



Leading capacity development: a key driver for the streamlining of ODA funding for renewable in Africa

This paper has been prepared by:



RINA. Excellence Behind Excellence.

in collaboration with:



Lorenzo Facco, RINA - Cristina Migliaro, RINA - Matteo Cavadini, EGP

Abstract

The global new investment in renewable in 2016 registered the lowest total since 2013 despite the record installation of renewable power capacity worldwide. One of the main reasons behind this drop in the investments is the lower average capital cost for renewable projects starting construction in 2016 as well as the delays which occurred in some Country or regional level development program. In addition, Official Development Assistance (ODA) funding to developing countries were in some cases not fully exploited; addressing part of the ODA to the support for setting policies with clear targets is crucial in facilitating investments in renewable energy and so is also the adoption of policy instruments. The main goal of the present paper is to spot the existing barriers preventing the extension of the renewable electricity coverage of the area and identify a high level set of recommendations to facilitate the deployment of renewable energy related ODA. The guiding principles for ODA supported capacity development activities identified within the paper include: Supporting country leadership; Capacity development design and sequencing should fit specific country circumstances; Donor support should be provided in a coherent, coordinated, and programmatic manner, and changes in procedures and policies need to be accompanied by extensive on-the-job training to ensure that the new concepts can be implemented.

Background

Despite the record installation of renewable power capacity worldwide, in 2016 the global new investment in renewables fell by 23% to US\$241.6 billion (excluding large hydro) which is the lowest total since 2013; in this context the renewable energy investment in the developing countries fell overall by 30% showing a rate of decrease similar to the one registered by China (32%) and Africa had in 2016 its lowest level of renewables investment since 2011, approximately US\$7.7 billion, 32% lower than 2015. Several are the reasons behind this drop in the investments:

- one of the most important reason is the lower average capital cost for renewable projects starting construction in 2016, which was 13% lower than in 2015 for PV, while for onshore wind the drop was 11.5% and for offshore wind 10%;
- several projects in wind and solar were financed in late 2015 and only commissioned in 2016, in which case the investment associated with them were recorded in the earlier year and the GW addition in the later one; activities in some key markets have slowdown during the course of 2016 especially in Asia;
- several renewable energy markets in the developing world produced record investment figures in 2015 but then saw sharp falls in 2016 in response to scheduled pauses, or delays, in their auction schedules as for example in South Africa and Morocco.

In addition to the above mentioned, Official Development Assistance (ODA) funding to developing countries, including African Ones, were in some cases not fully exploited due to major barriers to the wider dissemination of renewable energy such as policy, regulation

and institutional; as well as information and technical capacity; this highlights scope for an increased focus on skills development in the public sector for better capitalizing on ODA.

Objectives of the paper

Investments in the energy sector have been identified as a priority by many African Governments, Regional Organizations as well as the International Donors community.

As a result, numerous initiatives have been launched with the common goal to support the Continent in achieving a sustainable energy supply; this has led to an increasing need for exchange and coordination across the growing number of initiatives and programs in the sector.

The main goal of the present paper is to spot the existing barriers preventing the extension of the renewable electricity coverage of the area and identify a high level set of recommendations to facilitate the deployment of renewable energy related ODA with the final aim of improving the quality and stability of energy supply and therefore improve living conditions in the urban and remote areas, as well as fostering the ongoing efforts made by the National Governments of the Region and by the International players towards the sustainable economic development and achievement of the ambitious goals set by the United Nations Millennium Development Goals.

Trends in Energy related ODA in Africa

Over the course of the last 15 years, ODA to the African energy sector has increased substantially and the energy sector accounted for approximately 10% of ODA in Africa. In the period multilateral donors provided nearly 60 % of energy ODA, while bilateral

donors provided the remaining; the three largest multilateral donors in the energy sector in Africa are the World Bank, the EU Institutions and the African Development Bank.

The bulk of multilateral lending is disbursed via loans and grants to individual national governments. The EU institutions deliver their ODA via a mix of thematic and geographic programs with direct as well as indirect implementation modalities, including in particular blending instruments.

Similarly, the major bilateral donors channel a large part of their ODA through a variety of country-level delivery mechanisms such as the Agence Francaise de Développement (AFD), the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) and the Japanese International Cooperation Agency (JICA) which provide grants, loans and technical assistance in direct form as well as concessional lending and other financial instruments channeled through national development banks like the German Kreditanstalt fuer Wiederaufbau (KfW), or the Japanese Bank for International Cooperation.

North Africa, home to 16% of the total population on the continent and the only African region with close to universal access to electricity, and East Africa, where live the 23% of the African population of which more than half lacking access to a stable electricity supply, have received the largest volumes of energy sector ODA over the period, accounting for more than half of total ODA. West Africa represents the third largest destination (23.3%) and accounts for 30 % of the African population; while Southern Africa and Central Africa, follow by a wide margin.

The largest sources of donor funding in the African energy sector are the World Bank grants and concessional loans provided via the International Development Association (IDA) which represented almost 30 % of total energy ODA over the period.

The European Union was the second largest multilateral donor providing over 15 % of total ODA in the African energy sector; other major multilateral donors in the African energy sector are the African Development Bank (AfDB) and the Arab Fund for Economic and Social Development (AFESD).

The World Bank directs most of its ODA funding in the energy sector to East and West Africa. North Africa dominates the energy ODA of EU institutions and the AFESD while the AfDB channels most of its energy ODA to East Africa.

A list of the main ongoing initiatives supporting the deployment of renewable energy technologies and the provision of access to sustainable energy supply in Africa is presented in the following table.

Looking at the bilateral aid, France was the largest donor followed by Germany and Japan; together these three Countries accounted for approximately 30 % of total ODA to the African energy sector and 57 % of bilateral aid; the group of the ten largest bilateral donors furthermore includes Norway, Kuwait, the United States, Spain, the United Arab Emirates, United Kingdom and Korea.

High-level Initiatives	
Africa Clean Energy Corridor	Africa Renewable Energy Initiative (AREI)
Africa Energy Leaders Group (AELG)	Presidential Infrastructure Champion Initiative (PICI)
Africa-EU Energy Partnership (AEEP)	Program for Infrastructure Development in Africa (PIDA)
Africa Power Vision	SE4ALL (Africa Hub)
High-level Initiatives with an operative program	
Africa 50	New Deal on Energy for Africa
Africa Renewable Energy Access Program (AFREA I & II) – ESMAP	Power Africa
Electrifi	Public Private Infrastructure Advisory Facility (PPIAF)
Energies pour l'Afrique	World Bank Guarantee Program
Global Alliance for Clean Cookstoves	
Operative programs and delivery mechanisms	
ACP-EU Energy Facility	GET FIT Uganda
AFREA Gender and Energy Program	Global Energy Efficiency and Renewable Energy Fund (GEEREF)
Africa Clean Cooking Energy Solutions Initiative (ACCES)	Green Mini-Grids Africa Regional Facility
Africa Energy Guarantee Facility (AEGF)	IRENA/ADFD Project Facility
Africa Enterprise Challenge Fund (AECF)	Lighting Africa
Africa-EU Renewable Energy Cooperation Program (RECP)	Mediterranean Solar Plan (MSP)
African Development Bank Partial Risk Guarantee (PRG)	NEPAD Bioenergy Programme for Africa
Africa Renewable Energy Fund (AREF)	NEPAD Continental Business Network (CBN)
Biofuels Programme for Household and Transport Energy Use	NEPAD Infrastructure Project Preparation Facility (NEPAD-IPPF)
Carbon Initiative for Development (CI-Dev)	PIDA Service Delivery Mechanism (SDM)
Clean Technology Fund (CTF)	Private Infrastructure Development Group
EEP Africa – Energy and Environment Partnership	Regional Energy Project for Poverty Reduction
Energising Development (EnDev)	Regional Technical Assistance Program (RTAP)
Energy Access Ventures	Renewable Energy Performance Platform (REPP)
Energy Africa Campaign	Renewable for Poverty Reduction Program (REPoR)
EREF ECOWAS Renewable Energy Facility	Renewable Energy Solutions for Africa (RES4Africa)
EU-Africa Infrastructure Trust Fund (ITF) / Africa Investment Facility (AfIF)	Scaling Solar
EU Development Finance Institutions (EDFIs) Private Sector Development Facility	Strategic Climate Fund – Scaling Renewable Energy Program (SREP)
EU Energy Partnership Dialogue Facility (EUEI PDF)	Sustainable Development Investment Partnership (SDIP)
European Union's Technical Assistance Facility (TAF)	Sustainable Energy Fund for Africa (SEFA)
Geothermal Risk Mitigation Facility	

In terms of beneficiaries, North Africa dominates the energy portfolio of Spain, Germany, the UAE and Kuwait. East Africa receives the largest share of energy ODA from France and Japan. Southern Africa is the region that receives most energy sector ODA from the US, Norway and Korea. The energy portfolio of the UK concentrates on West Africa and Southern Africa. It is important to note that none of the top 10 bilateral energy donors have a focus on Central Africa.

Italy was the eighth-largest donor country in 2016 overall, spending US\$4.9 billion on net official development assistance which represents 0.26% of Italy's gross national income (GNI) and an increase in ODA amount of more than 90% since 2012 mainly driven by the rising costs for hosting refugees in Italy; in parallel, however, funding for development programs abroad also increased by 5% between 2015 and 2016 as part of the Government's effort to use development

cooperation to strengthen Italy's international standing. In this context Italy recently overhauled its development cooperation system, establishing its development agency (AICS) and development finance institution (CDP) in January 2016.

The creation of AICS and new development finance institution (CDP) is an opportunity to shape Italy's development agenda where the Italian Ministry of Environment, Land and Sea (IMELS) represents a key player with particular focus to climate change and clean energy; in particular, with specific reference to Africa, within the scope of the CoP 22, IMELS signed specific agreements concerning environmental cooperation activities with 5 African Countries (Ethiopia, Djibouti, Rwanda, Democratic Republic of the Congo and Sudan) and allocated about € 11 million for projects aimed at implementing the mitigation and adaptation targets set by the countries through their own NDCs.

Furthermore, IMELS, together with the International Finance Corporation (IFC) of the World Bank Group and the United States, launched in 2010 the Solar and LED Energy Access Program (SLED) with the aim of bringing clean and high quality energy to the population without access to energy, at the same time alleviating poverty, improving health and reducing greenhouse gas emissions.

The first initiative launched was "Lighting Africa", whose goal is to accelerate the development of the market of "off-grid" lighting products in rural, urban and peri-urban areas without access to electricity in 10 Sub-Saharan African countries.

This initiative subsequently merged with others into "Lighting Global", the World Bank's platform that supports the

international growth of the off-grid solar market as a means of rapidly increasing access to energy from those who do not have access to the electricity grid.

In 2015, an additional US\$ 7.25 million was paid into the program by IMELS and in 2017, in order to guarantee the impact of the program in the long term, IMELS has decided to support the program with a further US\$ 4 million with the aim of supporting market innovations, expanding the impact of emerging technologies as a basis for sustainable economic development, improving the quality of life and reducing greenhouse gas emissions. In addition the program have provided over 100 million people with modern services powered by solar energy, for home lighting and mobile phone charging, with an estimated 5 million tons of greenhouse gases emission avoided which is equivalent of removing one million cars from the road each year.

More than 100 products have already been produced within the program, of which Lighting Global certifies quality, with the aim of finding efficient applications for solar energy in the households or for small economic activities such as irrigation.

The Program also provides consulting services to companies and offers a wide range of services including: assistance in market access strategies, risk management and development of innovative models, promotion of economies of scale, assistance in the distribution and sale of products.

Barriers to Renewable Energy Investment in sub Saharan Africa

Although major technical and financial breakthroughs have been achieved internationally with respect to renewable

energy their contribution to Africa's energy problems remains minimal (excluding large Hydro). Major barriers to the wider dissemination of renewable energy on the African continent will need to be overcome. These barriers can be categorized as follows:

- policy, regulation and institutional;
- information and technical capacity;
- financial.

Policy, Regulation & Institutional

Consistent policy and regulatory frameworks are central to the successful dissemination of renewable energy in technologies in sub Saharan Africa, but in general such frameworks are absent in most of the African countries and where suitable policies for promoting renewable energy do exist, their impact is weakened by a lack of enforcement mechanisms which makes very challenging for the private and industrial sector to operate effectively and expand their renewable energy investments.

Furthermore, the lack of policy focus on the renewable energy is the relatively low budgetary allocations at Country level for the promotion of renewable energy in many African countries; the majority of energy projects are therefore externally financed. Despite the recent development of several renewable energy policies in many developing countries, including African ones the successful development and deployment of any technology, especially relatively new ones, such as renewable energy technology, need several institutions covering the different technical, economic to market aspects; this institutional capacity is not always available in most parts of Africa.

Moreover ancillary technical institutions for testing, operation and maintenance of

technologies have a limited presence in African countries especially with reference to National Systems of Innovation (NSI) which have proved to be crucial in increasing technological receptivity in most developed and emerging economies

Information and technical capacity

Ensuring secure sustainable commercial success of renewable energy depends on institutional and human capacities as well as business and market capabilities.

A major technical barrier is the unavailability of accurate and well organized renewable energy resource data. The data on renewable energy, especially for solar and wind, are very scanty and the poor technical skills in the continent affect the development of renewable technologies. Inadequate domestic technical skills account for poor maintenance of imported systems and lack of provision of adequate after-sales service. Hence, there is need for high and middle level technical manpower in business development, manufacturing and overall management. The public sector also lacks adequate personnel to undertake effective monitoring and evaluation.

Financing and investments

Scenarios developed by International Financing Institutions such as the African Development Bank has estimated at approximately US\$ 550 billion the total investment required to ensure universal access to reliable and increasingly cleaner electric power in Africa by 2030 thus estimating an average investment of approximately US\$ 30 billion per year; at present the total funding to the energy sector in Sub-Saharan African has averaged only about US\$ 2 billion every year showing the seriousness of the challenges which shall be

faced to mobilize financing for an effective deployment of the renewable energy potential in the area.

Moreover many economies in Africa are performing badly and this only makes the situation more difficult when seen in the context of the ongoing food and financial crisis, high volatility in oil prices and climate change.

Lacking of government support, the private sector remains a small player overall, and more prevalent in small-scale renewable energy systems; whereas the bulk of the private sector financing is “Foreign” and mostly linked with international financing institutions supporting the local beneficiary governments. On the other side, it is registered a scarce support from financial institutions such as insurance companies and broker institutions that assist to reduce the very high transaction costs of clean technologies in African countries.

In order to make ODA more effective, shared priority should therefore be put on to overcoming the barriers described above .

Recommendations

Major technical progress and policy development along with financial and institutional innovations are needed to scale up the production of renewable energy in Africa and notably in Sub Saharan Africa where it should be recognized that renewable energy roadmap technologies are at different stages of development and deployment. In this context, addressing part of the ODA to the support for setting policies with clear targets is crucial in facilitating investments in renewable energy and so are also the adoption of policy instruments such as public

auctions and tenders, quotas, feed-in tariffs, capital subsidies or rebates, investment or other tax credits, tradable renewable energy certificates, and public investment loans.

Several national and international policies have so far been tailored to promote the use of renewable energy technologies; it is clear that policy successes are likely to be achieved when it is feasible&sustainable, customized on domestic and regional context, involving&empowering national stakeholders, adequately funded by resources both capital and human, all in view of finalizing the implementation and integration. Based on these experiences, policies to be considered for implementation at the national level are: regulation measures (i.e., performance standards, equipment standards, etc); subsidies and financial incentives (feed-in tariffs, rebates, grants, loans, production incentives, government purchasing agreements, insurance) that are targeted and have a clear sunset clause; voluntary agreements (e.g. between government and private sector). At regional and sub-regional levels, policy measures that have been successful and can be considered for development in Africa include focused use emission targets and trading systems; technology co-operation which can be supported by financial systems (ODA, FDI, commercial bank loans). In selecting appropriate policy options suitable to be supported by International Donors and Financing Institutions, it is important that these policy options are evaluated for their environmental impacts and cost effectiveness; distributional aspects; institutional feasibility; and suitability to the local context. In addition, renewable energy policy development should be well integrated into policies of other sectors, smaller-scale producers may need special policies such as

using dedicated funds or project bundling which can be interesting options also for powering social infrastructure such as schools & vocational training, medical centres, hostels etc.

ODA could lead and guide the support of the development of regional, sub-regional and national strategies to acquire renewable technologies by increasing local R&D capacity, skills of technology adaptation and manufacturing capability. Furthermore, funds should streamline capacity for policies' integration and effectiveness aiming at fostering technology transfer. African countries can exploit new financing options to improve investments in renewable energy in the continent. Local sources of funding that should be included in public offer of shares by power utilities to implement specific projects, practicing of pensions funds to leverage local bank financing for new projects, use of emerging local bond markets. An overarching principle that must guide ODA distribution in the future is that capacity development is primarily endogenous to a country, based on voluntary action and motivation. Exogenous aid initiatives can support capacity development, but they are not a substitute for it. Capacity development efforts should therefore be rooted in the partner country's goals and strategies. A set of guiding principles for ODA supported capacity development activities is summarized in the following points:

1. Supporting country leadership should be central to donor approaches. Capacity development is most likely to succeed when countries view it as serving their own self interests and are committed to taking the actions necessary to implement it. In this case the role of donors therefore is to facilitate rather than direct the process of turning

broad goals and strategies into an actionable plan.

2. Capacity development design and sequencing should fit specific country circumstances, rather than reflect standard or imported solutions. Effective capacity development starts with a premise of building upon what already exists, rather than transplanting entirely new systems. Capacity development should therefore make use of local knowledge, build upon existing values where possible and have a timing and scope of interventions designed to be consistent with the country's capacity to implement change.

Capacity development efforts must be **tailored to country circumstances** if they are to succeed, for example, have to take into account a country's existing structures and inter-linkages (i.e. of the political and administrative layers – central, regional, local, etc.) bearing in mind that the entry point for capacity development will vary country to country

3. The institutional, organisational and individual levels of capacity development, including managerial and technical aspects, should all be taken into account in programme design and implementation. **Capacity development must be viewed from a holistic or systemic perspective, and not merely as a transfer** (e.g. of skills).

4. Donor support should be provided in a coherent, coordinated, and programmatic manner. Therefore, as to the content of capacity development, the government's own action plan should be the focal point for determining support. Though donors may come with different areas of expertise within the overall programme, their support should be complementary rather than competitive or

duplicative. Support should be phased over a multi-year horizon in order to take into account the long-term nature of capacity development. Likewise, interventions should be programmed in a way that reflects how they fit with the country's development objectives.

5. Extract key concepts from previous experiences instead of replicating whole systems. Effective capacity development attempts to build on what is already in place, rather than replace whole systems. Building on existing capacities, easy-to-handle instruments and procedures can be more easily implemented than sophisticated ones. Some advanced concepts can be introduced gradually, but only by extracting the elements that are most practical for the country.

6. Though the focus is often on improving organisational performance, **training individuals remains an important component of capacity development.** In other words, changes in procedures and policies need to be accompanied by extensive on-the-job training to ensure that the new concepts can be implemented.

7. Effective capacity development requires well functioning organisations consisting of trained, motivated and committed staff. This requires not only organisational restructuring, but also changes in personnel and a clear and reasoned allocation of project management roles in the program as well as a good balance of local and international expertise in the implementation team.

ODA Recipient Countries Government should stress on the need of Co-ordinated initiatives with and among donors to avoid duplication of programs or completion among them, his leads to separate funding mechanisms and pressure to show results within relatively

short timeframes. Shifting to a need-driven approach within a co-ordinated donor context creates the flexibility government needs to decide how best to maximise donor support which optimally includes establishing an institutionalised platform for both donors and partner countries, in order to also deal with the design and monitoring of the reform process.

In this context, in addition to the usual support for the development of legal and regulatory framework and for building capacity and raising awareness, the following four main areas of support can be identified to be considered by ODA beneficiaries Countries Government and other stakeholders target for programs with the aim of providing effective support to Renewable energy (and more broadly clean technologies) deployment in Africa:

- **Entrepreneurship and Business Acceleration;**
- **Innovation Finance Products;**
- **Market Development Mechanisms;**
- **Legal and regulatory Framework Strengthening.**

Entrepreneurship and Business Acceleration

Entrepreneurship and business acceleration are actions designed to assist entrepreneurs in turning ideas into sustainable businesses, or to scale up an existing initiative or business line. This has traditionally taken the form of programs involving consulting firms, business incubators or technical experts, in providing direct training and capacity building to managers and owners of entrepreneurial businesses, ranging from general financial and managerial skills to targeted support for technical aspects of the business. Alternatively, more recent types of programs aim to develop collaborations and

networks to assist clean technologies providers and firms using such technologies to share knowledge and experience thus reducing transaction costs for the single company by pooling resources and potentially sharing R&D and intellectual property rights (IPR).

Collaborations between national governments, the private sector and the international community can also support the creation and sharing of technical knowledge, building upon existing entrepreneurial cultures; innovating and delivering new models for financing and intellectual property sharing, and supporting the demonstration of complex technologies with strategic value. Such international, public-private, collaborations are able to achieve these functions through education and capacity building for companies, Business Clusters and agencies, and also through protections for intellectual property and the provision of economic resources and legal conditions required to enable commercial risk-taking.

Finally, public and private agencies can also conduct a facilitating and mediating role between entrepreneurs and their market clients. This role includes awareness raising activities, information sharing and simple communication of ideas and opportunities to clean technology providers and firms adopting these technologies within their processes. Such activities constitute the intangible assets of human capacity necessary to make markets work, beyond the more easily measured financial barriers. Here, governments, other stakeholders, and companies can draw upon technical support and advice from a range of international collaborations and networks to promote clean technology and small business development.

Innovation Finance Products

Innovation finance includes those instruments aimed at providing companies interested in clean technologies with early stage financing and risk capital not available from traditional financing sources, such as seed capital, venture capital, soft loans and loan guarantees.

In this framework, governments and investors can also provide funding to bolster private sector lending to firms interested in clean technology on preferential terms, like lower interest rates, more flexible collateral and repayment conditions, or by providing loan guarantees. Such form of support could help firms accessing to finance thus overcoming one of the most significant barriers to clean technology deployment in emerging economies where the high cost of capital and business financing for deploying clean technologies often reflects a lack of awareness on behalf of local banks about the related opportunities, which translates into higher financial risk assessments, and the longer supply chains inherent to the market structure of many clean technology businesses.

Building upon the above described basis, government-backed support for concessional or flexible loans creates the risk that the deployment of clean technologies becomes dependent upon non-market financing; therefore, to mitigate this risk, and facilitate a longer-term transition to market-based financing, soft loans and credit guarantees must be issued through commercial banks which set their own financial and technical criteria. Innovation finance can also operate on the demand side. To this aim, the most important instrument to promote growth in clean technology markets is technology-specific consumer credit which can overcome

the financial barriers surrounding high capital cost goods, such as off-grid renewable energy technologies (RETs). For example, a high demand for solar water heaters (SWHs) in Tunisia was stimulated by making available low-cost commercial loans, offered specifically for SWHs. These technology-specific credit markets have enabled, and were enabled by, greater awareness and acceptance for SWHs, lowering risk premiums.

Market Development Mechanisms

A range of instruments aim to increase demand for the products of local SMEs and facilitate the overall growth of the clean technology market. The main purpose of demand-side instruments is to reduce commercial uncertainties for businesses supplying clean technologies, thus reducing investment risk. Support for consumer financing, as discussed earlier, is an important mean to stimulate the growth of clean technology markets at the household level. Additionally, several measures to stimulate industrial demand for clean technology can be supported by governments with special focus on renewable energies such as feed in tariffs, renewable energy certificates.

The feed in tariffs are the most well-known instruments to strengthen market demand for grid-connected technologies in developed countries. However, given that FITs operate as a cross subsidy, where the cost of tariff-supported renewable energy technology is divided among all grid-connected consumers, this particular instrument becomes less economically viable and relevant in lower-income countries where levels of energy access remain low. Renewable energy certificates or obligations are government-imposed mandatory targets for utilities to

generate a share of their power from renewables, that normally result in the creation of certificates which can be traded, providing a market-based subsidy.

While RECs are a market mechanism, their prices are largely influenced by the regulatory framework that creates them. Therefore, the penalties for non-compliance must be significant, and base prices should be set high enough to ensure energy companies are incentivized to invest in clean technologies.

Conclusion

The energy sector, and in particular the development of renewable energies, has been often identified as a priority for growth in many African countries. Several initiatives have been launched by international organizations and donors in cooperation with local governments to support its development. Examples of such initiatives span from the Geothermal Risk Mitigation Facility (GRMF), promoted by the German and UK governments and the African Union, that provide grants for geothermal surface studies and drilling operations in the most promising geothermal prospects in Africa, to the Scaling Solar program launched by World Bank/IFC to promote the development of solar energy with large-scale grid-connected solar plants via rapid, open and transparent tender processes. These successful initiatives launched in recent years helped the development of renewable energies in the continent and will keep supporting African countries in the coming years in achieving a sustainable energy future.

References

SE4ALL & Africa EU Energy Partnership, *“Mapping of Energy Initiatives and Programs in Africa, Final Report”*, May 2016.

The World Bank et al. *“Financing renewable energy Options for Developing Financing Instruments Using Public Funds”*

Frankfurt School-UNEP Centre/BNEF, *“Global Trends In Renewable Energy Investment 2017”*.