

SE4All

AFRICA HUB

ANNUAL REPORT 2014 - 2015



the \mathbb{R}^n is a linear space over \mathbb{R} with the usual addition and scalar multiplication. The inner product is defined by

$$(x, y) = x_1 y_1 + x_2 y_2 + \dots + x_n y_n \quad (1)$$

where $x = (x_1, x_2, \dots, x_n)$ and $y = (y_1, y_2, \dots, y_n)$ are vectors in \mathbb{R}^n . The norm of a vector x is defined by

$$\|x\| = \sqrt{(x, x)} = \sqrt{x_1^2 + x_2^2 + \dots + x_n^2} \quad (2)$$

The distance between two vectors x and y is defined by

$$d(x, y) = \|x - y\| = \sqrt{(x - y, x - y)} \quad (3)$$

The angle between two vectors x and y is defined by

$$\cos \theta = \frac{(x, y)}{\|x\| \|y\|} \quad (4)$$

The orthogonal projection of a vector x onto a vector y is defined by

$$p_y(x) = \frac{(x, y)}{(y, y)} y \quad (5)$$

The orthogonal distance from a vector x to a vector y is defined by

$$d(x, y) = \|x - p_y(x)\| \quad (6)$$

The orthogonal distance from a vector x to a subspace S is defined by

$$d(x, S) = \inf_{y \in S} \|x - y\| \quad (7)$$

The orthogonal distance from a vector x to a line L is defined by

$$d(x, L) = \|x - p_L(x)\| \quad (8)$$

The orthogonal distance from a vector x to a plane P is defined by

$$d(x, P) = \|x - p_P(x)\| \quad (9)$$

The orthogonal distance from a vector x to a hyperplane H is defined by

$$d(x, H) = \|x - p_H(x)\| \quad (10)$$

The African Development Bank (AfDB)



SE4All
Africa Hub
Annual Report



2014 - 2015



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FOREWORDS FOR THE SE4All AFRICA HUB ANNUAL REPORT



Nothing is more important to achieving the sustainable development goals (SDGs) in Africa than access to energy services: for lighting homes, hospitals, schools and streets, for non-polluting energy sources for heating and cooking, and for powering small-medium and large scale enterprise development and ultimately industrializing Africa. What is required is a new deal on energy for Africa. The SE4All Africa Hub plays an important role in forging the transformative partnerships needed to make access to energy for all a reality.

Dr. Akinwumi Adesina

President, African Development Bank Group



The SE4All initiative with its agenda for universal access by 2030 fits very well with the African Union Agenda 2063 and it is important that this initiative is harmonised and implemented alongside other ongoing national, regional and continental energy initiatives in Africa like the Programme for Infrastructure Development in Africa (PIDA) especially with regards to resources mobilisation and action-oriented delivery mechanisms. I take this opportunity to congratulate the African Union member States for the great achievements in preparing their Action Agendas and Investment Prospectus, being the most active in this SE4All Initiative globally and in this regard, to commend the key role played by the African Institutions led SE4All Africa Hub.

Dr. Elham Mahmoud Ahmed Ibrahim

*Commissioner for Infrastructure and Energy
African Union Commission*



The move toward sustainable energy is firmly linked to Africa's development, and while there has been impressive progress in laying down the ground work, the time has come for concrete action and implementation. Africa should seize the opportunity if it is to benefit from the growing momentum behind this laudable initiative and it is NEPAD's mandate as technical arm of the African Union Commission to make it happen.

Dr. Ibrahim Assane Mayaki

*Chief Executive Officer
NEPAD Planning and Coordinating Agency*



There is no development without energy. Increasing access to modern energy services can dramatically reduce poverty and inequalities by expanding people's opportunities and well-being. It can also contribute to developing job markets and business activities while transforming African economies. But we also need to make sure the energy we use serves the needs of the present generations without compromising the ability of future generations to meet their needs.

Abdoulaye Mar Dieye

*Assistant Administrator and Director
Regional Bureau for Africa - UNDP*



Energy is critical for powering African economies towards industrialization and economic diversification. The Sustainable Energy for All (SE4All) Hub at the African Development Bank (AfDB) plays an important role in bringing together governments and the private sector to discuss concretely the importance of regional integration, infrastructure and energy sector investments to eradicate poverty once and for all in our continent.

Dr. Kandeh Yumkella

*Co-Founder African Energy Leaders Group (AELG)
Former Special Representative of the Secretary-General for
Sustainable Energy for All &
Former CEO of the Sustainable Energy for All Initiative*

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ACRONYMS

AA	SE4All Action Agenda
AB	Advisory Board
ACFCTN	African Climate Technology Finance Centre and Network
ADB	Asian Development Bank
AELG	African Energy Leaders Group
AFDB	African Development Bank
AUC	African Union Commission
CARD	Country Action Reference Document
CEMA	Council of Energy Ministers of Africa
COP	Conference of the Parties
EAC	Energy Access Committee
EBRD	European Bank for Reconstruction and Development
ECOWAS	Economic Community of West African States
ECREEE	ECOWAS Centre for Renewable Energy and Energy Efficiency
EEEP	ECOWAS Energy Efficiency Policy
EREP	ECOWAS Renewable Energy Policy
ESWAP	The Energy Sector Wide Approach Programme
EUR	Euros
GEF	Global Environment Facility
GFT	Global Facilitation Team
GMG	Green Mini Grids
HIO	High Impact Opportunity
IAD	Inter-American Development Bank
IP	SE4All Investment Prospectus
IRENA	International Renewable Energy Agency
MDP	Market Development Programme
NPCA - NEPAD	Planning and Coordination Agency
ONEC	Energy, Environment and Climate Change Department of the AfDB
OOC	Oversight and Operations Committee
Q1-Q2-Q3-Q4	First, Second, Third, Fourth Quarter
RAGA	Rapid Assessment and Gap Analysis
SDGs	Sustainable Development Goals
SE4All	Sustainable Energy for All Initiative
SEFA	Sustainable Energy Fund for Africa
SRSG	Special Representative of the UN Secretary General
SWG	Energy Sector Working Group
UAE	United Arab Emirates
UK	United Kingdom
UN	United Nations
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNF	United Nations Foundation
USA	United States of America
USD	United States Dollars
W-AELG	West African Energy Leaders Group

EXECUTIVE SUMMARY

The Sustainable Energy for All (SE4All) Africa Hub, hosted by the African Development Bank, is a partnership of African institutions dedicated to supporting the continent's progress towards the SE4All initiative's three main objectives: universal energy access, improved energy efficiency and an increased share of renewable energy.

Launched in 2013 following a mandate from the Conference of Energy Ministers of Africa to facilitate the implementation of the initiative in Africa, it was the first SE4All Hub to be established. Since that time, it has become a model of African leadership, set a standard for future hubs to follow, and been at the forefront of SE4All's implementation.

The Hub promotes African ownership, inclusiveness and a comprehensive approach to implementation in the currently 44 African countries that have joined SE4All. It provides guidance to African governments and energy stakeholders, delivers technical assistance, fosters networking and communication, and contributes towards finance mobilization. In close collaboration with partners, the Hub has further worked to define the SE4All country action processes and has contributed to the shaping of the initiative globally.

Specifically, the Africa Hub led the development of the Action Agenda template and promoted its adoption as an umbrella framework for long term country-level energy sector development and as a coordination platform for sector-wide coherence and synergy in attaining SE4All goals. As a result, SE4All Action Agendas and Investment Prospectuses are under development in many African countries, developed through a multi-stakeholder process which has brought together government actors, development partners, private sector and civil society. In addition, the Hub has been providing direct technical assistance in response to government requests, to more than ten African countries to advance SE4All country actions.

This year, the Africa Hub has also started implementing the Green Mini-Grid Market Development Program in cooperation with the Sustainable Energy Fund for Africa (SEFA) to scale-up the adoption of mini-grids as an integral solution to enhancing energy access in rural areas.

With the adoption of a dedicated Sustainable Development Goals on energy (SDG 7) in September 2015 in New York, the focus must shift toward implementation of activities described in Action Agendas and mobilization of required investments to implement project opportunities identified in Investment Prospectuses. The Africa Hub will therefore play a vital role in realizing this progression in close collaboration with SE4All partners.



I. INTRODUCTION

1.1 About the SE4All Initiative

The availability of reliable, affordable and sustainable energy services is one of the main constraints limiting Africa's development. Approximately 620 million Africans have no access to electricity, while 730 million still rely on solid fuels for cooking.

The Sustainable Energy for All (SE4All) initiative is a multi-stakeholder partnership between governments, the private sector, and civil society. Launched by the UN Secretary-General in 2011, it has three interlinked objectives to be achieved by 2030:

1. ensuring universal access to modern energy services;
2. doubling the global rate of improvement in energy efficiency; and
3. doubling the share of renewable energy in the global energy mix.

At the core of the SE4All initiative is the concept that access to sustainable energy is not an end in itself but that increased access to sustainable and modern energy services is key to achieve improvements in most sectors, including health, education, economic development, poverty reduction, gender empowerment, environment protection and climate change.

The initiative is a wide-ranging collaborative effort designed to leverage existing efforts and promote and inspire new approaches to achieve its ambitious objectives.

SE4All is based on the principle of voluntary actions and national commitments, but it has a structure to assure coordination at the national, regional and global levels.

The initiative's main bodies¹ are the :

- **Advisory Board**, co-chaired by the United Nations Secretary General and The World Bank Group President, which provides overall strategic guidance. The AfDB President is also a member alongside some forty high-level representatives from international organizations, governments, private sector and civil society.
- **Executive Committee**, a smaller group formed by members of the private, public and non-profit sectors, which has the objective of advising and evaluating the CEO, reviewing and commenting on the Initiative's strategy and work plan.
- **Global Facilitation Team (GFT)** is the executive arm of the initiative, which facilitates its adoption worldwide, organises meetings, pushes the policy agenda, facilitates country actions and links all actors in a coordinated way.

SE4All also relies upon its partners working within the following hubs:

- **Regional Hubs** facilitate the implementation of the initiative at the regional level providing advice and assistance as needed. Four regional hubs have been established: the Africa Hub (at the African Development Bank in Abidjan, Côte d'Ivoire), the Latin America and Caribbean Hub (at the Inter-American Development Bank in Washington DC, USA), the Asia-Pacific Hub (at the Asian Development Bank in Manila, Philippines) and the Europe-Central-Asia-Mediterranean Hub (at the European Bank for Reconstruction and Development in London, UK).
- **Thematic Hubs** support SE4All's key thematic areas. The following six have been established: Energy Efficiency (at the Technical University of Denmark/UNEP in Copenhagen, Denmark), Renewable Energy (at the International Renewable Energy Agency in Abu Dhabi, UAE), Knowledge Management (at the World Bank in Washington, DC, USA), Capacity Building (at the Energy and Resources Institute in New Delhi, India), Energy Efficiency Facilitation (the Energy Conservation Centre in Tokyo, Japan) and the Bottom-of-the-Pyramid (UNDP in New York, USA).

¹The structure of SE4All is undergoing modifications in line with the decision of the May 2015 Advisory Board meeting. The new structure will be based on two central pillars: the UN on one side, and a new international non-profit organization called «The Sustainable Energy for All Partnership» on the other, linked through a partnership agreement and headed by a Director General who will be appointed at the same time special representative for Sustainable Energy for All.

Figure 1 - Location of SE4All Hubs



 GFT Office
 SE4All Regional and thematic Hubs

In addition, the initiative is driven by its :

- **High Impact Opportunities (HIOs)**, which are action areas that are likely to show significant potential to advance the three objectives of SE4All. A platform for stakeholders (public, private and civil society) engaged in each HIO has been created to facilitate their collaboration, allowing them to act jointly on specific areas, such as clean energy mini grids, energy and women's health or the water-energy-food nexus.

SE4All has been instrumental to the ongoing intergovernmental processes related to energy in the context of the Sustainable Development Goals (SDGs) for the post-2015 development agenda. As a result, energy has been centrally placed as goal number 7 in the 2030 SDG list. The proposed goal strives to **“ensure access to affordable, reliable, sustainable and modern energy for all.”** The objective and its accompanying targets on energy access, energy efficiency and renewable energy build upon the SE4All objectives.

1.2 About the SE4All Africa Hub

The SE4All Africa Hub is a partnership between the African Development Bank (AfDB), the African Union Commission (AUC), the NEPAD Planning and Coordination Agency (NPCA) and the United Nations Development Programme (UNDP). In addition, regional economic communities participate on a rotating basis.

The Hub was launched at the Bank's Annual Meetings in Marrakesh in 2013, and was the first regional hub to be established. Its mandate derives from a resolution of the Conference of Energy Ministers of Africa (CEMA) of November 2012 tasking the AUC, NPDA and AfDB to coordinate and facilitate SE4All implementation in Africa².

The Hub promotes African ownership, inclusiveness and a comprehensive approach to the initiative's implementation. Its main activities include: provision of guidance for the SE4All country action processes globally and in Africa; delivering technical assistance to partner countries; networking and communication; and mobilization of financing.

The Hub has a light structure composed of a Secretariat and an Oversight and Operations Committee.

- The **Secretariat** is responsible for carrying out Hub activities. It is hosted at the AfDB in the Energy, Environment and Climate Change Department (ONEC). The Hub is managed by the SE4All Africa Hub Coordinator with a small support team.

- The **Oversight and Operations Committee (OOC)** provides strategic guidance for the operations of the Hub Secretariat and comprises representatives from the AUC, NPCA, AfDB, UNDP and ECOWAS, representing all regional economic communities for the initial two year period. Additional members might be added if and when necessary. The OOC meets formally twice a year and approves the Hub's annual work plan.

²See: <http://www.eu-africa-infrastructure-tf.net/attachments/CEMA/final-communique-en.pdf>

The Hub works in close collaboration with other AfDB activities, notably: (1) the pilot **African Climate Technology and Finance Centre (ACTFCN)**, a Global Environment Facility (GEF) funded project implemented by the Bank which supports the implementation of the SE4All initiative in Africa with respect to mitigation efforts (see section 3.2.2); and (2) **the Sustainable Energy Fund for Africa (SEFA)**, a multi-donor trust fund administered by the African Development Bank to support small- and medium-scale clean energy and energy efficiency projects in Africa (see section 3.2.3).

Africa's Initial Engagement on SE4All

Africa has been at the forefront of the SE4All initiative from the outset—a reflection of the significance of its objectives for the continent—with strong support from both countries and regional institutions.

In September 2012, NPCA and UNDP in collaboration with AUC and AfDB, organized a workshop in **Nairobi**, which outlined Africa's response to SE4All and established the principles for the development and implementation of the SE4All initiative in Africa.

In November 2012, the Council of Energy Ministers of Africa (CEMA) endorsed the recommendations of the September Nairobi workshop and further requested AUC, NPCA and AfDB to coordinate the implementation of the SE4All initiative in Africa.

In December 2012 and April 2013, NPCA and UNDP, in collaboration with AUC, SADC and AfDB, organized follow-up workshops in Nairobi, Kenya and Gaborone, Botswana on the finalization and validation of the Guidelines for Developing Sustainable Energy for All National Action Plans in Africa, African Sustainable Charcoal Policy Framework and the Africa Strategy for Decentralized Energy Services.

In May 2013, the SE4All Africa Hub was officially launched at the annual AfDB Annual Meetings.

1.3 About the SE4All Country Level Processes

The SE4All country action process entails the identification of needs, the formulation of long-term plans and the identification of concrete investment opportunities. Once a country joins the initiative, the subsequent steps are detailed in the SE4All Country Action Reference Document (CARD)³ as follows:

- 1) Rapid Assessment and Gap Analysis (RAGA),
- 2) SE4All Action Agenda (AA), and
- 3) Investment Prospectuses (IPs).

Figure 2 - The SE4All Country Action Process



1.3.1 Rapid Assessment and Gap Analysis

The first substantial step for partner countries is carry-out a Rapid Assessment and Gap Analysis (RAGA). In essence, the RAGA is intended to help determine the main challenges and opportunities in achieving SE4All's three objectives. It highlights the status quo of energy in the national development context, providing the political, economic, social, and environmental background. It further draws upon existing documents and studies and describes the national policies and efforts in relation to SE4All's three objectives. The RAGA is descriptive in nature and is meant to consolidate information that exists in disparate plans, documents and sectoral studies.

Most African countries completed the RAGA as the basis for the development of the Action Agenda⁴.

1.3.2 Action Agenda

The Action Agenda (AA) is a strategy-driven holistic document that serves as an umbrella plan for national energy sector development. It defines the national SE4All objectives and determines how the three goals of SE4All can be achieved. The Action Agenda provides the long-term vision which ensures overall sector-wide coherence and synergy of the accumulated efforts towards SE4All's country goals, while including the cross-cutting sectors, such as food security, gender, health and water.

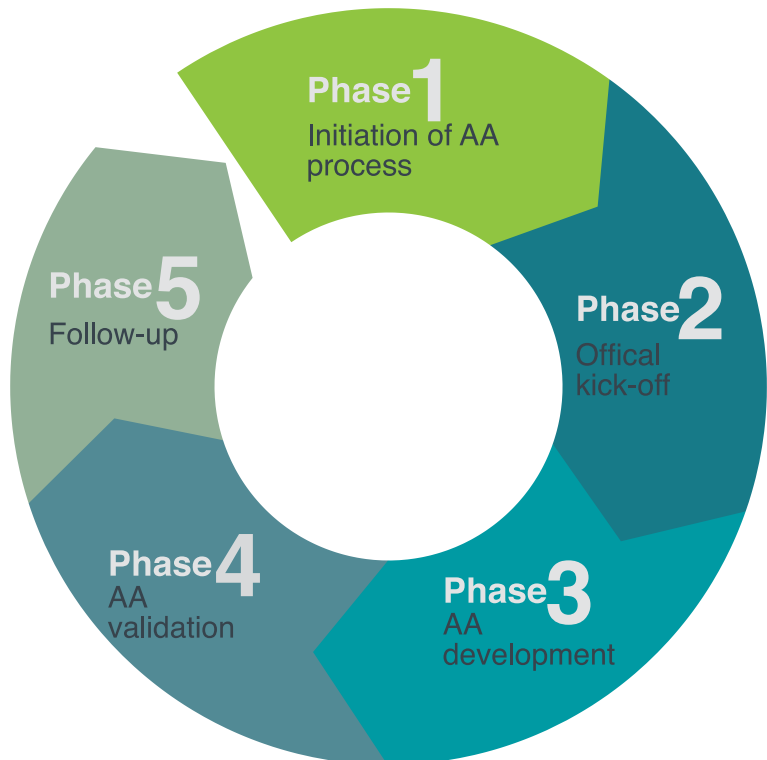
³ See: <http://www.se4all.org/flagship-programmes/country-level-actions/>

⁴ See: <http://www.se4all.org/flagship-programmes/country-level-actions/raga/>

The development process of the Action Agenda is of critical importance as it defines its ultimate quality. National ownership of the Action Agenda is crucial and the development process must be an inclusive and transparent exercise of stakeholder engagement led by national authorities. This exercise should bring together stakeholders from all relevant sectors into one conversation. Specific stakeholder consultation guidelines building upon the principles contained in the Hub's Guidelines for Developing Sustainable Energy for All National Action Plans in Africa have been developed for this purpose⁵.

The development of an Action Agenda is a multi-stage process in most cases facilitated by technical assistance provided by partners. The Action Agenda development process starts with a preparatory phase that includes the nomination of a SE4All focal point and institution, and the set-up of coordination and working groups for the AA development process.

Figure 3 - Action Agenda Development Process



⁵ See: <http://www.se4all.org/wp-content/uploads/2014/02/Stakeholder-Guidelines-final-draft.pdf>

The AA is a nationally owned process that is developed as part of a coherent framework of SE4All activities at the global and regional levels. SE4All partners, such as the regional and thematic hubs and the HIOs support the national AA development processes upon request from participating countries.

At the end of the process, the AA must be validated and adopted. Technical validation may occur through a workshop which brings together key stakeholders. Political adoption is essential to ensure implementation and ideally involves cabinet level approval or equivalent depending upon the national context.

Once an Action Agenda is politically adopted, it should become the national implementation framework under which sectoral policies are elaborated. It further serves as the basis for energy-related donor coordination and assistance, as well as a reference for the private sector and civil society. As a result, it is well aligned with Sustainable Development Goal 7 which aims to ensure access to affordable, reliable, sustainable and modern energy for all.

An Action Agenda is typically developed over a 6 to 12 month period from inception to end depending upon local conditions and the length and depth of the consultation process.

1.3.3 Investment Prospectus

The Investment Prospectus (IP) provides an approach to operationalizing the specific sectors or subsectors of the Country Action Agenda. It identifies a set of investment opportunities (programmes and projects) including investment requirements that may be presented to potential private and public investors.

IPs are short- to medium-term investment plans given that investment opportunities and market conditions are often variable and may fluctuate rapidly. Consequently, a series of IPs may be developed covering diverse investment opportunities throughout an Action Agenda's lifespan.

The IP presents details of an investment opportunity in a particular sector (e.g. mid-sized renewables, energy efficiency, or mini-grids) for prospective financiers to decide whether or not they wish to liaise with specific programme sponsors to obtain additional details. Although IPs require less standardization than AAs, the Africa Hub developed a guidance note to ensure some degree of uniformity to help mobilize financing.





II.

STATE OF THE IMPLEMENTATION OF THE SE4All INITIATIVE IN AFRICA



II. STATE OF THE IMPLEMENTATION OF THE SE4ALL INITIATIVE IN AFRICA

The SE4All initiative is being widely implemented in Africa. As of mid-2015, 44 countries had joined the initiative, the majority of which had completed a Rapid Assessment and Gap Analysis. In addition, Action Agendas and Investment Prospectuses are under development or about to start in 27 and 17 countries respectively.

SE4All implementation has been the result of cooperation between a variety of partners, including Governments, donors, development finance institutions, private sector participants, non-governmental organizations and research institutions.

2.1 Action Agenda Implementation

The SE4All Action Agenda template has seen widespread adoption throughout the continent as a comprehensive long-term planning tool for the implementation of the initiative.

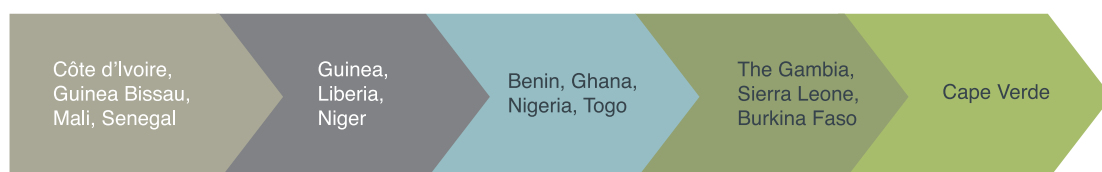
In West Africa, the initiative is being implemented through a concerted approach that combines parallel country actions and a strong regional coordination for policy development and technical assistance. In 2013, ECOWAS approved two regional policies, the ECOWAS Renewable Energy Policy (EREP) and the ECOWAS Energy Efficiency Policy (EEEP) and gave the mandate to the ECOWAS Centre for Renewable Energy and Energy efficiency (ECREEE) to coordinate their implementation. In 2014, ECOWAS countries endorsed the Action Agenda template developed by the Hub and designed a regional framework of implementation. This process has been largely uniform in all ECOWAS countries, with some variations to accommodate specific programmes already in place.

Ghana, for example, developed and approved a SE4All Action Plan in 2012, the first country to do so in Africa, identifying a SE4All focal point and Secretariat. The Action Plan preceded the standardization of the SE4All country action process, and is being transformed into an Action Agenda harmonised with the rest of region.

Cape Verde is the first country to see the political adoption of the Action Agenda. **The Gambia, Sierra Leone and Burkina Faso** are seeking technical validation of their Action Agendas, while the remaining West African countries are actively developing their Action Agendas, the majority of which are expected to be finalised in Q3-Q4 2015 (fig.2).

Figure 2. AA Development in ECOWAS Member States⁶

SE4All Action Agenda



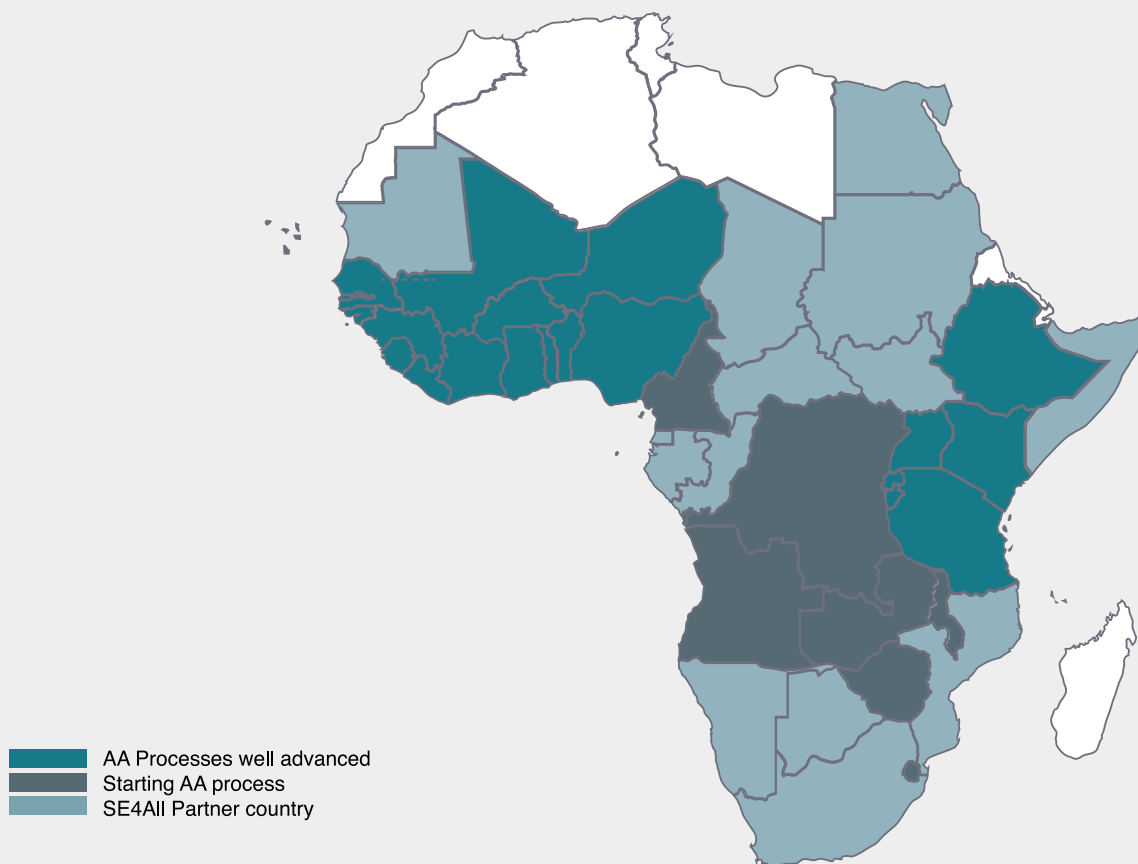
In East Africa, Uganda adopted its Action Agenda in 2015, while Rwanda, Tanzania and Kenya are at an advanced stage of doing so. In 2014, Ethiopia finalised its SE4All Action Plan.

In the Central Africa region, most countries are starting to implement the AA. In October 2014, at a regional meeting in Yaoundé, Cameroon on the «ECCAS & CEMAC White Paper: Regional policy for universal access to modern energy services and economic and social development», the ministers adopted a resolution encouraging Central African countries to embark on the process of developing SE4All Action Agendas and Investment Prospectuses. As a result, the development of the SE4All AA and IP started in Angola, the Democratic Republic of Congo, and Cameroon and is expected to be finalised between the end of 2015 and mid-2016.

In the Southern Africa region, the Action Agenda process is also progressing at the country level with, for exemple, Malawi, Swaziland, Zambia and Zimbabwe having begun the process.

⁶ Source: ECREEE - Status Report - June 2015.

Figure 3 - SE4All Action Agendas Under Development in African Countries



COUNTRY BOX NO. 1 - Action Agenda Development in Rwanda

The Rwanda Action Agenda is in the final stages of development. It was developed in accordance with the Africa Hub's template and guiding principles and AfDB technical support. The process was further facilitated by the establishment of a series of technical working groups related to electricity access, generation and fossil fuels, biomass and energy efficiency, in addition to a working group dedicated to liaising with civil society.

The government showed strong leadership throughout the process, most notably in harmonizing the AA within existing policy frameworks, such as the Economic Development and Poverty Reduction Strategy and Vision 2020. The AA processes were further integrated into the energy Sector Working Group (SWG), operating under the energy Sector Wide Approach Programme (eSWAP) established in 2008—a mechanism for coordination and prioritisation of activities in the energy sector involving all stakeholders including other government ministries and agencies, development partners, private sector representatives and civil society.

Through a process that included both energy modelling and extensive consultations, the Action Agenda sets the following national SE4All objectives.

SE4All Pillar	Issue	2030 Goal
Access to clean and sustainable cooking	Biomass sustainability	100% renewable biomass
	Universal access to clean cooking	100% access to clean cooking
	Reduction in charcoal dependence	Charcoal use less than 25% of cooking fuel in urban areas
	Increase productivity of forests and plantations (from 2009 level of 9.5 t/ha/yr)	15 t/ha/yr
Access to electricity	Total households	100% access
	Urban households	100% on-grid
	Rural households	65-80% on-grid 20-35% off-grid
Renewables	Share of renewables in total primary energy supply	50%
	Share of RE in cooking energy	80%
	Share of electricity generated from renewables	45%
Energy efficiency	Energy intensity of the economy (relative to 2010)	33%

The Action Agenda also sets relevant «cross-cutting» targets in areas such as health, water, food, and gender specifying some energy-related objectives on, for example, indoor air quality level, land-use competition between energy crops and food and time spent on biomass collection by women.

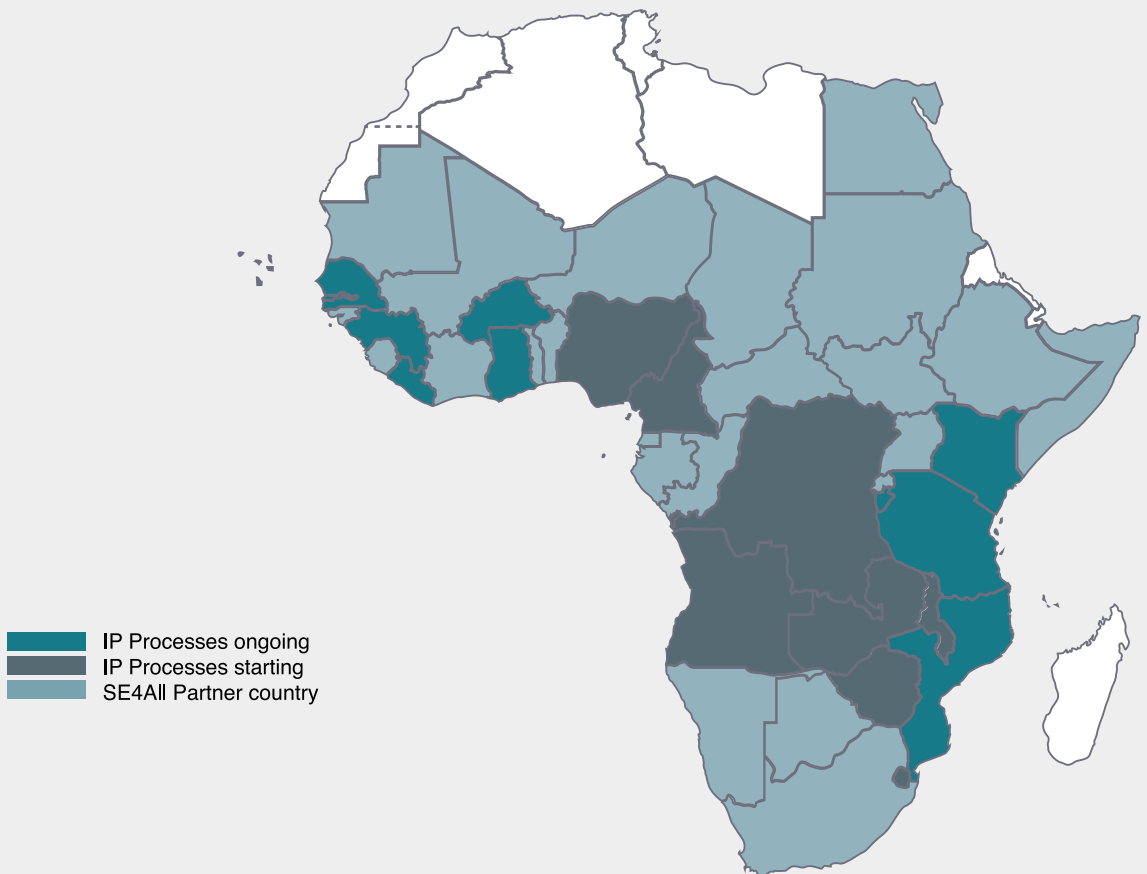
Targets and objectives are accompanied by a list of detailed actions and measures necessary to achieve them, some of which are already in place, some to be reinforced or newly developed. For each implementation action a costing exercise was attempted and the total annual capital cost by 2030 was estimated to be between USD 675 and USD 875 million per year (excluding operations, maintenance and fuel costs).

2.2 Investment Prospectuses Implementation

Investment Prospectuses are under development in several African countries.

Few countries have concluded an IP so far. In the ECOWAS region, **Gambia** technically validated its IP in early 2015, while **Ghana** developed an IP framework document in 2013 and prepared a draft IP in May 2015. In East-Africa, **Kenya** has made progress on the IP development. In addition, the World Bank is supporting five African countries draft IPs: Burundi, Guinea, Liberia, Mozambique and Senegal.

Figure 4 - IP Development in Africa



COUNTRY BOX NO. 2 – The Gambia’s Investment Prospectus

The Gambia’s SE4All Investment Prospectus was designed to provide an approach for operationalizing the Gambia SE4All Action Agenda by identifying and developing a set of implementable programmes and projects, including their investment requirements, that can be presented to potential private and public investors. The Gambia IP combines different investment opportunities to be showcased to potential investors that could, in a second stage, be transformed into detailed «bankable» documents. The IP includes 18 concept notes or project ideas at various stages of development that address all three SE4All long-term objectives. The entire portfolio is estimated to have an investment capital cost of around EUR 57 million. The Gambia IP was supported primarily by NPCA with BizClim financing.

The methodology used to prepare the IP was based on the principles of ownership and participation of various Gambian actors and included focused training and consultations that helped prioritize the projects.

The Gambia Action Agenda accompanying this Investment Prospectus indicated clearly that The Gambia needs to address its dual challenges of energy access and energy security, which traverse all sectors and impact all citizens. In addition, it must similarly address current biomass use that has major implications for land degradation, deforestation and health. Given the country’s growing population, the pressure will likely continue to increase. Consequently, the Ministry of Energy has prioritized the following three projects:

1. Biomass Briquetting and Fuel-Efficient Domestic Stove Enterprises.

The project seeks to provide 70,000 stoves, 17,000 tons of briquettes and create income for 3,000 workers for a total investment of about EUR 1.83 million.

2. Powering Up Health – Leveraging PV Solar Investments to Fund Critical Gambian Healthcare Needs. This solar PV project will build a 260kW plant able to provide 50-75% of the electricity necessary for the Sulayman Junkung General Hospital, with potential for later expansion, for a total investment of EUR 570,750.

3. Efficient Lighting Project. The project’s overall objective is to distribute compact fluorescent lamps to 200,000 households for an estimated cost of USD 1 million.

The largest project included in The Gambia’s IP is a large green mini-grid programme expected to electrify more than 50 remote sites with hybrid solar/wind generators.

Table 1 - Status of AA and IP in African Partner Countries (according to the information available to the Hub)

	Country	AA Status	IP Status
1	Angola	Starting	Starting
2	Benin	Under development	
3	Botswana		
4	Burkina Faso	Advanced	Under development
5	Burundi		Under development
6	Cameroon	Starting	
7	Cape Verde	Finalized*	
8	Central African Republic		
9	Chad		
10	Congo		
11	Côte d'Ivoire	Under development	
12	Dem. Republic of Congo	Starting	Starting
13	Egypt		
14	Equatorial Guinea		
15	Ethiopia	Finalized (Action Plan)	
16	Gabon		
17	The Gambia	Finalized	Finalized
18	Ghana	Advanced	IP framework finalized - Draft IP
19	Guinea	Under development	Under development
20	Guinea-Bissau	Under development	
21	Kenya	Advanced	Advanced
22	Lesotho		
23	Liberia	Under development	Under development
24	Malawi	Starting	Starting
25	Mali	Under development	
26	Mauritania		
27	Mozambique		Under development
28	Namibia		
29	Niger	Under development	Under development
30	Nigeria	Advanced	Starting
31	Rwanda	Finalized	
32	Sao Tome and Principe		
33	Senegal	Under development	Under development
34	Sierra Leone	Under development	
35	Somalia		
36	South Africa		
37	South Sudan		
38	Sudan		
39	Swaziland	Starting	Under development
40	Tanzania	Under development	Under development
41	Togo	Under development	
42	Uganda	Finalized	
43	Zambia	Starting	Starting
44	Zimbabwe	Starting	Starting

*Finalized refers to AAs or IPs adopted by the respective government as of July 2015.





III.

SE4All AFRICA HUB ACTIVITY UPDATE



III. SE4All AFRICA HUB ACTIVITY UPDATE

The Africa Hub, in accordance with its mandate, facilitates regional implementation and contributes to the global roll-out of the SE4All initiative. The following section highlights the work of the Hub in 2014-2015.

3.1 Development and Implementation of the SE4All Initiative

3.1.1 Guidelines and Policy Elaboration

The Africa Hub has been at the forefront of the design of the SE4All country action processes:

— The Africa Hub partners led the development of the **Africa Guidelines for the SE4All Action Plans, the Africa Policy Framework for Sustainable Charcoal** and the **Africa Strategy for Decentralized Energy Services**, developed in consultative processes and regional workshops in Nairobi and Gaborone in 2012-13 and approved by the CEMA bureau in February 2014.

— The Africa Hub organized, in December 2013, the Tunis workshop which provided the basis for the development of the **Country Action Reference Document (CARD)** that outlines the series of steps to be achieved to implement the initiative at country-level⁹.

— The Africa Hub developed the SE4All **Action Agenda template** providing detailed guidance for its development and promoting coherence and consistency of the SE4All implementation across the continent⁹.

— The Africa Hub developed the **Quality Circle for the AA/IP**, a process of voluntary quality review of the AA/IP to be undertaken before the final political validation¹⁰.

— The Africa Hub developed the **IP Concept note**, an effort to offer guidance to countries in developing coherent IPs to be presented to potential investors as «conversation starters».

— The Africa Hub contributed to the **stakeholder consultation guidelines** providing support for setting up the participatory processes that are necessary to develop and implement the Action Agendas.

— The Africa Hub supported the work of the **SE4All Energy Access Committee (EAC)** and in particular coordinated its workstream on energy access in the country Action Agenda and Investment Prospectus processes. The workstream produced a set of recommendations for the EAC that were endorsed in the final report that highlighted the need to promote national “energy councils” and SE4All country Action Agendas¹¹.

⁹See: <http://www.se4all.org/wp-content/uploads/02/2014/CARD.pdf>

⁹See: <http://www.se4all.org/wp-content/uploads/02/2014/Country-Action-Agenda-Template.pdf>

¹⁰See: http://www.se4all.org/wp-content/uploads/02/2014/ToR-AA-and-IP-Quality-Review_final.pdf

¹¹See: <http://www.se4all.org/wp-content/uploads/02/2014/Stakeholder-Guidelines-final-draft.pdf>

3.1.2 Workshops and Events

The Africa Hub facilitates networking between African countries and SE4All partners. The organization of, and the participation in, workshops and conferences is an important component of this engagement. Specifically, the Hub has organized and participated in three types of events:

- 1) SE4All Africa Hub workshops that helped shape the initiative at the global and regional level;
- 2) High-level conferences; and
- 3) Country and regional implementation workshops.

1/ SE4All Africa Workshops Organized by the Hub:

In November 2012, and again in December 2013, the Hub organised the first **regional workshop** in Tunis. The main outcome of the first event was an agreement on the principle that a certain degree of standardization in SE4All implementation in Africa was required. As a result, the 2013 workshop concretely led to the development of the Country Action Reference Document (CARD) and the Action Agenda template.



One year later, in January 2015, the Hub organized a workshop at AfDB headquarters in Abidjan on **advancing the SE4All Country Action Processes in Africa**. The workshop was attended by key stakeholders: SE4All country focal points, development partners, regional institutions and civil society organizations. The workshop assessed the progress made to date on the development of SE4All AA/IPs and explored quality assurance options and targeted follow-up to AAs and IPs.

2/ High Level Conferences to Which the Hub Contributed Included:

- In May 2014, the AfDB hosted the **launch of the Sustainable Energy for All Decade for Africa** at its Annual Meetings in Kigali, Rwanda.
- In June 2014, the Hub participated in the first **SE4All Forum** in New York chairing a session on SE4All country action.
- In July 2014, the Hub also contributed to the **launch of the SE4All Decade for the Least Developed Countries** at the Ministerial Conference on New Partnerships for the Development of Productive Capacities in LDCs, 28-31 July 2014 in Cotonou, Benin.
- In April 2015, the Hub participated in the **SE4All Energy Access Committee** organised in Vienna. The Hub contributed to the proceedings of the Advisory Board Committee on Energy Access, leading one of the workstreams of the Committee on Energy Access in the Country Action Agenda and Investment Prospectus Processes.



In May 2015, the Hub participated in the second **SE4All Forum in New York** where it organised a session on the advancement of country action in Africa.



In June 2015, the Hub supported the organization of the launch of the **West African Energy Leaders Group** (see section 3.5).

3/ Country and Regional Implementation Workshops Include:

- The Hub is collaborating with ECREEE on the development of the Action Agendas in all ECOWAS countries following a workshop on the **Development of ECOWAS EE and RE Policies and SE4All Action Agendas in March 2014 in Abidjan**. The meeting was attended by representatives of the 15 ECOWAS countries and saw the validation by participants of the Action Agenda template in ECOWAS countries.
- In May 2014, the Hub organized a workshop on **SE4All Action Agenda and Investment Prospectus processes in East, Central and Southern Africa** in Addis Ababa. It was attended by representatives of focus countries from the region and key development partners.



One year later, in **March 2015**, **ECREEE convened a follow-up workshop in Abidjan**, hosted and supported by the Hub, to emphasize the level of advancement in each country; facilitate regional exchanges; provide guidance as needed to complete the processes; support networking between countries and development partners; and plan follow-up action.

In October 2014, the Hub participated in a regional meeting in Yaoundé Cameroon on the **ECCAS-CEMAC white paper on energy access**. The ministers adopted a resolution encouraging Central African countries to embark on the process of developing SE4All Action Agendas and Investment Prospectuses.

In November 2014, the Hub organized a **stakeholder workshop in Harare** to brief Zimbabwean representatives on SE4All country action processes and the next steps in terms of development of the SE4All Action Agenda.

In November 2014, the Hub actively contributed to the **First Forum on Renewable Energy (FoDER)** in the context of the UN-led SE4All initiative organised in Kinshasa, DRC. The event was well attended by some 150-200 participants and highlighted the potential for renewable energy in the DRC and the framework being established to attract private investment.



In April 2015, the Hub organised a regional workshop on country preparation for SE4All Action Agendas and Investment Prospectuses in Yaoundé, focusing on Central and Southern African countries that are about to embark on the AA/IP process.

3.2 Facilitating Mobilization of Required Financing to Implement SE4All Initiative

3.2.1 Technical Assistance to African Countries

The Hub is directly supporting several African countries with Action Agenda and/or Investment Prospectus development. Hub partners have been supporting the governments of Angola, Democratic Republic of Congo, The Gambia, Ghana, Kenya, Malawi, Rwanda, Tanzania and Zimbabwe, with other countries still in the procurement phase, including Cameroon and Zambia. AfDB support is provided through the GEF-funded pilot African Climate Technology Finance Centre and Network (ACTFCN) project adopted by the Board in June 2014.

3.2.2 Pilot African Climate Technology Finance Centre and Network (ACTFCN)

The centre is financed by the GEF with some US\$ 14.3 million and implemented by the AfDB over a three year period. The objective of this pilot project is to support Sub-Saharan African member countries in scaling-up the deployment of low carbon and climate resilient technologies for climate change mitigation and adaptation by: (1)enhancing networking and knowledge dissemination with respect to climate technology transfer and financing; (2)enabling the scaling-up of technology transfer through policy, institutional and organizational reforms of the country and regional enabling environments; and (3)integrating climate change technologies into investment programmes and projects. Mitigation activities focus exclusively on the energy sector and are aligned with the SE4All initiative. Since its inception in the summer of 2014, the ACTFCN has been financing technical assistance activities related to SE4All implementation in ten SSA countries.

The project has also finalized a framework contract facility to assist Sub-Saharan African countries with policy, institutional and organizational reforms. The framework contract facility allows the Centre to respond quickly to specific requests for technical assistance, such as for early stage activities that will generate opportunities for crowding-in complementary financing from the Bank's own instruments, such as the Sustainable Energy Fund for Africa.

3.2.3 Sustainable Energy Fund For Africa (SEFA)

SEFA was established in 2011 at the African Development Bank following Denmark's commitment of US\$ 56 million to allow the Bank to scale-up its engagement in the small- to medium-sized renewable energy and energy efficiency space. In 2013, SEFA was transformed into a multi-donor facility with an initial US\$ 5 million commitment from the United States as part of a multi-year engagement under US President Barack Obama's Power Africa Initiative. And, more recently, the United Kingdom joined SEFA with a GBP 15 million contribution.

SEFA is one of the regional instruments supporting the SE4All initiative and cooperates closely

with the Africa Hub. SEFA operates through the following three financing components all focused on unlocking private investment in small-to medium-scale sustainable energy projects: (i) grants to facilitate the preparation of bankable projects; (ii) equity investments to bridge the financing gap and infuse managerial capacity; and (iii) support to public sector institutions in improving the enabling environment for private sector investments¹².

SEFA was instrumental in the structuring of the Africa Renewable Energy Fund (AREF), the first truly Pan-African US\$ 132 million private equity fund focused on renewable energy, contributing US\$ 35 million.

3.2.4 Green Mini-Grids

The SE4All initiative recognizes the importance of mini-grids for achieving the objective of universal energy access. To this end, a dedicated HIO on Clean Energy Mini-Grids is bringing together relevant stakeholders working on this subject.

In this framework, two initiatives to support Green Mini-Grids (GMF) are being developed by SEFA: (1) the Green Mini-Grid Market Development Programme (GMG-MDP), implemented by the SE4All Africa Hub; and (2) GMG Country Programmes, implemented by SEFA.

The GMG-MDP, launched in mid-2015, seeks to reduce market barriers and strengthen the ecosystem for the emergence of a thriving GMG sector in Sub-Saharan Africa. The immediate beneficiaries of the MDP will be regional economic communities, governments and public sector institutions, project developers and financing institutions that are working on GMGs in Africa.

The MDP will be implemented through five business lines: 1) Market Intelligence; 2) Business Development Support; 3) Policy and Regulatory Support; 4) Quality Assurance; and 5) Access to Finance. The business lines will be rolled-out in phases.

The MDP was subject to an extensive consultation process with HIO stakeholders, GMG experts, the SE4All Africa Hub OOC and members of the Energy Access Practitioner Network organized by the United Nations Foundation (UNF). The comments received helped to shape the project, to prioritize the activities, to avoid duplication and to ensure close coordination with the HIO, which will be maintained during the implementation phase.

The GMG country programmes managed by SEFA provide support to enabling environment interventions in six Sub-Saharan African countries. Selected projects will address sector planning, regulatory and policy interventions, as well as market development work at the country level. SEFA, in collaboration with the Hub, launched a call for proposals for the country support packages with a deadline of end June 2015. The call received a strong response and proposals are under evaluation based upon criteria such as government commitment, alignment with the country's SE4All Action Agenda, institutional capacity, market potential, and relevance and specificity of the requested technical assistance.

¹²see <http://www.afdb.org/en/topics-and-sectors/initiatives-partnerships/sustainable-energy-fund-for-africa/>.

3.3 Networking, Communication and Knowledge Management

The Hub, acting as repository for SE4All in Africa, is collecting and categorizing all relevant information and documentation on the implementation of the SE4All initiative in Africa, including focal point contact details.

The Hub is working on a dedicated website that is expected to go online by the end of 2015.

3.4 Partnerships

The Hub has strengthened cooperation and partnerships with many stakeholders that are involved at the global and regional level in support of the initiative.

For example, the Hub is cooperating closely with the Africa-EU Energy Partnership on the issue of coordination of the various energy initiatives focused on Africa. The Hub has a strong relationship with ECREEE that is coordinating and supporting the Action Agenda development in the ECOWAS region. The Hub maintains close relations with Power Africa, the European Commission and with many bilateral and multilateral donors and non-governmental actors.

The Hub has also contributed to the work of the G20 on energy under the Turkish G20 Presidency, notably in relation to the G20 Action Plan on energy access in Sub-Saharan Africa for which it is expected to play an important role in coordinating implementation.

3.5 The African Energy Leaders Group

The African Energy Leaders Group (AELG) is a community of energy leaders from the public and private sector dedicated to promote a sustainable energy transition in Africa in support of the objectives of the SE4All initiative. The AELG comprises high-level individuals from the public and private sectors, such as heads of state, CEOs of major corporations, and representatives of African institutions. The AELG was launched in January 2015 at the World Economic Forum in Davos, spearheaded by the Special Representative of the UN Secretary General (SRSG) for SE4All, Kandeh Yumkella.

The Hub contributed to the establishment of the AELG, which is dedicated to unblocking policy and project-related energy sector problems hindering progress towards SE4All targets. The Secretariat of the AELG is housed at the African Development Bank in conjunction with the SE4All Africa Hub.

On June 30, 2015, Côte d'Ivoire's President, Alassane Ouattara, headed a top-level line-up of political and business leaders in Abidjan to launch the West African Energy Leaders Group

(W-AELG). Distinguished guests included Nigerian Vice-President, Yemi Osibajo and the Prime Ministers of Côte d'Ivoire, Benin, Mali, Niger and Togo, in addition to former Nigerian President, Olusegun Obasanjo, and former Ghanaian President, John Kufuor. Leading private-sector figures including Nigerian entrepreneur, Tony Elumelu, and Senegalese-American musician, Akon—whose Akon Lighting Africa programme is installing solar lighting for communities in 11 African countries—were also in attendance.

The AELG intends to advance solutions for regional energy sector problems, unblock trans-boundary energy projects, build regional and thematic collaboration, and push the agenda of regional economic integration. The AELG will support energy reforms and energy programmes that contribute to the pursuit of SE4All objectives¹³.

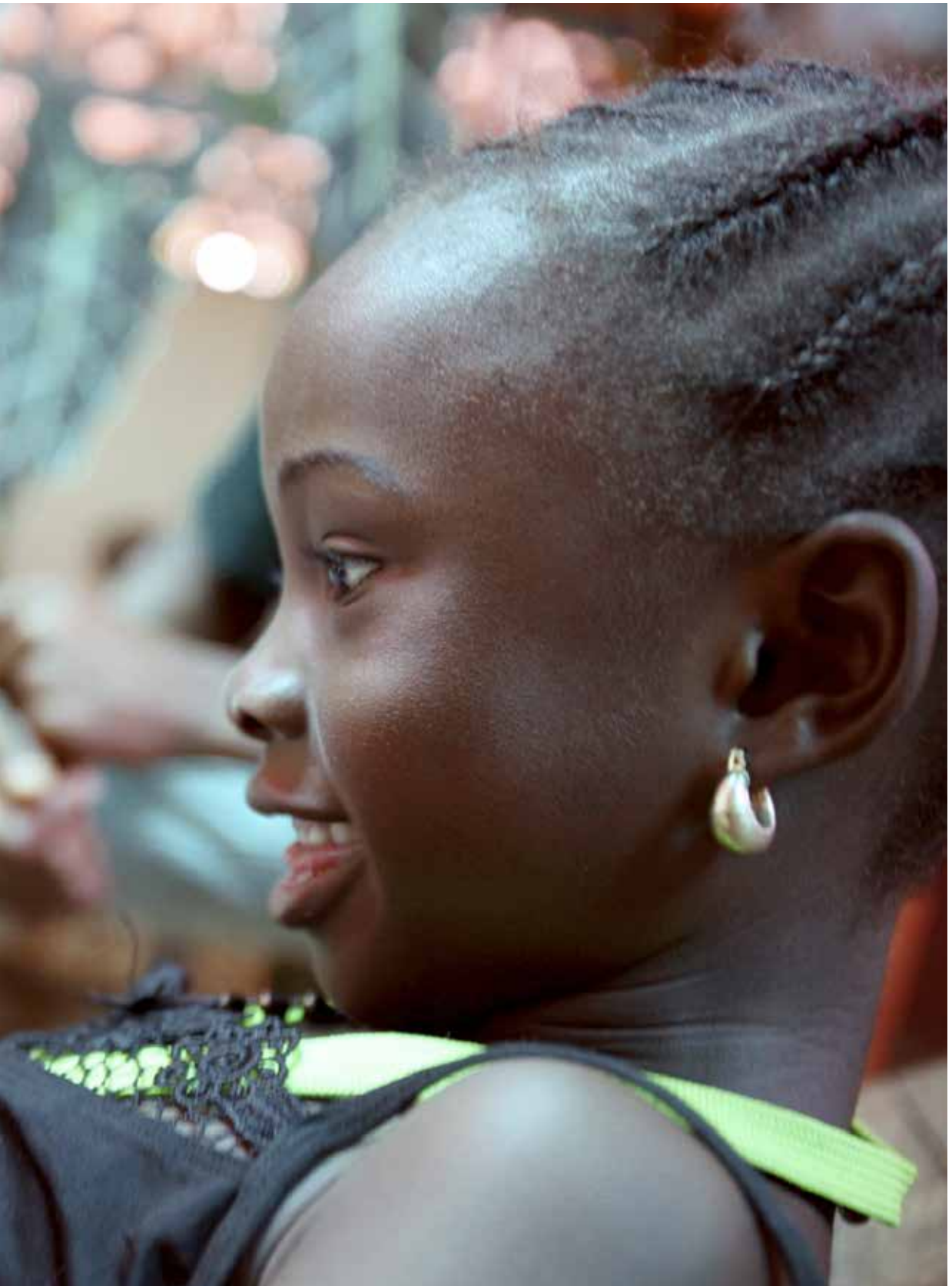


¹³http://www.afdb.org/fileadmin/uploads/afdb/Documents/GenericDocuments/Summary_of_the_launch_event_of_the_WAELG.pdf



IV.

OUTLOOK FOR 2015 - 2016



IV. OUTLOOK FOR 2015 - 2016

The period 2014 - 2015 was successful for the Sustainable Energy for All initiative in Africa. Important ground work in terms of country-level energy sector planning processes and identification of investment opportunities was carried out in many African countries. The period 2015 - 2016 will increasingly focus on actual implementation of these plans and acceleration in terms of investment mobilization.

The upcoming year will also mark global energy-related milestones. In September 2015, the UN summit on the Sustainable Development Goals is expected to endorse a goal on energy, while a global agreement on climate change is expected at COP21.

SE4All must therefore play an important role and the SE4All Africa Hub is well positioned to contribute to the required transformation in Africa. The focus on the Hub-side will be on three themes:

- **(1) Concerted follow-up and implementation of AAs/IPs.** The credibility of SE4All vis-à-vis partner countries depends to a considerable extent on SE4All's ability to mobilize the required support for the implementation of AAs/IPs. It is therefore essential that targeted follow-up measures building on outcomes from the January 2015 Abidjan workshop are identified and implemented by the Global Facilitation Team, the Hubs and the SE4All partnership collectively.
- **(2) Further refinement of country action processes to ensure quality outcomes of the AA/IP process.** Given the multi-stakeholder nature of the initiative and its reliance on decentralized processes, some of the activities carried out in the name of SE4All risk falling short of the desired calibre and potentially undermine the initiative's overall credibility. It is therefore important that the recently established "quality circle," the stakeholder consultation guidelines and other measures, are consistently implemented to support individual countries in realizing quality outcomes.
- **(3) Strengthening SE4All focal points, communication and networking.** Given the number of stakeholders involved in the process, success of the initiative will depend also on the Hub's ability to properly support regional member countries, adequately communicate to them best practices in completing the relevant processes, and putting them in touch with the right partners. As a result, sound communication and networking among SE4All stakeholders will be essential for coherent implementation on the continent.

the \mathbb{R}^n -valued function \mathbf{f} is a solution of the system (1) if and only if \mathbf{f} is a solution of the system (2).

Let us assume that \mathbf{f} is a solution of the system (2). Then, for any $t \in \mathbb{R}$, we have

$$\mathbf{f}(t) = \mathbf{f}(0) + \int_0^t \mathbf{f}'(s) ds = \mathbf{f}(0) + \int_0^t \mathbf{A}(s) \mathbf{f}(s) ds.$$

Since \mathbf{f} is a solution of the system (2), we have $\mathbf{f}(0) = \mathbf{0}$. Therefore, we have

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SE4All

AFRICA HUB

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2014 - 2015



SUSTAINABLE
ENERGY FOR ALL

