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# AFRICAN DEVELOPMENT BANK ACTFCN

Project: Support to SE4ALL Country Actions processes in Ghana, Kenya and Tanzania -Ghana-

Part 1: Monitoring, Evaluation and Reporting System for Ghana's SE4ALL Initiative - Consultancy Report

Date: August 12th 2015

ITP/UKP1205

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Project: "Support to SE4ALL Country Actions processes in Ghana, Kenya and Tanzania" Report: "Monitoring, Evaluation and Reporting System for Ghana's SE4ALL Initiative - Consultancy Report"

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### African Development Bank

IT Power reference: UKP1205

# Part 1: Monitoring, Evaluation and Reporting System for Ghana's SE4ALL Initiative - Consultancy report

August 12<sup>th</sup> 2015

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Document control	
File path & name	Y:\Data\OWorkITP\OProjects\1205 ACTFCN SE4ALL Tanzania Kenya Ghana
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Approved	Akanksha Chaurey
Date	August 2015
Distribution level	Client distribution

Template: ITP REPORT Form 005 Issue: 07; Date: 12/03/2012

ITP/UKP1205 i August 2015





#### **EXECUTIVE SUMMARY**

This report was written as part of the consultancy work carried out by the consultants under the project "Support to SE4ALL Country Actions processes in Ghana, Kenya and Tanzania", which is financed by the African Climate Technology Finance Centre and Network (ACTFCN) as part of a UNFCCC/GEF initiative conducted with regional multilateral development banks, in this case, the African Development Bank (AfDB). The objective of ACTFCN is to support Sub-Saharan African (SSA) member countries in scaling-up the deployment of low-carbon and climate resilient technologies for climate change mitigation and adaptation. On the mitigation side, the project supports the implementation of the Sustainable Energy for All (SE4ALL) initiative in Africa. The project contributes to advancing the SE4ALL initiative in three countries, and this report specifically addresses the design of a Monitoring, Evaluation and Reporting (MER) system to track Ghana's progress towards the achievement of its SE4ALL goals.

This work is composed of two parts: the first part (this report) introduces the consultancy work done to build the Monitoring, Evaluation and Reporting (MER) system specifically developed for the Energy Commission (EC), host of Ghana's Sustainable Energy for all (SE4ALL) Secretariat, to track progress on the implementation of Ghana's activities under its SE4ALL initiative; the second part is contained in a separate document, which is the MER system itself, and is the document that will be used by the EC to monitor the initiative and to report the results.

Ghana is the first country that opted for the SE4ALL initiative launched in September 2011 by the United Nations Secretary-General and which aims at reaching three main goals by year 2030: universal access to energy services, in particular electricity services and clean cooking solutions; doubling the share of renewable energy in the global energy mix; and doubling the global rate of improvement in energy efficiency. In line with these three goals, Ghana has developed and published its Country Action Plan (CAP) in June 2012 which presents the country's goals and priority intervention areas under the SE4ALL initiative. The country is now developing its Action Agenda (AA) with support from ECREEE¹. Ghana's AA should be released in the course of 2015 and will complement the CAP 2012 by providing the strategic framework towards achieving the country's SE4ALL goals.

In order to monitor the progress towards the achievement of the country goals, the EC, in its role of hosting the SE4ALL Secretariat, will apply the MER system designed for it. The objective is to provide a way to track how the country is evolving and use the MER system as a tool to communicate the results and identify any deviations, bottlenecks, needs for modifying or designing new activities while implementing the activities as set under the CAP and, in the near future, under the AA.

Ghana's SE4ALL MER system is designed to fit current Ghanaian context and needs. In line with the recommendations of the SE4ALL initiative, it builds on current monitoring and evaluation exercises already in place in Ghana including the Government's own monitoring and evaluation activities. It also links to the SE4ALL Global Tracking Framework (GTF), which proposes a holistic approach for tracking progress on all three SE4ALL global goals.

The MER system is composed of a Logical Framework (Logframe), a Monitoring Plan, an Evaluation Plan, a Reporting Plan and a Performance Assessment Framework (PAF) summarising the most relevant aspects of each stage. The PAF contains the list of the 22 indicators that the country will monitor, and provides information on information and data sources, entities and GoG agencies involved, etc. The MER also includes guidelines on how to sustain the system and incorporate new indicators according to new developments of the initiative - whether at the country level, with the future release of the AA, or at the global level with the publication of new versions of the GTF<sup>2</sup>.

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<sup>&</sup>lt;sup>1</sup> ECOWAS Centre for Renewable Energy and Energy Efficiency

<sup>&</sup>lt;sup>2</sup> The second edition of SE4ALL GTF is expected to be publicly released soon (current 2015). For now, only the key findings, summary and infographic are publicly available.





The MER system has been developed to track Ghana SE4ALL CAP implementation and its contribution to the three SE4ALL universal goals. The relationship between Ghana SE4ALL CAP implementation and the three stages of the MER system is represented in the following figure:

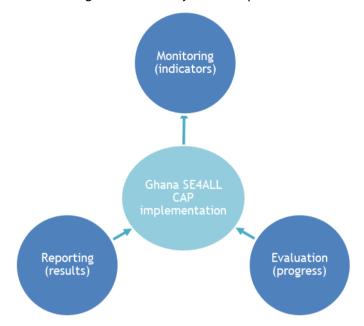


Figure 1 Relationship between Ghana's SE4ALL MER system and CAP implementation

While Ghana is progressing in the implementation of its SE4ALL initiative (i.e. development of Ghana's AA and corresponding IPs) and new monitoring tools and guidelines are developed at the international level, the MER system will need to be updated and will include indicators that are not directly linked to the CAP implementation, but reflect the evolution of the country SE4ALL strategy.

This report presents the background to the development of the SE4ALL MER system for Ghana, the status of the SE4ALL initiative in the country and the rationale for a MER system. A brief description of the content and structure of the MER system is also given along with the monitoring and evaluation activities currently in place in the country that could feed into the system to ease its implementation. Finally, challenges pertaining to such a system are identified and potential actions to be put in place to mitigate them are proposed. As said, the second document, i.e. the MER system, will be applied by the EC to track progress of the implementation of Ghana's CAP, and in the future, Ghana's AA. It is organised in 7 parts describing each of the three stages of the system from monitoring to reporting, and including a Logframe and a Performance Assessment Framework as well as recommendations on how to sustain the MER system in the future to include updates derived from the GTF and the AA.

Undertaking an MER initiative poses potential challenges and risks that have to be taken into consideration beforehand in order to preview potential mitigation actions and be ready to act if any of them appear in the future. These potential challenges and risks are evaluated in terms of probability and impact and mitigation actions are also proposed. The identified challenges are related to:

- Low data availability, in terms of difficulties for collecting them
- Lack of baseline information to evaluate how indicators are progressing towards targets
- Limited resources (human, material, financial) for carrying out monitoring activities
- Excessive number of indicators, which may generate higher monitoring costs
- Low stakeholders' engagement (e.g. to provide data, participate in activities)
- Insufficient commitment from GoG entities/agencies to support the SE4ALL Initiative
- Institutional, operational and technical capacity constraints
- Difficulty in data collection and reporting processes due to confidentiality issues





#### **ABBREVIATIONS**

AA Action Agenda

ACTFCN African Climate Technology Finance Centre and Network

AfDB African Development Bank

CAP Country Action Plan
CFP Country Focal Point

CIF Climate Investment Funds

EA Energy Access
EC Energy Commission

ECOWAS Economic Community Of West African States

ECREEE ECOWAS Centre for Renewable Energy and Energy Efficiency

EE Energy Efficiency

EPRAP Energy for Poverty Reduction Action Plan

GDP Gross Domestic Product

GEAR GIS-based Energy Access Review

GEDAP Ghana Energy Development and Access Project

GFT Global Facilitation Team

GHACCO Ghana Alliance for Clean Cookstoves
GIS Geographical Information Systems
GLSS Ghana Living Standard Survey
GSS Ghana Statistical Service
GTF Global Tracking Framework

ICT Information and Communication Technology

KNUST Kwame Nkrumah University of Science and Technology

LPG Liquefied Petroleum Gas
M&E Monitoring and Evaluation

MCC Millennium Challenge Corporation
MDA Ministries, Departments and Agencies

MDB Multilateral Development Bank

M&E Monitoring & Evaluation

MER Monitoring Evaluation Reporting
MiDA Millennium Development Authority

MMDA Metropolitan, Municipal and District Assemblies

MoEP Ministry of Energy and Petroleum

MoP Ministry of Power

PHC Population and Housing Census

PUE Productive Use of Energy

RE Renewable Energy

SE4ALL Sustainable Energy for All

SEAAF Sustainable Energy for All Acceleration Framework

SHS Solar Home System

SL Solar Lantern

SREP Scaling up Renewable Energy Program in Low Income Countries

UNDP United Nations Development Programme





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#### 1 BACKGROUND

#### 1.1 The SE4ALL initiative in Ghana

Ghana is the first country to commit to the Sustainable Energy for All (SE4ALL) initiative since its inception by the United Nation Secretary-General in September 2011. The SE4ALL initiative is a multi-stakeholder partnership between governments, the private sector and civil society organisations. The initiative focuses on achieving three interlinked objectives by the year 2030:

- Ensure universal access to modern energy services;
- Double the global rate of improvement in energy efficiency (EE);
- Double the share of renewable energy (RE) in the global energy mix.

Ghana has received support from the United Nations Development Programme (UNDP), the African Development Bank (AfDB) and other partner agencies, to implement the SE4ALL initiative. It adopted Sustainable Energy for All Acceleration Framework (SEAAF) to identify barriers and opportunities, and initiate concrete actions towards the achievement of the three SE4ALL objectives.

The SEAAF carried out a Rapid Assessment and Gap Analysis and subsequently rolled out a SE4ALL Country Action Plan (CAP) in June 2012 under the leadership of the Energy Commission (EC) and the former Ministry of Energy and Petroleum (MoEP)<sup>3</sup>, and with the engagement of multiple stakeholders. The CAP 2012 prioritised the key interventions Ghana seeks to pursue where the removal of binding constraints will have the highest impact on people's living standards and socioeconomic conditions, especially in underserved rural and peri-urban areas. A detailed bottleneck analysis was carried out and cost-effective solutions for their removal have been proposed to accelerate the progress towards SE4ALL goals. Based on impact and feasibility, Ghana has identified four priority intervention areas under each of the three SE4ALL objectives: Productive Use of Energy (PUE), Modern Energy for Cooking - LPG, Modern Energy for Cooking - Improved Cookstoves, and Off-Grid Electrification using renewable energy interventions.

In December 2013, an Investment Prospectus Framework was developed with support from the U.S. Department of State in order to identify potential investment opportunities and bankable opportunities in the priority areas. A Financing Working Group including representatives of the MoEP, EC, Ghana's SE4ALL Secretariat, ECREEE, U.S. Department of State, UNDP, AfDB, European Commission and the World Bank, has also been established with the mission to identify, develop and secure funds and investment to implement off-grid electricity access interventions as part of Ghana's SE4ALL initiative. The pertaining Investment Prospectus (IP) is currently being prepared and a draft version should be made available in the course of 2015.

In the meantime, Ghana is also developing its SE4ALL Action Agenda (AA) with support from ECREEE. Ghana's AA is expected to be released by end of 2015. A summary is already available which presents the strategic decision of Ghana to focus on specific interventions that are likely to produce tangible benefits for a controlled cost, instead of embracing a wide-angle strategy developing a more diverse set of activities. Therefore, Ghana is opting for a strategy focusing mainly in the area of energy access, but with significant impact on renewable energy and energy efficiency to a certain extent.

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<sup>&</sup>lt;sup>3</sup> In late 2014, the MoEP has been replaced by two ministries: the Ministry of Power (MoP) and the Ministry of Petroleum.





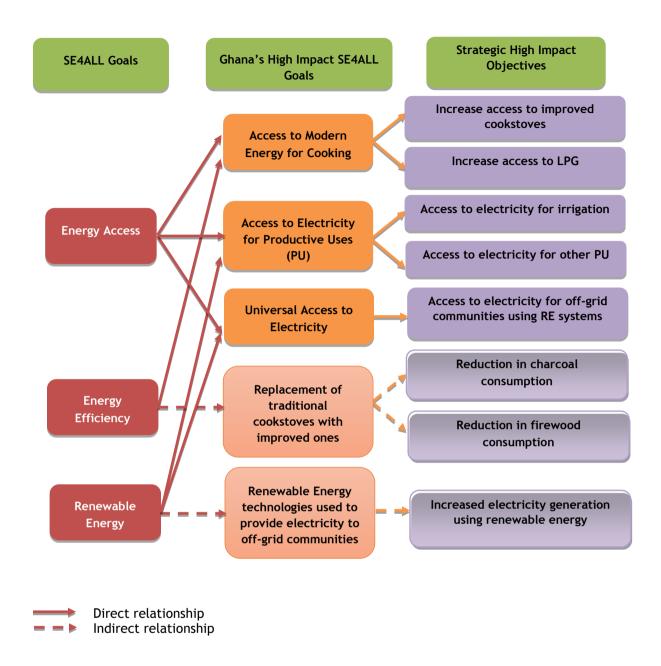


Figure 2 Ghana's priority areas and strategic objectives vis-à-vis SE4ALL goals<sup>4</sup>

Figure 2 illustrates the goals and objectives of Ghana's SE4ALL initiative as per the CAP 2012 and the summary of Ghana's AA. Ghana has identified high impact country goals under each SE4ALL global goal, and for each country goal, strategic high impact objectives were defined. As seen in that figure, several country goals may have an indirect relationship with the global goal, e.g. in the case of universal access to electricity, RE systems will be used thus contributing directly to increasing universal electricity access but, simultaneously, indirectly contributing to increasing the share of RE in the energy mix.

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<sup>&</sup>lt;sup>4</sup> Authors' interpretation based on the scope of Ghana's CAP 2012 and summary of Ghana AA.





#### 1.2 Monitoring the implementation of Ghana's SE4ALL initiative

It is important to establish a robust monitoring, evaluation and reporting (MER) system for Ghana in order to monitor the implementation of the SE4ALL initiative at national level, which is framed and materialized in its CAP (and future AA and IPs). The MER will aid the EC to track progress towards the achievement of Ghana's SE4ALL goals and objectives, and identify any deviation or bottlenecks associated with the implementation for early resolution.

Such system would provide a framework for frequent review and update of Ghana's CAP/AA implementation; help informing national development planning and decision making; support sector policy development and programme design; help establish trends over time; as well as encourage policy dialogue within the Government and with Development Partners. It would also aid the reporting of results of Ghana's SE4ALL initiative at country level as well as among the SE4ALL Community.

In this regard, an efficient MER system is designed with the following key elements in mind:

- Suggesting institutional arrangements (such as need for additional resources, specific capacity development) that can support sustainable monitoring, evaluation and reporting processes;
- Selection of a specific set of indicators to track Ghana's SE4ALL activities implementation and progress towards the achievement of Ghana's SE4ALL objectives;
- Building a robust data platform related to Ghana's SE4ALL initiative;
- Ensuring a holistic and participatory approach in monitoring activities vis-a-vis collaborative participation of stakeholders;
- Defining standardized procedures for data collection to ensure data quality, if necessary;
- Suggesting evaluation activities for assessing the implementation of Ghana's SE4ALL initiative;
- Ensuring relevant reporting of the results arising from the evaluation of the CAP/AA implementation to the different stakeholders, including the Global Facilitation Team (GFT) and the SE4ALL Hub.

Ghana's SE4ALL MER system is designed to fit Ghanaian context and needs. In line with the recommendations of the SE4ALL initiative, it builds on current monitoring and evaluation exercises already in place in Ghana including the Government's own monitoring and evaluation activities. It also links to the SE4ALL Global Tracking Framework (GTF), which proposes a holistic approach for tracking progress on all three SE4ALL goals, hence ensuring the provision of the most accurate data possible.

#### 1.3 Monitoring global progress of SE4ALL: the Global Tracking Framework

More than 85 governments from developing countries have joined the SE4ALL initiative and have expressed an interest in advancing Sustainable Energy for All. To sustain momentum for the achievement of the three SE4ALL objectives, a means of charting global progress over the years leading to 2030 is necessary. The Global Tracking Framework (GTF) has been developed for this purpose. It establishes a methodology and data platform for regular global reporting against the three SE4ALL objectives by 2030.

Note: The first version of the GTF, which the following sections are referring to, has been released in 2013. A second version is currently under development and few information is already publicly available such as the key findings. The full report of GTF version 2 will however be published later in 2015, and presumably after this report and the MER system for Ghana have been completed.





#### 1.3.1 Energy Access

One of the three objectives of the SE4ALL initiative is to ensure universal access to modern energy services by 2030. The SE4ALL initiative accepts different definitions for energy access. Therefore, it is challenging to determine the best way to capture quantitative and qualitative data. This is especially true when focusing on topics like the quantity of energy consumed, the quality and reliability of the service, as well as complementary issues such as the ability to pay (affordability) and the informality of the service. This is challenged by the way data is currently collected as stated in the following GTF quote:

"Because currently available global databases only support binary global tracking of energy access (that is, a household either has or does not have access, with no middle ground), this is the approach that will be used to determine the starting point for the SE4ALL Global Tracking Framework. Based on an exhaustive analysis of existing global household survey questionnaires, the following binary measures will be used:

- Electricity access is defined as availability of an electricity connection at home or the use of electricity as the primary source for lighting.
- Access to modern cooking solutions is defined as relying primarily on non-solid fuels for cooking<sup>5</sup>.

An important limitation of these binary measures is that they do not capture improvements in cookstoves that burn solid fuels, nor are they able to register progress in electrification through off-grid lighting products. In the case of electricity, the binary measure fails to take into account whether the connection provides an adequate and reliable service, which it may often fail to do."

While there are a number of data sources that can collect global data (World Bank, IEA and WHO), GTF puts the challenge of creating country level data in the medium term. Basically the proposal is to develop systems based on the multi-tier metric established for Access. Based on the idea of using a multi-tier methodology for tracking progress towards achieving modern energy, the GTF encourages countries to set their own targets, but choosing any tier above tier 0: "such targets will depend on the current access situation in the country, the evolution of the energy needs of users, the availability of energy supply for income-generating activities, and the affordability of different energy solutions in the country". Countries have the flexibility of choosing whether they will improve access on a tier by tier basis or jump across tiers<sup>6</sup>.

Table 1: Tracking access in the medium term<sup>7</sup>

		NO ACCESS	NO ACCESS		ADVANCED ACCESS		
TRACKING ACCESS TO ELECTRICITY	GLOBAL TRACKING	NO ELECTRICITY	SOLAR LANTERN OR RECHARGEABLE BATTERY LANTERN	HOME SYSTEM OR GRID CONNECTION		NECTION	
	COUNTRY-LEVEL TRACKING	TIER-O	TIER-1	TIER-2	TIER-3	TIER-4	TIER-5
		NO ACCESS	BASIC ACCESS		ADVANCED ACCESS		
TRACKING ACCESS	GLOBALTRACKING	SELF-MADE COOKSTOVE	MANUFACTURE	D NON-BLEN C	COOKSTOVE	BLEN CO	OKSTOVE
TO COOKING							
	COUNTRY-LEVEL TRACKING	TIER-O	TIER-1	TIER-2	TIER-3	TIER-4	TIER-5

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 $<sup>^{5}</sup>$  In case of Ghana, access to modern cooking is focused on the use of improved cookstoves (with solid fuels) and LPG.

<sup>&</sup>lt;sup>6</sup> Table 1 and Table 2 are extracted from the Global Tracking Framework

<sup>&</sup>lt;sup>7</sup> BLEN: Biogas-LPG-Electricity-Natural gas





Table 2: Challenges to energy access tracking8

Challenge	Proposed approach to global tracking	Proposed approach to country tracking
Off-grid, mini- grid, and grid solutions	Two-threshold measurement to reflect access to electricity for lighting and for more advanced applications on a technologyneutral basis.	Technology-neutral multi-tier measurement based on attributes of supply and covering grid and off-grid solutions.
Quality of supply	Not reflected. Quality of supply cannot be measured without detailed household surveys or reliable utility data.	Qualities of supply aspects are reflected through detailed household surveys using the multi-tier framework.
Access to electricity supply versus electricity services	Electricity supply and services overlap across the two-threshold measurement.	Both electricity services and electricity supply are measured through separate multi-tier frameworks.
Productive and community uses	New methodologies to be developed.	New methodologies to be developed.
Heating	New methodologies to be developed.	New methodologies to be developed.
Improved solid fuel cookstoves	Two-threshold measurement to reflect the use of manufactured non-BLEN cookstoves and BLEN cookstoves (based on direct observation).	Technology-neutral multi-tier framework reflects the wide range of technical performance of non-BLEN cookstoves, along with the associated CCA attributes.
Stacking of stoves and fuels	Only the primary cooking solution is reflected.	Multi-tier framework reflects fuel stacking through the adequacy attribute.
Convenience and conformity	Not reflected. BLEN cookstoves may be assumed to be convenient and conforming.	Multi-tier framework reflects all actual use attributes.

#### 1.3.2 Renewable Energy

Renewable energy is defined in different ways depending if the concept is approached from the resource perspective or the conversion technology that can convert such resource into either fuel or energy. While indicators on renewable energy consumption exist, data collection and formulation of same or similar indicators may vary. Therefore, the GTF proposes a "broad" definition for Renewable Energy that states:

"Renewable energy is energy from natural sources that are replenished at a faster rate than they are consumed, including hydro, bioenergy, geothermal, aerothermal, solar, wind, and ocean."

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<sup>&</sup>lt;sup>8</sup> In the case of "productive community uses" and "heating applications", draft multi-tier approach methodologies exist and are in the process of review and validation within ESMAP, World Bank. These approaches may or may not be fully incorporated in the version 2 of the GTF. However, they could be taken into consideration for updating the MER system for Ghana when publicly released.

<sup>&</sup>lt;sup>9</sup> Aerothermal energy involves utilising the calories present in the air, thanks to solar radiation, to generate heat and use it to air-conditioning a house (see <a href="http://www.repsol.com/es\_en/energia-inteligente/informate/aerotermia.aspx">http://www.repsol.com/es\_en/energia-inteligente/informate/aerotermia.aspx</a>). Accessed 23 July 2015.





The GTF concludes that the best way to track this is as final energy consumed because: "Since renewable energy sources do not have fuel inputs, they are only reported in final energy terms; expressing them in primary terms would require the use of somewhat arbitrary conversion factors."

Like with many other global energy indicators, the GTF focuses in reaching "high aggregation levels" when at low aggregation, and mostly at country level, data gaps are significant. This is true not only for renewable energy resources, but for the associated technologies and non-grid solutions too. Another issue identified by the GTF is the challenge of measuring "heat output" from certain technologies.

So far, the GTF has adopted the baseline for 181 countries, based on IEA's review of energy balances for 20 years (1990 - 2010), and proposes to complement these balances with the following indicators:

- (i) "Policy targets for renewable energy and adoption of relevant policy measures";
- (ii) "Technology costs for each of the renewable energy technologies";
- (iii) "Total investment in renewable energy from the Renewable Energy Network 21, the International Renewable Energy Agency, and Bloomberg New Energy Finance, respectively."

Table 3: Challenges on renewable energy monitoring<sup>10</sup>

Challenge	Proposed Approach
Definition of renewable energy	Energy from natural sources that are replenished at a faster rate than they are consumed, including hydro, bioenergy, geothermal, aerothermal, solar, wind and ocean
Sustainability of renewable energy	Develop sustainability protocols for different forms of renewable energy over time, so that sustainability considerations can be incorporated to the definition in the medium term
Primary versus final energy accounting	Track renewable energy as a share of total final energy consumption, and as a subsidiary indicator the share of renewable energy in electricity generation
Measuring additional indicators	Track complementary indicators such as deployment diversification, renewable energy policy, technology cost and diversification

#### 1.3.3 Energy Efficiency

Energy efficiency's definition under the GTF is:

"Energy efficiency is defined as the ratio between useful outputs and associated energy inputs. Rigorous measurement of this relationship is possible only at the level of individual technologies and processes, and the data needed for such measures are available only for a handful of countries. Even where data are available, they result in hundreds of indicators that cannot be readily used to summarize the situation at the national level."

Given the complexity of measuring energy efficiency, energy intensity (energy consumed per dollar of gross domestic product) has been used as a proxy. While this approach may create some concerns, some refinements and corrections can be made to reduce the distortions from the

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<sup>&</sup>lt;sup>10</sup> Table copied from the Global Tracking Framework





composition of the GDP to correlate them better with energy sector indicators. Energy intensity will:

- "Rely primarily on energy intensity indicators
- Use PPP measures for GDP and sectoral value-added
- Use primary energy supply for national indicators and final energy consumption for sectoral indicators
- Complement those indicators with energy intensity of supply and of the major demand sectors
- Provide a decomposition analysis to at least partially strip out confounding effects on energy intensity
- Use a five-year moving average for energy intensity trends to smooth out extraneous fluctuations"

Table 4 shows a summary of the challenges on energy efficiency, as identified in the GTF.

Table 4: Challenges on energy efficiency monitoring<sup>11</sup>

Challenge	Proposed Approach
Multidimensionality of energy efficiency	Track global performance on energy intensity while also tracking the energy intensity of major economic sectors and the efficiency of the energy industry.
	Move toward better tracking of targets, policies, institutions, and investments.
Intensity versus efficiency	Track energy intensity for countries and major regions and blocks. Where feasible, complement that tracking with decomposition of changes in energy demand to strip out structural effects.
Market exchange rate versus purchasing power parity	Track energy intensity using the purchasing power parity measure to capture the value-added of economic output.
Primary versus final energy	Track global energy intensity in terms of total primary energy supply and sectoral energy intensity in terms of final energy consumption.
Volatility of efficiency measures	Track a five-year moving average trend.

#### 1.4 Global tracking vs. country tracking

The GTF provides an adequate system for basic global tracking and reporting, however this can only help to portray the big picture. In this regard, a list of considerations is 12:

- The GTF has no short-term focus on country tracking systems. All is concentrated at the global level.
- The GTF has a series of recommendations on what should be the country efforts in the "medium term", some of them will take time to properly develop.

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<sup>11</sup> Table 4 is extracted for the Global Tracking Framework

<sup>&</sup>lt;sup>12</sup> This list is based on the GTF version one, a new version is to be presented during the third quarter of 2015.





 There is a big concern on data gaps and mechanisms to measure thermal power across technologies. The GTF expects that new methodologies and mechanisms will be developed to close the gaps.

Appropriate country tracking is an essential complement to global tracking and will allow for a much richer portrait of energy sector developments. The SE4ALL initiative expressively states that "... a mechanism should be put in place to track progress that should link to the Government's own monitoring and evaluation instruments and, where relevant, build on existing monitoring exercises by the different partners, facilitate the collaborative participation of stakeholders in monitoring, and make the monitoring information accessible to the public. This work should also link to the Global Tracking Framework ensuring the provision of the most accurate data. It will also be important to make provisions for regular reporting on Action Agenda implementation to the GFT and Regional Hub".

Ghana SE4ALL MER system has been specifically designed to answer this need taking into account the Ghanaian context, the country SE4ALL strategy (CAP) and the MER activities already in place in the country.

#### 2 CONSIDERATIONS FOR DEVELOPING A SE4ALL MER SYSTEM FOR GHANA

#### 2.1 Approach for developing Ghana's MER system

The MER system for Ghana is developed taking into consideration:

- Ghana's SE4ALL goals and targets set in Ghana's CAP from 2012, and confirmed in the summary of SE4ALL Ghana's AA;
- The GTF guidelines as set in the first version of the GTF, the second version still not being available to the public;
- Current monitoring or tracking systems applied in Ghana which will enable the identification of existing indicators, current practices and standards to facilitate the implementation of the SE4ALL MER activities;
- The need to fit the Ghanaian context and environment and therefore to develop a MER system which allows for some flexibility (i.e. having the capability to respond to changing circumstances and new information);
- The possibility of using multi-tier approaches derived from the GTF for indicators related to energy access;
- The identification of appropriate indicators under each goal that the country has set, which will enable the country to evaluate progress toward the accomplishment of those goals.

#### **Key Concepts**

<u>Monitoring</u> refers to the continuous process of collecting data on the agreed indicators to provide indications of the extent of progress and achievements made. It involves the systemic collection of information and data as well as calculating specific indicators to evaluate the effectiveness of the activities implemented. Monitoring will be conducted following specific procedures to collect information, data, and variables that are set for each indicator. Procedures that are already in place in the country to track variables will be taken into consideration. Monitoring also contributes to the creation of a robust data platform related to SE4ALL which can be useful for other future activities or projects.

<u>Evaluation</u> refers to the action of assessing the current scenario (at any given moment during implementation) in comparison to the baseline scenario and the expected targets or objectives set for the period under evaluation and for the subsequent periods. This comparison enables the country to identify delays or deviations in the achievement of targets and to take corrective actions accordingly (e.g. modify targets or implementation strategies). Proper monitoring is vital





for conducting a successful evaluation, which will aid to keep the initiative on track. A proper evaluation frequency should be selected in accordance with the type of activity under execution and targets.

<u>Reporting</u> refers to the systematic and timely provision of essential and useful information showing how Ghana is progressing toward the achievement of its SE4ALL goals. It should take place at periodic intervals and should result in the publication of a performance report, or similar document. Reporting will provide a regular feedback on Ghana's SE4ALL initiative evolution to stakeholders and the public indicating progress made, problems found, successes achieved and lessons learnt during the initiative's implementation.

An <u>indicator</u> is a quantitative or qualitative factor or variable that provides a simple and reliable means to measure achievement, to reflect the changes connected to an intervention, or to help assess the performance of a development actor.

A <u>logical framework (or Logframe)</u> is a management tool used to improve the understanding of the planned interventions, most often at the project level. It involves identifying strategic elements (goals, objectives, outputs) and their causal relationships, indicators, and the assumptions or risks that may influence success and failure. It thus facilitates planning, execution and evaluation of a development intervention.

The relationship among the three steps of the system, i.e. Monitoring, Evaluation and Reporting, with the CAP/future AA implementation is shown in Figure 3. Monitoring the selected indicators for each SE4ALL country goal is vital for conducting an evaluation of how the implementation of the SE4ALL CAP/future AA, is progressing throughout time. The evaluation allows for reporting the results of this implementation, which can eventually be shared with the general public, stakeholders and other countries committed to follow the SE4ALL global initiative.

Evaluating results and progress enables the country to take corrective actions, modify strategies and activities, and identify opportunities for the future improvement of its action plan or corresponding action agenda.

The SE4ALL MER system is the key management tool to be used by the EC in its role of hosting SE4ALL Secretariat for Ghana, to manage data collection, analysis of results and report on the performance of the accomplishments made under the country's SE4ALL goals. It captures those key elements of the expected results from the initiative's implementation at country level, by outlining proposed performance indicators for each strategic objective and targets, baselines, frequency of data collection, data sources and methods, as well as responsibilities of the different entities involved.





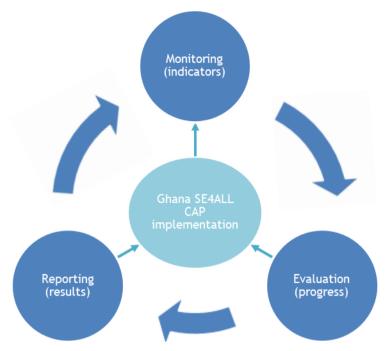


Figure 3 Relationship between Ghana's SE4ALL MER system and CAP implementation

#### 2.2 Objective of Ghana's MER system

The objective of having a MER system for Ghana is to track and evaluate how the country progresses toward the achievement of the SE4ALL goals and targets that are set in the CAP and upcoming AA, and which are defined to be achieved by 2020.

#### 2.3 MER system description

The MER system developed for Ghana consists of five main components which are:

- Logical Framework ("Logframe")
- Monitoring Plan
- Evaluation Plan
- Reporting Plan
- Performance Assessment Framework

All those components are described in the following paragraphs within this section. They were designed to be applied in the Ghanaian context and were developed with support from the EC. The EC will be the entity responsible for ensuring that the MER system is applied correctly and that all the involved entities and stakeholders provide the necessary information and data in a timely and proper manner.

MER activities must be participatory and transparent, but the confidentiality of data reported by the various partners and stakeholders should be protected if deemed necessary. Stakeholder engagement (e.g. country institutions, national NGOs, etc.) and understanding of the implications of applying such a system in Ghana is essential for ensuring a proper data "flow" that will feed the MER. Moreover, robust governance is vital to ensure the successful conduction of monitoring activities and data quality control procedures.

#### 2.3.1 Logical Framework

The proposed logical framework provides a strategic overview of Ghana's SE4ALL activities. It is presented in the form of a table and aims at providing information about the key components of





Ghana's SE4ALL initiative implementation in a clear, concise and systemic way. It contains the proposed indicators qualified by baseline and targets, along with sources of data, means of verification and assumptions for each indicator. The Logical Framework for Ghana's initiative is show in the MER system, and it intends to present an overview of the SE4ALL initiative including a wide set of potential indicators that could be used. Since the SE4ALL initiative in Ghana is focused on specific goals and aspects that the country wants to advance to improve the population's socioeconomic development, the MER system was designed to fit that Ghanaian context and thus contains a selected set of indicators that will be tracked, some of which are included in the Logframe. Some others, also mentioned in the Logframe, will not be tracked because they are not directly related to the country's SE4ALL goals and objectives.

#### 2.3.2 Monitoring Plan

#### 1) Selection of indicators

The design of the Monitoring Plan implied, as a first step, the identification of the SE4ALL country goals and objectives that the country aims at achieving as well as the activities to be implemented to do so. This allowed continuing with the second step of the process, which is to identify and select the appropriate indicators that will enable the country to track progress toward the achievement of its goals. The resulting list of indicators was a combination of inputs from the EC, suggestions from the Consultant and information collected from stakeholders interviewed during the missions conducted in Accra.

The selected indicators are listed in the MER System. Different levels of indicators were identified: at "goal level", and at "objective level" under each SE4ALL goal.

The monitoring of the "objective level" indicators will be conducted using data monitored during the implementation of Ghana's CAP activities. These data will be collected by ministries or agencies dealing with the specific activities, and reported to the EC in order to estimate the corresponding objective level indicators.

Two aspects related to indicators are essential to reduce the demand of resources associated to monitoring activities: diversity and number of indicators. It is necessary to assess those indicators that, although they are more difficult to monitor, capture the substance of the change that is occurring in a better way. Moreover, having fewer indicators would reduce associated monitoring costs but it is important to analyse the relevance of each indicator and that there are enough ones to cover everything that needs to be tracked.

#### 2) Identification of baselines and targets

The general country goals as well as the objectives under those goals are set by Ghana in its CAP, or AA in the near future. A goal can have one or more targets, which is what the country aims at achieving in terms of results in a certain period of time, derived from the actions taken.

In terms of baselines, it is essential to determine what the starting point (i.e. the baseline) is in order to provide something to compare with after the actions are taken and their results are evaluated. It is suggested to identify the most appropriate baseline for each indicator. For those indicators where currently there is no information on baselines, some baseline identification activity should be carried out during the first year of MER implementation since without a baseline it will not be possible to evaluate progress.

#### 3) Indicators' monitoring protocols

A proper protocol to monitor each of the indicators is to be developed taking into consideration several aspects, such as: method and frequency of calculation, sources of data and information, frequency of data collection, responsible entities involved in the monitoring process and data collection activities, risks and assumptions associated to the indicator, amongst other. These protocols are taken from current monitoring activities carried out in the country where available.





#### 4) Availability of data

In order to save costs, time and efforts, data sources which are already available should be identified and analysed before deciding to create new data sources.

#### 2.3.3 Evaluation Plan

The evaluation process consists of annual reviews of the progress made through the activities conducted and performance achieved towards the targets that are set under Ghana's SE4ALL CAP, or in the future, Ghana's SE4ALL AA.

The evaluation will ensure a broad and representative perspective on the achievements and challenges in the implementation of Ghana's SE4ALL activities, and will allow to assess the adequacy of the adopted strategy to meet the targets as planned and take any corrective action if needed. The evaluation should include the provision of recommendations for future monitoring periods and it is also intended to inform the stakeholders participating in the implementation of the CAP for follow-up actions required to further strengthen the CAP's performance and strategic activities. It will also be of interest for the SE4ALL Hubs, the GFT, Development Partners and other stakeholders, with respect to lessons learnt from implementation of the CAP.

In general terms, the purpose of the evaluation activities is twofold:

- (i) To contribute to improving program effectiveness and delivery towards Ghana's SE4ALL goals by 2020 by using knowledge and lessons learnt from the CAP's implementation back into the country initiative;
- (ii) To contribute to overall alignment of strategic activities of the CAP and ensure that it remains relevant to addressing country level objectives whilst also aligned to the global SE4ALL initiative.

During the annual SE4ALL evaluation, the EC will review the results achieved in the current monitoring period in comparison to the baseline and the previous year: progress on actions and targets met as planned in Ghana's CAP using the agreed indicators. It will also help identify the actions needed for the following year.

#### 2.3.4 Reporting Plan

Using the results of the evaluation phase, the EC will report on an annual basis on the progress and performance towards the implementation of Ghana's SE4ALL CAP. The yearly progress will be presented in a Performance Assessment Report, or similar reporting document. This report must clearly show the baseline scenario and the progress made against the targets set where this is required and available.

The annual report would be prepared in time for sharing the results during the annual SE4ALL Forums or any other forums that the country may consider attending or hosting. A mid-term shorter evaluation will be also conducted to allow any potential adjustment to be made before reaching one full year of implementation.

#### 2.3.5 Performance Assessment Framework

The Performance Assessment Framework, which was developed taking the Logframe as a basis, is the key instrument to facilitate understanding of indicators, showing in a clear way a summarised plan for monitoring (including frequency, data collection methodology, roles and responsibilities, etc.), analysing and reporting on the outcomes of Ghana's SE4ALL CAP/AA implementation. It also captures the expected results of the implementation of Ghana's CAP/AA implementation by outlining targets and baselines.

#### 3 MER ACTIVITIES IN PLACE IN GHANA

A number of monitoring and evaluation activities are currently in place in Ghana (or under development), and would be tapped into as source of information in order to feed into the different elements of the SE4ALL MER system for Ghana.





#### 3.1 Population and Housing Census (PHC)

The Population and Housing Census is produced every ten years by Ghana Statistical Service (GSS). The last PHC has been published in 2012 and presents information on population and housing characteristics for the entire country, the ten administrative regions and the 170 districts for the year of 2010. The sections covered by the 2010 PHC are: geographical location of the population, household and non-household population, literacy and education, emigration, demographic and economic characteristics, disability, information and communication technology (ICT), fertility, mortality, agricultural activity and housing conditions.

The 2010 PHC monitors several indicators including energy indicators. Data monitored by the PHC which will be useful for the SE4ALL MER system are:

- Number of households in the country;
- Percentage of households using electricity (mains<sup>13</sup>) as the main source of lighting;
- Percentage of households using solar energy as the main source of lighting;
- Percentage of households using LPG as the main fuel for cooking.
- Percentage of households using firewood or charcoal as the main cooking fuel.

#### 3.2 Ghana Living Standard Survey (GLSS)

The Ghana Living Standard Survey (GLSS) is a nation-wide household survey produced every 5-6 years by the GSS and designed to generate information on living conditions in the country. The survey collects detailed information on topics, including demographic characteristics of the population, education, health, employment and time use, migration and tourism, housing conditions, household agriculture, access to financial services and asset ownership, as well as the perception of governance, peace and security in the country.

The GLSS was initiated to provide a more comprehensive, reliable and up-to-date statistics and indicators to monitor and evaluate the effects of development policies and programmes on living standards. It completes the statistical data of the PHC and many indicators are common to the two exercises.

The last round of GLSS (GLSS 6) covered a period of twelve months from 18<sup>th</sup> October 2012 to 17<sup>th</sup> October 2013 and had the following objectives:

- To provide information on patterns of households consumption and expenditure at a greater level of disaggregation.
- Serve as the basis for the construction of a new basket for the next re-basing of the Consumer Price Index.
- Provide information for up-dating the country's National Accounts.
- Provide information on household access to and use of financial services.
- Estimate the number of persons in the labour force (employed, under-employed and unemployed) and their distribution by sex, major age-groups, educational level, disability status, geographical and rural/urban spread, as well as the ecological manifestations of these.
- Estimate the number of child workers (or children in employment) aged 5-17 years, and its
  distribution by sex, major age-groups, educational status, geographical, ecological and
  rural/urban spread, etc.

GLSS usually covers a nationally representative sample of households in selected enumeration areas. However, the magnitude remains such that it requires substantial human, material and

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<sup>&</sup>lt;sup>13</sup> Mains refers to a connection to the national electricity grid.





financial resources to successfully implement it, like for the PHC. To collect the data required for the GLSS, GSS receives substantial support and cooperation from various stakeholders including regional and district administrators, traditional rulers and community leaders. Detailed information is collected in-the-field using a set of questionnaires developed for the survey. Then, it is compiled, processed and reported by GSS staff.

The GLSS monitors the same data that will be useful for the MER system than the PHC:

- Number of households in the country;
- Percentage of households connected to the national electricity grid and using electricity as the main source of lighting;
- Percentage of households using solar energy as the main source of lighting;
- Percentage of households using LPG as the main fuel for cooking;
- Percentage of households using firewood or charcoal as primary cooking fuel.

#### 3.3 Energy Outlook by the Energy Commission

Every year, the Energy Commission presents an "Energy Outlook" summarizing the national scenario including supply and demand forecasts for electricity, crude oil, petroleum products, natural gas and charcoal, as well as factors that could influence the demand and supply. It provides information on fields that are relevant for tracking the SE4ALL initiative evolution, such as:

- The power subsector: grid-connected RE installed capacity (plus thermal plants, etc.), transmission losses as percentage of gross transmission.
- The petroleum subsector: consumption of LPG and other derivatives, household fuel use split in LPG, charcoal, firewood, kerosene and electricity (based on PHC).
- The woodfuel subsector: charcoal demand.

The report also provides information on forecasts, prices, opportunities and recommendations for each sector.

#### 3.4 GHACCO

The Ghana Alliance for Clean Cookstoves (GHACCO) has been established to serve as a strong stakeholder platform to lead and catalyse a revolution in the cookstoves sector. In line with Ghana's SE4ALL CAP and the country strategic objectives for clean cooking, GHACCO aims at creating a platform to foster the adoption of clean cookstoves and fuels by 4 million households in Ghana and distributing 5 million cookstoves by 2020. Its mission is to promote partnerships among members of the alliance and other actors to ensure synergy in influencing policies and stimulating actions that contribute to the cookstove industry and sustainable utilization of clean energy and fuels.

GHACCO has created a specific working group which focuses on Monitoring and Evaluation (M&E) activities and which is currently developing a country M&E framework and the associated toolkit for evaluating the progress in the national clean cooking sector. The country M&E framework would track progress and performance on:

- Adoption of clean cooking in Ghana;
- Impact of adoption of clean cooking on lives of adopters including on lives saved, livelihoods, empowered women, and the environment;
- Impacts on lives of participants in clean cooking value chains particularly their livelihoods and gender empowerment;
- Changes in the clean cooking sector resulting from GHACCO activities and those of its members;





Changes in the Ghanaian clean cooking sector as a whole.

It is in line with Ghana's SE4ALL CAP and the data resulting from the GHACCO M&E activities would be useful for tracking of SE4ALL progress (besides informing actions of GHACCO, development partners, NGOs, private sector, financial services providers and communities).

Due to its mission in the clean cooking sector, GHACCO could act as a focal point for Ghana for monitoring and evaluating clean cooking related actions and impacts, and reporting these to the EC besides its report to the Alliance Secretariat and other relevant stakeholders of the sector.

#### 3.5 Scaling-Up Renewable Energy Program in Low Income Countries (SREP)

The Scaling-Up Renewable Energy Program in Low Income Countries (SREP) is supported by the Strategic Climate Fund of the Climate Investment Funds (CIF). The program aims "to pilot and demonstrate the economic, social and environmental viability of low carbon development pathways in the energy sector by creating new economic opportunities and increasing energy access through the use of renewable energy". The main output of a SREP is the development and implementation of an investment plan to increase energy access through the use of renewable energy.

Currently, ten countries have an endorsed SREP Investment Plan and three countries are developing theirs. Ghana is part of the fourteen new pilot countries selected to benefit from the SREP. SREP mission in Ghana started in September 2014 and led to the publication of the draft SREP Investment Plan for Ghana.

CIF monitoring and reporting is of critical importance to track performance and ensure accountability. The goal is to be able to generate, aggregate, synthesize and report data across countries and programs to demonstrate results. The objectives are (i) to create a functioning monitoring and reporting system, (ii) to help generate and analyse high quality data, and (iii) to achieve this by placing learning at the heart of all its activities.

As stated in the SREP Investment Plan for Ghana, the SREP Monitoring and Evaluation (M&E) system is a key tool to plan and monitor the SREP-funded activities, and essentially aimed at:

- Defining how transformational impacts will be measured before, during and after the life of the program,
- Ensuring that data collected, processed and analysed at the level of the three investment projects harmoniously feed into the programmatic M&E system,
- Supporting the knowledge management and sharing initiatives of the Programme, by highlighting successful outcomes and lessons learnt and recommending ways to improve programme implementation and its transformational impact.

It is based on a set of SREP core indicators, and will, to the extent possible, be integrated into Ghana's existing M&E system of the energy sector - while solving some of its main constraints and bottlenecks, through capacity building initiatives. Its design should therefore avoid the development of parallel structures or processes for monitoring and evaluation.

The SREP indicator that will be useful for the SE4ALL MER system is the annual electricity output from renewables in GWh per year, which is monitored by national utilities and the Ministry of Power.

#### 3.6 GIS-based Energy Access Review (GEAR) Toolkit

Between 2009 and 2011, the EUEI PDF, upon request of the Ministry of Energy, supported The Energy Center of Kwame Nkrumah University of Science and Technology (KNUST) in the implementation of a project aiming at employing and complementing existing policies, strategies, plans and recommendations from the Energy for Poverty Reduction Action Plan (EPRAP) and the Ghana Energy Development and Access Project (GEDAP) to achieve national goals and the Millennium Development Goals.





The program pursued five objectives which includes:

- To use Geographical Information Systems (GIS) to collate and analyse national level data and provide timely information on population distribution, services, economic activities, and status of energy access programmes; and
- To facilitate project identification, planning, implementation and impact assessment for the EC, the Ministry of Energy and the ECOWAS Commission for timely development, implementation and monitoring of energy access strategies.

The GEAR Toolkit has been developed as a result of this programme. It focuses on the development of a digital platform that can enable users get information pertaining to electrified and non-electrified communities in Ghana (e.g. type of electricity generation, population connected, capacity installed, etc.). The Toolkit is intended to display energy access as well as LPG data and show electrification trends in order to facilitate energy planning and management. It includes the production of a digital map and a functional geo-database of the energy facilities including access to electricity in schools, access to electricity in hospitals, access to electricity in security posts, access to biogas, as well as street lighting.

The energy access mapping of Ghana is currently still on-going, and a particular focus is set on off-grid communities (mainly lakeside and riverbank communities).

#### 3.7 Past M&E exercise: Millennium Development Authority M&E Plan

In August 2006, the Government of Ghana signed a 5-year Compact with the Millennium Challenge Corporation (MCC) of the United States of America to reduce poverty through economic growth led by agricultural transformation. The Compact consisted of a series of investments in agriculture, transportation and rural development activities in 30 targeted districts across Ghana. The implementation of Ghana Compact was left to the Millennium Development Authority (MiDA), a government corporation specifically established by the Ghanaian Parliament for that purpose. M&E activities were an important component of the programme design as it allows to:

- Monitor the various components of the Ghana Compact to determine whether investments were achieving intended results.
- Highlight the M&E requirements that must be met in order to allow disbursements.
- Guide program implementation and management so that stakeholders understood what
  results were expected, by when the results should be achieved and who was responsible for
  achieving and reporting them.
- Provide a framework that would alert stakeholders to performance problems so that adjustments could be made as needed.

Throughout the Compact period, i.e. 2006 to end-2011, MiDA monitored and evaluated a set of performance indicators linked to the specific activities implemented under the programme. Amongst these indicators, three were related to energy:

- Number of agricultural facilities in target districts with electricity due to rural electrification sub-activity;
- Number of electricity projects identified and diligenced;
- Kilometres of electricity lines identified and diligenced.

The monitoring of these indicators stopped with the Compact and therefore the information collected are no longer relevant to populate the SE4ALL MER system. However, some methodologies for data collection of the MER system could build on the methodologies set in the Compact, especially those related to PUE in the agricultural sector.





#### 4 CHALLENGES TO THE SE4ALL MER ACTIVITIES AND RECOMMENDATIONS

#### 4.1 Challenges and risks

As in any initiative or project, there are challenges and risks that should be taken into consideration by the EC. Doing this provides the country with the opportunity to preview mitigation actions if any constraint arises. Table 5 provides a list of potential risks that may show up during the implementation of the MER system, and the mitigation actions that could be taken into consideration for their speedy resolution.

Table 5: Potential risks and mitigation actions

Potential risk or challenge	Probability <sup>14</sup>	Impact	Potential mitigation action
Low data availability and accuracy	Н	Н	Some indicators will need to be estimated from specific data which might be hard to collect in the field or at the required frequency. The estimation of these indicators will therefore involve assumptions which could affect the accuracy of the reported information.
			This risk could be mitigated through simple, clear and unambiguous methods of calculation of suggested indicators, as well as the use of data that are likely already tracked in the country and available, where possible or international data sources that can complement country data. Specific capacity building to train the implementing partners to the SE4ALL MER activities will also be provided to ensure the consistency of the system. Also, devise new data collection mechanisms for future monitoring periods, if possible.
			Finally specific data quality controls could be defined and implemented to further mitigate this risk.
Lack of baseline information for indicators monitoring	Н	Н	Several indicators have no baseline information that will serve as "starting point" against which future measures should be compared. This implies that it will be difficult to understand the actual progress made after the first monitoring period because the new results will not be able to be compared to any previous data, because data was not measured before.
			A mitigation action could be to establish a plan to determine those baselines currently lacking during the first monitoring period using available information, if possible.
Limited resources: human, material and financial	Н	M	The magnitude of the SE4ALL monitoring activities, nation-wide, will require a large mobilisation and utilization of human and material resources to collect and process the data.
			Therefore, dedicated resources should be made

 $<sup>^{14}</sup>$  L, M, H stand for Low, Medium and High.





Potential risk or challenge	Probability <sup>14</sup>	Impact	Potential mitigation action
			available through adequate planning and budget to support monitoring and evaluation, as it is an essential requirement for implementing a MER.
			Find synergies with ongoing monitoring activities (e.g. PHC, GLSS, GHACCO, etc.).
Excessive number of indicators	М	Н	Tracking a large number of indicators increases the complexity of the MER system. This could challenge the capabilities of the implementing stakeholders in efficiently collecting and processing the data, and therefore affect the sustainability of the system.
			Frequent assessments of the effectiveness of the MER system and its revision accordingly will help mitigate this risk.
			Feedback will be collected from the stakeholders to assess the difficulties and barriers met when collecting and processing data. Data quality and usage will also be assessed to avoid pile-up of collected information.
			According to the results of this assessment, the set of indicators would be refined and the indicators protocols simplified.
Low stakeholders engagement	M	M	The effectiveness of the MER system implementation is linked to the engagement of all stakeholders involved in the implementation of the SE4ALL initiative.
			Partnerships will need to be created and strengthened to support the MER activities. This could be achieved by various means such as organising workshops and conferences, as well as maintaining frequent communication on results of the MER activities.
			A robust governance from the SE4ALL Secretariat will also be vital to ensure the sustainability of stakeholders' commitment and the timely delivery of results.
Insufficient commitment from other GoG entities to support the SE4ALL initiative	L	Н	The SE4ALL initiative is country-driven. The Government and all the involved institutional entities should therefore show a strong commitment towards the achievement of the SE4ALL country goals. This will create an enabling environment for the implementation of the SE4ALL activities and will strengthen the partners' engagement.
			The continued and long term resource support and pro-active participation and promotion from the SE4ALL CFP, the Government of Ghana, development partners and other SE4ALL stakeholders will contribute to the sustainability of the system.





Potential risk or challenge	Probability <sup>14</sup>	Impact	Potential mitigation action
Institutional, operational and technical capacity constraints	L	Н	The MER system involves specific procedures and methodologies which might not be familiar to the implementing stakeholders. To ensure that all stakeholders are capable of implementing the MER process, a tailored capacity building programme will be developed and specific training workshops organised. This will also contribute to mitigate data quality risks.
Difficulty in data collection and reporting processes due to confidentiality issues	L	L	Due to confidentiality issues, some partners and stakeholders might be reluctant to share information which will affect the implementation of the MER system. Adequate protocols should be put in place to ensure the protection of confidential data in the MER activities.

## 4.2 Capacity building to ensure efficient use of the SE4ALL MER system in Ghana

The SE4ALL MER activities will involve numerous stakeholders on various tasks such as data collection, calculation of indicators, evaluation, and reporting. In order to ensure the efficiency of these activities and that the results correspond effectively to what is expected, it is necessary to ensure that all the stakeholders involved clearly understand the purpose of such activities and how to implement them.

The SE4ALL MER system especially includes clear methodologies for data collection and indicator calculation. The stakeholders responsible for applying the system would need to be trained and experienced in the application of these methodologies to ensure the consistency of the process as well as the accuracy of the results.

The tables below identify the capacities needed and the possible capacity building activities for:

- The Energy Commission, host of SE4ALL Secretariat for Ghana, responsible for implementing the MER system; and,
- The stakeholders which will be involved in providing and collecting data associated to monitoring activities, such as GHACCO, community based organisations, district assemblies, amongst others.

Table 6: Capacities needed and capacity building activities proposed to implement the MER system

MER actor	SE4ALL Secretariat: Energy Commission			
MER tasks: Monitoring, Evaluation and Reporting	Capacities needed	Possible capacity building measure		
information received from implementing partners.	<ul> <li>Human resources with sound MER experience.</li> <li>Dedicated experience staff at peak moments of annual evaluation and reporting.</li> </ul>	The EC has been trained in the use of the MER system developed for Ghana as final step of the consultancy work. However, if future updates of the MER system are conducted, the EC will		





<ul> <li>Quality control of evaluation and reporting.</li> <li>Updating the MER system according to the update of the CAP or AA.</li> </ul>		carrying out additional capacity building activities.
MER actor	Stakeholders involved in the mon	itoring activities
MER tasks: Monitoring	Capacities needed	Possible capacity building measure
<ul> <li>Compilation of data and information that will be used to assess the indicators.</li> <li>Internal quality control on monitoring activities.</li> </ul>	<ul> <li>Human resources.</li> <li>Understanding of monitoring activities and data quality control procedures.</li> <li>Knowledge of governance.</li> </ul>	The stakeholders have been trained in the use of the MER system developed for Ghana as final step of the consultancy work. However, if future updates of the MER system are conducted, the EC will consider the need of carrying out additional capacity building activities.

If necessary, future tailored capacity building activities would be identified by EC to strengthen the capacities of the stakeholders involved in the SE4ALL MER system implementation.





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