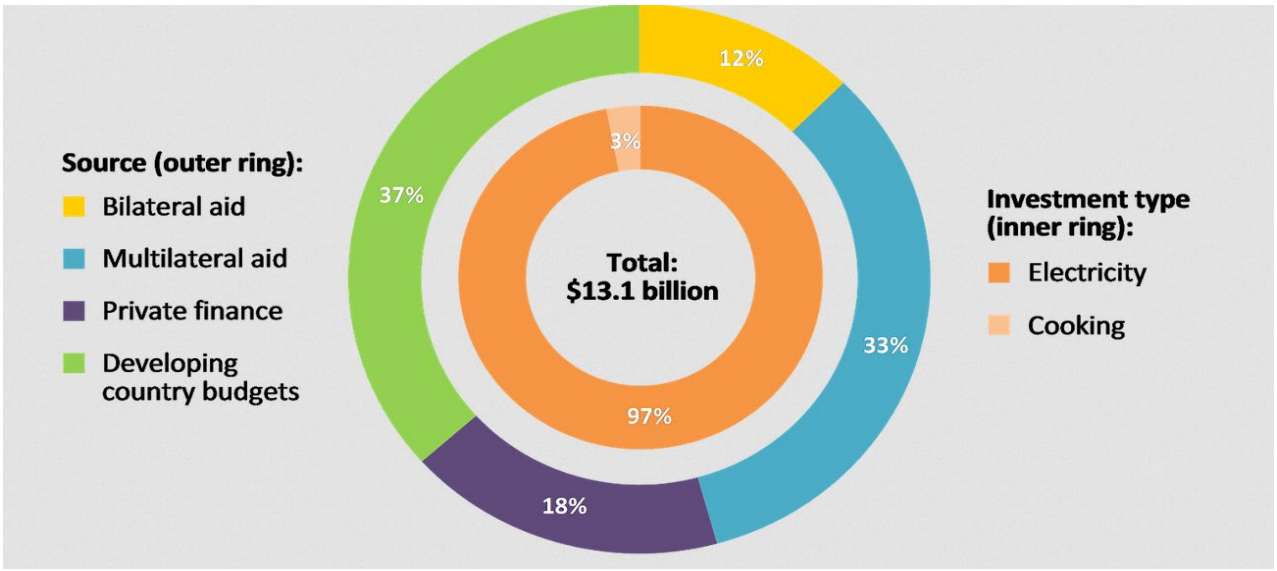
Part 3: Main Funding Sources Available for Financing Renewable Energy in SSA

i). Main Funding Sources Available for Financing Renewable Energy in SSA

The main Funding sources are:

- Country government sources
- Multilateral & bilateral development sources
- Private sector sources
- New and upcoming innovative financing

Currently, funding to the energy sector comes from a number of different sources, and a rough estimate from the IEA is as follows: **developing country's budgets 37%**, **multilateral organizations 33%**, **private investors 18%** and **bilateral aid 12%.**



World energy access investment by type and source, 2013 (IEA)

ii). Upcoming Innovative Financing

The ambitious goals set for energy access in SSA also require attracting **new actors**, innovative funding mechanisms and **sustainable technologies** beyond the BAU pathways.

Examples: DFIs

- World Bank's – **RBF**,
- Multilateral Investment Guarantee Association (**MIGA**),
- Ethiopia's Access to Distributed Electricity and Lighting (**ADELE**)
- AfDB's Facility for Energy Inclusion (**FEI**)
- EU's Energizing Development (**EnDev**)
- **SE4 ALL** Universal Energy Facility,
- Sustainable Use of Natural Resources and Energy Finance (**SUNREF**)
- Leveraging Energy Access Framework (**LEAF**).
- Global Energy Alliance for People & Planet (**GEAPP**)
- The Sustainable Energy Fund for Africa (**SEFA**)

Part 4: What Roles Can Civil Society Organizations Play in Unlocking Finance in the RE Space?

Generally, meaningful CSOs and CBOs in the energy space are widely recognized as being essential to the process. They can act as trusted intermediaries between the government, the private sector, and energy users on the ground, as well as provide expertise in designing and delivering energy services, particularly for poor and vulnerable groups.

Energy interventions serve a positive development impact if questions of equality of access, and the benefits and costs of energy investments for poor and vulnerable groups, are addressed and accounted for in the design and delivery of services. CSOs have experience in the participatory design and delivery of energy services by and for the poorest groups. CSOs can build the capacities of end users and other actors in the value chain and can act as a trusted intermediary between communities, government agencies and the private sector.

5.3 Panel Discussion

Dr Olufunso Somorin (*Regional Principal Officer, African Development Bank*)

The discussion started with what was happening in COP27. The Productive Use of Energy is an important component required in any energy project in on and off-grid areas. The productive use of clean energy can be defined as agricultural, commercial and industrial activities that generate income and are powered by clean energy sources. These activities increase productivity, enhance diversity, and create economic value.

A variety of clean energy technologies are being used to meet production needs. This is due to the minimum generation capacity required for powering some productive use activities, such as welding (3-7.5 kW), SMEs and other commercial activities. The most common productive activities supported in Africa are lights, manufacturing, agro-processing, illumination and service provision.

The key lesson learned from the productive use of energy projects is that growth in rural electricity demand can be both a gradual and a long-term process. Stimulation measures are often required to achieve commercial viability within a feasible timeframe. Increasing demand through the productive use of energy is of particular importance to the viability of mini-grids and stand-alone systems designed for productive purposes.

Edward Aloyce Masawe (*Field Coordinator, Mercy Corps/ Energy4Impact*)

The Productive Use of Energy (PUE) is required as means for growing, processing and storing products from agriculture, business, small and large industries and other productive uses. E4I supports entrepreneurs to marshal four sets of enabling resources needed to implement the model: people, technology, networks, and capital. The organization has served more than 1,500 SMEs and 7,000 micro-enterprises of local clients and women-led businesses. During empowering

of these clients and enterprises, the organisation has strived to improve business skills, capital access, partnerships, registration and formalization and market position of entrepreneurs engaged in productive sectors.

Emilian Nyanda *(Principal Energy Officer, MoE, Tanzania)*
The Ministry of Energy is responsible for functions of formulating and monitoring the implementation of policies, strategies and laws for the sustainability of energy recourses to enhance the growth and development of the economy. Productive use is one measure that has been stipulated in the National Energy Policy of Tanzania and has been supported by strategies and various programmes of the ministries and CSOs in the country.

REA and TANESCO have electrification programs in unconnected areas. These programs need to go beyond household use for lighting homes, charging phones or powering household appliances such as radios and TVs because economies in rural and urban areas require energy for productive use.

The introduction of electricity in unconnected areas should go concurrently with the promotion of productive activities which requires extra measures to overcome barriers, such as gaps in local people's skills, availability of appliances, or access to financing. As awareness has risen of the importance of PUE, off-grid developers for mini-grids have been observed venturing into unknown areas, trying out different interventions which combine energy projects with development initiatives to increase people's skills and productivity.

5.4 Group Discussion

The group discussions were in the form of tackling the given questions by resource persons who presented papers on Unlocking Finance for Energy Access Space and Understanding the Productive Use of Renewable (PURE) Sector and other previous discussions.

First Group
Question: Challenges or gaps in terms of energy planning and how IEP could contribute to addressing the challenges

Challenges or gaps in terms of energy planning
- CSOs' hardship in accessing scientific and empirical data related to energy that could help in planning and informing policy choices concerning energy issues
- CSOs' weak capacity in interpreting data
- Inadequate free accessible data tools
- Inadequate financing models to support energy access and planning
- Insufficient policy framework governing energy in general – particularly Renewable Energy

How IEP could contribute to addressing the challenges
- The IEP will support addressing CSOs' access to data on energy for planning through open-source explorer
- The IEP provides an opportunity for providing capacity building to CSOs and other stakeholders on energy
- The IEP has paved the way for open access to data
- the IEP will support to ensure various sectors integrate/mainstream energy in their planning

Success stories we can build on
- There are a considerable number of households in Tanzania that use solar for lighting, charging, pumping water, and heating.
- Some small-scale farmers use solar pumps for irrigation purposes which have contributed to food security, income generation, and reducing costs in irrigation from using expensive diesel or petrol to cleaner solar power.

- It has contributed to reducing pollution in many ways
- Some citizens use solar for small businesses – solar, small centres for entertainment,

What role do you think CSOs can play effectively in promoting integrated energy planning?
- Influencing policy framework that is policy advocacy in support of integrated energy planning.
- Awareness raising to various stakeholders on the importance of integrated energy planning.
- Capacity building to local communities, CBOs, media representatives, policy-makers, etc.
- Mobilizing funding for capacity building, awareness raising, and promoting integrated energy planning.

How do you think data can help in achieving the objectives of your work as CSOs? What data do you think would be useful in helping CSOs advance advocacy efforts in energy access
- Data support CSOs to have evidence-based information for advocacy and influencing policy-makers.
- Data can also inform CSOs in undertaking research including evidence-based research.
- Data can assist CSOs in developing various projects/programs for funding, all in support of energy access, etc.
- Data will provide a better ground for developing various information materials for awareness raising, mindset changes, and providing an avenue for an alternative solution.

Second Group

What role can CSOs play in advancing governance in the electricity sector – at either national, or sub-national level?

- Advocating for an improved investment environment specifically on cost reflective tariff, guiding policy and implementation tools.
- Advocating for the establishment of a national climate financing entity that will play a leading role in the mobilization of funds at all levels example mobilizing private banks to accommodate RE financing, coordination of financing initiatives between sectors, leading in carbon emissions trading etc
- Conducting R&D in the energy sector
- Replication of best cases practices
- To influence regional energy investments
- Advocate for long-term plans of 50 years and above to ensure continuity of government plans

What opportunities do you see that CSOs can take advantage of to influence policy in energy planning? Be specific in terms of (i) which opportunities, (ii) what are the opportunities about? (iii) when are they happening

- Replication of best cases models/strategies example Rift Valley Energy (mini-grid developer) has succeeded in using emission trading enabling the reduction of tariff to 60 Tshs/kWh, which is lower than even the TANESCO rate. Such kind of practices should be sought and replicated
- Having integrated energy planning
- Having coordination among CSOs
- The transition of energy and climate change challenges into business opportunities that can be capitalized on by the private sector.

What can CSOs do to influence such opportunities, and what support would you need?

- Creation/strengthening and expansion of coalition and frameworks to include diverse stakeholders and officiating them
- Collaborate with stakeholders for commercializing the successful case studies/pilot.

Third Group

Challenges/gaps in terms of energy planning and how IEP could contribute to addressing the challenges

- Inadequate capacity to both public and private sector stakeholders on IEP
- Insufficient involvement of private sector stakeholders in the development of energy planning
- Uncoordinated efforts from various stakeholders, the public sector pushing one agenda and the private sector pushing another agenda
- Lack of harmonization of energy plans from various ministries
- Lack of decentralization of the development and implementation of energy plans

Proposed Solutions

- Timely and reliable data for actionable insights to public and private sector stakeholders
- Coordination and harmonization through IEP
- Raise awareness of the IEP in both public and private sectors
- IEP can help to assist accurate projection of energy demand and supply but also assist in setting the ministerial budget

Success stories we can build on

- Sensitization of LGA on the gender and energy-sensitive issues to be embedded on the district, regional and national level i.e. TANGSEN
- Active involvement of both public and private sectors in the development of the Renewable Energy Strategy by the Ministry of Energy
- Various coalitions were formed to advocate energy policy issues and involved in energy planning at the national level i.e., TAREA, Sustainable Energy Forum (SEF) etc.

What role do you think CSOs can play effectively in promoting integrated energy planning?

- Awareness and sensitization to various stakeholders
- Capacity building for various stakeholders
- Advocacy and lobbying to various stakeholders
- Resource mobilization
- Research and development

How do you think data can help in achieving the objectives of your work as CSOs?

- Evidence-based research or case study
- Identification of key priority areas
- Prioritization
- Approach to advocacy matters
- Demographic
- Qualitative and Quantitative data collection

What data do you think would be useful in helping CSOs advance advocacy efforts in energy access?

- Gender dis-aggregation
- Identification of key economic activities in various regions so as to identify productive use of energy needs
- Priority sectors i.e., health, agriculture, water, and education.

Fourth Group

Challenges/gaps in terms of energy planning and how IEP could contribute to addressing the challenges

- There is no up-to-date data e.g. Available for access to those data that need them. Or not of the current demography.

How Integrated Energy Planning (IEP) could contribute to addressing challenges

- Decentralizing the data access i.e. devolution/institutional arrangements and stakeholders engagements,
- Facilitating and enabling the harmonization of policies and regulations that enable integration of energy planning and use.
- Resources allocation?

Success stories we can build on

- Zimbabwe: the renewable energy of policy 2019, focused on integrating different sectors
- Zambia: lessons learned after the blackout led the country to integrate all sources of energy (i.e. hydro, geothermal etc) into the main grid to curb the energy deficiency at that time and is continuing in that path.

What role do you think CSOs can play effectively in promoting integrated energy planning?

- Awareness raising in multiple issues and bringing evidence for advocacy to build cases for solutions
- Conduct research.

How do you think data can help in achieving the objectives of your work as CSOs?

- Invest in research and enhance evidence-based data in advocacy and influencing our work to the Government and beyond as CSOs.

What data do you think would be useful in helping CSOs advance advocacy efforts in energy access?

- Both qualitative and quantitative – depend on the context and the accuracy. The data are backed by real evidence from the community that builds cases for actions.

Fifth Group

Challenges/Gaps in terms of energy planning and how IEP could contribute to addressing the challenges.

- Room of Political influence towards energy projects to targeted groups
- Lack of information (energy access data) from the government to the end user.
- Proper capacity to operate proper technology in handling Energy access data.
- Adequate data sources: Inadequate data collection; digitizing data to be accessed easily.
- Lack of consideration to use the available socio-demographic information
- Limited prioritization of IEP areas (cooking/heating)
- Financing: Ability to pay

Success stories we can build on

- Rural Electrification program in Malawi
- Pilot –Briquette project

What role do you think CSOs can play effectively in promoting IEP?

- Policy and Advocacy (to Parliament committees-allocation of funds to quantified and/or evidence-based projects to take over).
- Support Capacity building sessions with all stakeholders (IEP issues and/or technologies).

- Wider participatory planning (Bottom-up approach); enforce the grassroots to fit in the planning.
- Assist to coordinate grants offered by various development partners; to add value to IEP issues.

How do you think data can help in achieving the objectives of your work as CSOs?
- Policy-makers listen to quantifiable information
- Evidence-based influence –decision making.

What data do you think would be useful in helping CSOs advance advocacy efforts in energy access?
- Socio-demographic data
- Success stories
- Energy Audit patterns, etc.

6.0 THE WAY FORWARD

CSOs in Tanzania are mainly focusing on increasing energy access to the majority in on and off-grid areas. These efforts have been going parallel with fostering an enabling environment which is performed through advocacy for necessary regulations, policies and financial incentives that can enable access to reliable, affordable and sustainable energy services. Other activities include notable investment in capacity building and awareness raising among key stakeholders, policy-makers and actors across the entire energy value chain have been a crucial activity.

CSOs through this workshop have realized gaps in homogeneously for developing the technical expertise of CSOs on matters of energy access, including the development of Inclusive and Integrated Energy Plans, PUE, energy access financing and electricity sector governance. The CSOs are supposed to work together through coalitions, alliances or networks to mobilize communities from the national to the grassroots levels, resource mobilization, awareness creation, advocacy, capacity building and collect/ share appropriate data for energy planning and development. The CSOs should as well support mainstreaming productive use of energy in areas with grid and mini-grid electricity.

7.0 CLOSING SESSION

A Word from a Local Participant *(Mr Zuberi Mwachulla-Chair of the Sustainable Energy Forum)*

Distinguished Participants, Organisers, Ladies and Gentlemen,

First of all, let me use this opportunity to convey my gratitude to the organizers for the opportunity to air out our remarks.

I would like also to thank the World Resource Institute (WRI) for the support they provided to organize the workshop. Furthermore, many thanks and appreciation is directed to the TaTEDO staff for their tireless efforts to organize the successful and commendable workshop.

I would like also to thank all participants for their devotion which was made to ensure that they participated well in the workshop.

Ladies and Gentlemen, I would like to have a call to various energy stakeholders for working together through the following:

i). More collaboration and networking which is needed for all stakeholders for energy access
ii). Proper coordination is needed to ensure that all energy interventions are well-planned, implemented, monitored and evaluated.
iii). It is important to formulate a capacity-building team which will be responsible to create awareness of access to energy among various stakeholders.

Let me end up by providing a piece of advice to all participants to learn further all that we received from this workshop and change the way we undertake our activities in our organisations.

A Word from the Regional Participant *(Ms Dunia Mphande)*

Ladies and Gentlemen, I am assured that you have got a lot from this important regional workshop. First of all, I am thankful to the WRI and TaTEDO for the opportunity you provided to all participants and even to a few of us who are coming from Zambia, Malawi and Zimbabwe. On behalf of other regional participants, I would like to pass my warm thanks to the organisers of this workshop for their support and logistics which enabled them to come to the workshop.

We had a great time with you and I am assured that you have also enjoyed a lot from the energy access contributions made through this workshop. We also acknowledge the contributions of all those who have presented papers. We as CSOs, we are supposed to demonstrate our commitment to the creation of energy access by ensuring we use tools and lessons we have learned and airing our views to our governments and other supporters to achieve targets stipulated for development goals and modern energy services in our countries in the near future.

Closing Remarks *(Mr Benson Ireri, Africa Lead, WRI)*

Good Evening,

Let me take this opportunity to thank you for taking the time and come to the workshop. The two days of this workshop, have been a form of learning new things which have contributed to the knowledge of staff from WRI. We are grateful that discussions on these two days were lively and generated a wealth of concrete and constructive ideas, as well as reflecting a thorough understanding of the direction of energy access in the organisations represented in this workshop. Thank you to all participants for their engagement and enthusiasm and concluded that the CSOs workshop was an important step towards making the bold objectives of realizing achievements of energy access in the Sub-Saharan African countries.

Ladies and Gentlemen, as has been mentioned at different times during the days we have been here, let us leave here with a clear understanding of our different roles in the development of energy access in SSA. We have realized an increased ability to access data and information through EAE, systematic continuous and constant interaction, the inclusion of CSO in the designing of country policies, strategies programs and the implementation of projects and promise to do better in the future. And most importantly, as this was the common thread in all three breakout groups,

the building of capacity to ensure CSOs can participate and be represented, at every level of governance and policy-making and in strategic plans and government decision-making.

Finally, I would like to wish you all safe journeys back home and as you go about your daily lives, please think about what legacy you would like to leave behind for your country.

Thank you all for your attention and declared that the workshop is closed!

Annex 1: Workshop Programme

Time	Particulars	Responsible
15th Nov. 22	• Check-in for participants coming from outside Dar-es-salaam/Tanzania	TaTEDO-SESO
16th Nov. 22	▪ Africa Energy Transition – all participants from Tanzania to continue for 17th& 18th Nov ▪ Arrival of regional participants	TaTEDO-SESO
17 November 2022		
8:30 – 9:00 am	**Arrival & registration**	TaTEDO-SESO
9:00 – 9:45 am	**Welcome and Participant Introduction** ▪ Preamble ▪ Participants' Introduction **Opening Remarks and Keynote Address** ▪ ***Benson Ireri*** **-** Africa Lead – Energy Access Programme, WRI ▪ **Estomih Saweh** – Executive Director, TaTEDO and SESCOM Ltd	***Session Moderator:*** ***Jensen Shuma*** - TaTEDO
9:45 – 10:30 am	**Deep dive session 1: SSA Energy access space** ▪ Understanding SSA's energy access landscape - ▪ *Moderated Q&A session:* Understanding questions that African CSOs could be having regarding energy access situation	***Benson Ireri*** – Africa Lead – Energy Access Programme, WRI
10:30 – 11:00 am	**Coffee Break and Group Photo – Session Moderator – Adugna Nemera**	
11:00 – 12:00 noon	**Deep dive session 2: Introduction to Integrated Energy Planning (IEP):** ▪ What is inclusive & integrated energy planning? ▪ How can data help achieve IEP ambition (EAE) ▪ Q&A Session	***Dimitrios Mentis, PhD***– Manager, Energy Access Mapping & Ag. Global Lead for Energy Access Pillar, WRI
12:00 – 1:00 pm	▪ Group Discussion ▪ Presentation at plenary	TaTEDO/WRI

1:15 – 2:15 pm	**Lunch Break: Session Moderator –Shukuru Meena**	
2:15 – 3:30 pm	**Deep dive session 3: Electricity Sector Governance** ▪ Understanding governance in the electricity sector (EGI)	***Benson Ireri***–Africa Lead – Energy Access Programme, WRI
3:30 – 4:30 pm	Moderated Group Discussions + plenary feedback	All Participants
4:30 pm	**Tea Break and end of day 1**	

18th Nov. 2022 Session Moderator – Fraxen/AmshaAmsha		
9:00 – 9:30 am	Recap from Day 1	
9:30 – 10:15 am	**Deep dive session 4:** ▪ Understanding the Productive Use of Renewable (PURE) Sector	***Edward Aloyce Massawe***- Field Coordinator, Rural Electrification Densification Programme (REDP) II – Energy4Impact
10:15 – 11:00 am	**Deep dive session 5: Unlocking finance for energy access space** ▪ What is the current state of energy access financing for SSA? ▪ How much investment is needed to unlock energy access space, and more so, PUE? ▪ What are some of the sources available for financing energy access work? ▪ What role can CSOs play in unlocking the finance space?	***Adugna Nemera*** – Senior Associate, Energy Access Finance, WRI Africa
11:00 – 11:30 am	**Coffee Break**	
11:30 – 1:00 pm	**Session 6: Panel Discussion**- facilitating investments in PUE ▪ ***Dr. OlufunsoSomorin*** **-** Regional Principal Officer, African Development Bank ▪ ***Edward Aloyce Massawe***- Field Coordinator, Rural Electrification Densification Programme (REDP) II – Energy4Impact ▪ ***Emilian Nyanda***–Principal Energy Officer, Department of Environment, Ministry of Energy (MoE), Tanzania	**Session Moderator** – Benson Ireri
1:00 – 2:00 pm	**Lunch Break**	
2:00 – 3:00 pm	**Session 7: Putting it all together** (Group Discussion). **Session 7: Putting it all together** (Group Discussion). Each group should discuss the following questions:	WRI/TaTEDO or Fraxen

	▪ How can CSOs influence finance for energy access and productive use in SSA? ▪ What are the opportunities for influencing integrated energy planning, and how can CSOs better organize them to harness such opportunities?	
3:00 – 3:45 pm	The Way Forward	Benson Ireri (WRI)
3:45 – 4:00 pm	▪ A Word from Local Participant ▪ A Word from Regional Participant ▪ Closing Remarks	Selected participants and Benson Ireri (WRI)
4:00 pm	**Tea Break and end of training event**	

Annex 2: Participants of the Enhancing the Capacity of CSOs to Play a Meaningful Role in the Realization of Energy Access for Sub-Saharan Africa

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