



# Public-private partnerships for the European External Investment Plan in Africa:

insights from the experience of the French cooperation in the West African energy sector

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#### List of acronyms

AAAA Addis Ababa Action Agenda

AFD Agence Française du Développement

AfDB African Development Bank
DFI Development Finance Institutions

EC European Commission

ECOWAS Economic Community of West African States

EIP External Investment Plan

ERERA ECOWAS Regional Electricity Regulatory Authority

EU European Union

EU-AITF EU-Africa Infrastructure Trust Fund ICA Infrastructure Consortium for Africa

IEA International Energy Agency
 MDG Millennium Development Goals
 MSME Micro, small and medium enterprises
 ODA Official Development Assistance

OECD Organization for Economic Co-operation and Development

OMVG Gambia River Basin Organization

PPP Public Private Partnership
SDG Sustainable Development Goals

SSA Sub-Saharan Africa

SUNREF Sustainable Use of Natural Resources and Energy Financing

TA Technical assistance

UEMOA West African Economic and Monetary Union

UN United Nations

#### 1. Introduction

Public Private Partnerships (PPPs) are a form of cooperation between public authorities and the private sector to achieve long-term development objectives. To this aim, authority, responsibility and risks are shared between the public and the private partner, while resources are joint.

There is no widely accepted definition of what Public Private Partnerships are, neither common models and practices. In this study, we will focus on the definitions and methods used by the European Union.

The European Union (EU) promotes public private partnerships as innovative financial solutions to enlarge its strategy and external cooperation actions. In 2016, the European Commission (EC) launched the External Investment Plan (EIP) which promotes investments in Africa and the Neighborhood Countries to create decent job opportunities, stimulate a sustainable development and, ultimately, track some of the root causes of migration. The EIP provides an integrated framework to promote the participation of the private sector in financing for development and, in particular, to develop a blending agenda.

"Blending" is the combination of EU grants with loans or equity from public and private financiers. Typically implemented as public-private partnerships, "blending" mechanisms are valued by the EC among the most innovative financial instrument to increase the impact of the EU external action. These instruments are aimed at leveraging additional private capital in countries and sectors where otherwise the private sector would not invest, at promoting social, environmental and economic progresses and at ensuring levels of the private sector returns in line with market expectations (through risk mitigation).

Blended finance can play a role as one of the most innovative mechanisms to leverage public and private funds for infrastructure development, even if it still remain a small part (4%) of total EU funding. According to the ICA's annual report of 2016, indeed, ICA members are increasingly reporting the use of blended finance in their operations, with the AFD, AfDB and EU-AITF providing the majority of grant components in blended finance.

The European Union has been particularly active in leveraging investments in the energy sector, especially committing in improving affordable, reliable, sustainable and modern energy. To date, the energy sector makes up 41% of the total blending funding through EC instruments aimed at increasing the impact of the EU Development Policy<sup>1</sup>. The latter is intended to insulate developing countries from shocks (such as environmental risks due to climate change, price volatilities, scarcity of resources and supply shortages) and to help providing the foundations for a sustainable growth.

The aim of this study is to shed some light on good and bad practices in the implementation of blended PPPs through the analysis of specific case studies. By means of a desk review and of interviews with key informants, our objective is to identify best practices to leverage the potentials and to overcome the challenges of blending finance.

<sup>&</sup>lt;sup>1</sup> EUEI PDF (2017), The European Portfolio on Energy in International Development Cooperation. Eschborn: European Union Energy Initiative Partnership Dialogue Facility (EUEI PDF), March 2017.

The analysis stems from a previews research<sup>2</sup> which: i) addressed the main European blending facilities covering Africa and the Neighborhood countries, ii) reviewed the role of the European Development Finance Institutions in implementing blending operations and in reinforcing public-private partnerships; iii) mapped the French and Italian blending operations in Africa and in the Neighborhood countries; iv) highlighted the strengths and weaknesses of blending operations based on the available evidence and evaluated the opportunities and threats of blending mechanisms as tools for external development cooperation.

Case studies have been selected among those relative to the energy sector. We focus on projects implemented in Africa, in particular in West Africa, which have a regional relevance. In this region, access to electricity is a major concern to allow the achievement of the Sustainable Development Goals.

According to the IEA (International Energy Agency), the number of Africans lacking access to electricity is of about 600 million people, that is, two in every three people. This number is projected to increase to 645 million people by 2030, based on current trends and as a result of a growing middle class, of the urbanization and of the population growth rates. As a matter of fact, the continent's entire power generation capacity is of 90GW, half of which is located in South Africa. Excluding South Africa, consumption averages around 162 kWh per capita per year, compared to a global average on 7'000 kWh<sup>3</sup>.

In West Africa, electricity access rate are below 20% in Liberia, Sierra Leone, Niger and Burkina Faso; more than 50% in Senegal and above 70% in Ghana, one of the most successful countries in improving electricity access<sup>4</sup>.

The selected case studies are led by the Agence Française du Développement (AFD), which, in 2007, was recognized by the EU as a Development Finance Institution able to manage European funds. Since then, it has a leading role in setting up innovative co-financing mechanisms such as loan-grant blending facility.

We here focus on those initiatives implemented in the framework of the EU-Africa ITF (Infrastructure Investment Facility), one of the main European blending facilities covering Africa. Launched in 2007, its main objective is to facilitate interconnectivity and regional integration through regional and cross-border infrastructure projects in the energy, water, transport and communication and telecoms sectors. Under this financial framework, investments are typically leveraged for large-scale projects with a regional relevance.

We thus look into those blending operations being comparable on the basis of:

- the sector: all operations have a focus on the energy sector;
- the intervention area: the selected projects are implemented in West Africa and have a regional relevance.

<sup>&</sup>lt;sup>2</sup> Napolitano S. (2018), Review of the main European development cooperation strategies to encourage investments in Africa and in the Neighborhood countries: a focus on blending facilities. CeSPI, Rome.

<sup>&</sup>lt;sup>3</sup> Africa Progress Panel (2015). Power people planet: seizing Africa's energy and climate opportunities: Africa progress report 2015

<sup>&</sup>lt;sup>4</sup> International Energy Agency (2014). *Africa energy outlook: A focus on energy prospects in Sub-Saharan Africa*. International Energy Agency.

The chosen selection criteria led us to select the following case studies: the "ECOWAS Electricity Regulation" project (ERERA Project), approved in 2009 and ended in 2013 as planned; the "Financing energy efficiency and renewable energy investments of private companies in West Africa" project, approved in 2013 and still ongoing.

The study is organized as follow. Section 2 reviews definitions and objectives of PPPs and of blended PPPs. Section 3 focuses on the role of the private sector in investing in the West African energy sector.

Section 4 introduces the role of the AFD's in blended PPPs, in particular in the energy sector.

Section 5 describes the selected case-studies, presents the projects objectives and achieved results, while Section 6 draws conclusions on the lesson learnt from these case studies with reference to some key aspects such as: their leverage effect and the respect of the principle of additionality in blending finance, their development impact, the levels of participation and ownership of local partners, the support to MSMEs and the occupational impact.

Section 7 concludes.

#### 2. Public Private Partnerships (PPPs) in Africa

#### 2.1. Definitions and objectives

There is not a common definition of what Public Private Partnerships are.

The United Nation Commission for Africa defines PPPs as "risk-sharing relationships in which a legal contract assigns public service delivery responsibility to a private entity. The PPP contract allocates risks and rewards associated with the delivery of these public services between the private entity and the public owner or sponsor of the project. In other words, the compensation received by the private entity for this involvement can vary depending on performance"<sup>5</sup>.

The World Bank Group, the Asian Development Bank, and the Inter-American Development Bank in a reference guide for PPPs take a broad overview and thus define them as "long-term contract between a private party and a government entity, for providing a public asset or service, in which the private party bears significant risk and management responsibility, and remuneration is linked to performance"<sup>6</sup>.

The European Commission adopts the following broad definition: "PPPs are forms of cooperation between public authorities and the private sector that aim to modernize the delivery of infrastructure and strategic public services"<sup>7</sup>.

<sup>5</sup> United Nations Economic Commission for Africa (2011). "Public-Private Partnerships in Africa's Energy Sector: challenges, best practices, and emerging trends." High-level workshop in the United Nations Conference Centre, Addis Ababa, Ethiopia, 30 June – 1 July 2011.

<sup>&</sup>lt;sup>6</sup> International Bank for Reconstruction and Development / The World Bank, Asian Development Bank, and Inter-American Development (2014). Public-Private Partnerships – Reference Guide. Second edition, July 2014.

<sup>&</sup>lt;sup>7</sup> European Commission (2009), Mobilising private and public investment for recovery and long term structural change: developing Public Private Partnerships, COM (2009) 615 final, p.2.

PPPs have then been promoted in developing countries and generally consist in the following elements:

- a long term contract between the public and the private sectors for the design, financing, construction, operation and maintenance of public capital assets from the private sector;
- a payment over the life of the PPP contract to the private sector party for the provision of services and use of the asset, made either by the public party or by the general public as users of the asset:
- the reversion of the asset to public sector ownership at the end of the contract.

For example, in the African countries of the franc zone<sup>8</sup>, initiatives of PPPs have been experiencing sustained growth since years. A program of the AFD, Expertise France (the French international technical cooperation agency) and the World Bank promotes PPPs defined as contractualization whereby a public authority uses a private company to finance, design, build and/or manage equipment ensuring or contributing to the public service. The aim of this initiative is to support the selection and development of priorities for infrastructure projects, support the establishment of a legal and institutional framework, at national and regional levels, and build capacity of administrations<sup>9</sup>.

PPPs initiatives, and in particular those with long-term contracts, have been welcomed because of <sup>10</sup>:

- budgetary reasons: PPPs are perceived as more efficient in the use of resources. Sharing risk
  between the public and the private sectors allows to allocate it to the party most able to
  manage it; private sector capital is leveraged so that projects became affordable as the
  private sector takes life cycle cost risks;
- efficiency reasons: the exposure of capital to performance risk (public sector only pays when services are delivered) incentivizes the private sector to design and implement the initiative on time and within budget;
- value for money: quality and even a specific focus on outputs and outcomes of service delivery are ensured by standard public procurement processes and, on the other hand, the public authority is scrutinized by investors whose capital will be at risk depending on the performance.

More in general and from a political point of view, the potentiality of PPPs resides in a long term vision where the relationship between the Nord and the South is articulated on co-production models to obtain a win-win situation.

#### 2.2. Blended PPPs

Like PPPs, there is not a common definition of blended finance. The concept encompasses the one of traditional PPP.

<sup>&</sup>lt;sup>8</sup> It includes 8 countries of UEMOA (Benin, Burkina Faso, Ivory Coast, Guinea Bissau, Mali, Niger, Senegal and Togo) and 6 countries of the CEMAC (Cameroon, Central Africa, Republic of the Congo, Gabon, Equatorial Guinea, Chad)

<sup>&</sup>lt;sup>9</sup> Information taken from the website: <a href="http://www.initiative-ppp-afrique.com/">http://www.initiative-ppp-afrique.com/</a>, consulted the 8<sup>th</sup> December 2017.

<sup>&</sup>lt;sup>10</sup> Torres De Mastle, Clemencia; Encinas, Javier; Farquharson, Edward; Yescombe, Edward Raymond (2011). *How to engage with the private sector in public-private partnerships in emerging markets*. Washington, DC: World Bank.

The Addis Ababa Action Agenda (AAAA) agreed by 193 UN Member States defines "blended finance" as activities that combine "concessional public finance with non-concessional private finance and expertise from the public and private sector, special-purpose vehicles, non-recourse project financing, risk mitigation instruments and pooled funding structures." As noted in the Addis Agenda "an important use of international public finance, including ODA, is to catalyze additional resource mobilization from other sources, public and private" <sup>11</sup>.

The OECD gives a broader definition: "blended finance is the strategic use of development finance for the mobilization of additional commercial finance towards the Sustainable Development Goals (SDGs) in developing countries" 12.

The EC defines blending as "an instrument for achieving EU external policy objectives, complementary to other aid modalities and pursuing the relevant regional, national and overarching policy priorities. Blending is the combination of EU grants with loans or equity from public and private financiers" (European Commission, 2014)<sup>13</sup>.

In this definition, two concepts are relevant:

- the concept of "complementarities": blending mechanism are expected to unlock sources of
  finance with a development objective and to concretize the principle of PPPs, according to
  which private sector investments are mobilized as complementary to, not competitive with,
  public funds;
- 2. the pursuit of "relevant regional, national and overarching policy priorities": blending is seen as an opportunity to address a situation of sub-optimal investments levels and therefore to encourage investments in countries and sectors which are unattractive or risky. In economic terms, blending is seen as a corrective measure in case of market failures and higher socio-economic than financial returns.

#### 3. The SSA energy sector: a focus on West Africa

According to the IEA (International Energy Agency), the number of Africans lacking access to electricity is of about 600 million people, that is, two in every three people. This number is projected to increase to 645 million people by 2030, based on current trends and as a result of a growing middle class, of the urbanization and of the population growth rates. Those that have access to electricity have low levels of consumption: the Africans consume 488 KWh per capita per year. This is because prices remain high and there are frequent power shortages. As a matter of fact,

<sup>&</sup>lt;sup>11</sup> United Nations Department of Economic and Social Affairs (2016). Blended finance in the SDG Era. DESA Technical Workshop on the margin of the 5<sup>th</sup> Biennial High-level Meeting of the Development Cooperation Forum. New York, 20 July 2016.

<sup>&</sup>lt;sup>12</sup> Definition taken from the website <a href="http://www.oecd.org/dac/financing-sustainable-development/development-finance-topics/blended-finance.htm">http://www.oecd.org/dac/financing-sustainable-development/development-finance-topics/blended-finance.htm</a>, consulted the 8<sup>th</sup> December 2017

<sup>&</sup>lt;sup>13</sup> It would be more precise to distinguish between private-finance blending, that is public finance blended with private finance, and blending of different sources of public finance, which might better be termed "pooling".

On this topic, see: Oxfam International (2017), Private-Finance blending for development – risks and opportunities, Oxford, February 2017.

the continent's entire power generation capacity is of 90GW, half of which is located in South Africa. Excluding South Africa, consumption averages around 162 kWh per capita per year, compared to a global average on 7.000 kWh<sup>14</sup>.

The case of West African countries highlights how strong the relationship between energy poverty and low human development is. ECOWAS countries consume 88kWh of electricity per capita per year. The 300 million inhabitants of West African countries can hardly afford modern fuels, especially in rural areas. As a consequence, 80% of the population depends on traditional biomass (against the 67% dependency rate on biomass in Africa) for cooking and lighting, with environmental consequences such as soil erosion and desertification <sup>15</sup>.

Low access to electricity and unreliable supply hinders the region's development. Energy availability and reliability indeed play a role in human development through different channels: it may improve education, for example by allowing schooling when there is no natural light; it may improve health, by improving the quality of indoor air and the storage of medicines; it may increase productivity, by extending the length of the workday, facilitating the use of modern machinery, improving the use of information technology and so on.

During the COP21 in Paris, the international community, by acknowledging the role of electricity access for development, negotiated a climate agreement aimed at ensuring the access to reliable, affordable, sustainable and modern electricity and energy services for all. The agreement further aims at reducing the carbon intensity of energy by promoting the adoption of renewable energy.

In 2006, the ECOWAS/UEMOA decided to increase access to modern energy services of rural and peri-urban population, reaching by 2015 at least half of the population. The decision to adopt a regional policy on access to energy services for populations in rural and peri-urban areas was aimed at reducing poverty in the region and at achieving the MDGs in Member States<sup>16</sup>.

More recently, in 2013, the ECOWAS Member States adopted the "ECOWAS Renewable Energy Policy". The vision is to enable universal access to electricity by 2030, thanks to a more sustainable and safe provision of domestic energy services for cooking <sup>17</sup>.

To this aim, the ECOWAS Member States recognized the need to "create a favorable environment to attract private sector and use renewable energy as an engine for industrial development, fostering social and economic development" <sup>18</sup>.

Investments are necessary to generate capacity to create energy and to distribute and transmit electricity to its consumers. Estimates of the annual investments required from 2015 to 2040 in

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<sup>&</sup>lt;sup>14</sup> Africa Progress Panel (2015). Power people planet: seizing Africa's energy and climate opportunities: Africa progress report 2015

<sup>&</sup>lt;sup>15</sup> ECOWAS (2006). White Paper for a Regional Policy Geared towards increasing access to energy services for rural and peri-urban populations in order to achieve the Millennium Development Goals. Economic Community of West African States (ECOWAS), Abuja, Nigeria.

<sup>&</sup>lt;sup>16</sup> Ibidem.

<sup>&</sup>lt;sup>17</sup> ECOWAS (2013): ECOWAS Renewable Energy Policy. ECOWAS Centre for Renewable Energy and Energy Efficiency (ECREEE), Cape Verde, 2013.

<sup>&</sup>lt;sup>18</sup> Ibidem.

Africa range from US\$ 33.4 billion to US\$ 63.0 billion, with the highest investment needs in West Africa. The average annual spending in the past decade in the African power sector has been about US\$ 12 billion<sup>19</sup>, largely behind the needs.

African governments are faced with financial constraints that make this financial gap difficult to fill. Grant funding is needed to help governments prepare large investments projects, with a regional relevance. In this framework, the private sector is assuming a greater role, as we will see in the next Section.

### 3.1. The contribution of the private sector for investments in the African energy sector

Private sector commitments for investments in infrastructure development in Africa was increasing, especially in the energy sector which became the largest recipient of the total financing: in 2015, USD 34.7 billion committed, a significant rise on the USD 22.4 billion invested in 2014<sup>20</sup>.

In 2016, this positive trend stopped but the energy sector remained by far the largest recipient of donor funding: the overall commitments to Africa's infrastructure declined reaching the lowest level in five years<sup>21</sup>.

The decline was mainly due to a reduction of the private sector investments: while the private sector in 2015 committed USD 7.4 billion of which USD 7.2 billion went to the energy sector, in 2016, a significant decrease was registered, with USD 2.6 billion of investments from private capital, of which USD 1.3 billion went to energy projects.

West Africa was the largest beneficiary of privately sourced finance and, together with Central Africa, the only region to show increased commitments (14%) in investment commitments compared with the previous year. The region registered a progressive increase in total commitments for infrastructure investments, from 2011 to 2016, with USD 16.3 billion commitments, of which USD 5.6 for the energy sector. Private capital accounted for USD 1.52 billion, the highest level since 2013.

The increase of commitments in the energy sector is also due to a larger commitment by DFIs (together with an increase in Chinese investments in the regions and private investments in the renewable sector in South Africa). DFIs are thus playing an important role, not only from a financial point of view but also because they invest to improve management effectiveness and governance through technical assistance and skills development. Moreover, DFI's such the AFD reports to commit to improve risk management by way of guarantees or insurance: this is a key aspect as risk mitigation strategies have been recognized as crucial to attract investors in infrastructure projects in Africa, especially in the earlier stages of the project cycle.

<sup>&</sup>lt;sup>19</sup> International Bank for Reconstruction and Development/The World Bank (2017), "Linking Up: Public-Private Partnerships in Power Transmission in Africa", Washington DC

<sup>&</sup>lt;sup>20</sup> The Infrastructure Consortium for Africa Secretariat c/o African Development Bank (2015), Infrastructure financing trends in Africa – 2015. Abidjian, Cote d'Ivoire.

<sup>&</sup>lt;sup>21</sup> The Infrastructure Consortium for Africa Secretariat c/o African Development Bank (2016), Infrastructure financing trends in Africa – 2016. Abidjian, Cote d'Ivoire.

In this framework, blended finance can play a role as one of the most innovative mechanisms to leverage public and private funds for infrastructure development, even if it still remains a small part (4%) of the total funding<sup>22</sup>. According to the ICA's annual report of 2016, indeed, ICA members are increasingly reporting the use of blended finance in their operations, with the AFD, AfDB and EU-AITF providing the majority of grant components in blended finance.

#### 3.2. PPPs in the African energy sector

In the era of energy transition, the energy sector is crucial in defining a sustainable development programme based on cooperation and coproduction.

The European Union has been particularly active in leveraging investments in the energy sector, especially committing in improving affordable, reliable, sustainable and modern energy. The energy sector is thus among the EU priorities since 2011, when the EU Agenda for Change was defined to increase the impact of the EU Development Policy<sup>23</sup>. Its main objective is to insulate developing countries from shocks (such as environmental risks due to climate change, price volatilities, scarcity of resources and supply shortages) and to help providing the foundations for a sustainable growth.

To this aim, the European Commission recognized the need to crowd in private sector finance, to develop a blending agenda and to use innovative financing and project development initiatives.

The European External Investment Plan (EIP), launched in September 2016 under the President Jean-Claude Juncker leadership, provides a framework to:

- design a "win-win" situation for EU enterprises who wish to expand their activities into developing countries and for the local private sector that will benefit of additional investments,
- strengthen effective partnerships in Africa and in the Neighborhood countries,
- promote the participation of the private sector in financing for development and develop a blending agenda.

Specific examples of European initiatives of blended PPPs came from the EU-Africa Infrastructure Trust Fund (EU-AITF) and the more recent African Investment Facility (AfIF) and ElectriFI. All these facilities support access to energy in African countries.

The energy sector makes up 41% of total blending funding through EC instruments. With EUR 3.5 billion committed to the energy sector, the EC estimates a possible leverage effect of EUR 30 billion from other sources<sup>24</sup>.

<sup>23</sup> European Commission (2011), Communication from the Commission to the European Parliament, the Council, The European Economic and Social Committee and the Committee of the Regions. "Increasing the impact of EU Development Policy: An Agenda for Change" COM/2011/0637 final.

<sup>&</sup>lt;sup>22</sup> EUEI PDF (2017), The European Portfolio on Energy in International Development Cooperation. Eschborn: European Union Energy Initiative Partnership Dialogue Facility (EUEI PDF), March 2017.

<sup>&</sup>lt;sup>24</sup> EUEI PDF (2017), The European Portfolio on Energy in International Development Cooperation. Eschborn: European Union Energy Initiative Partnership Dialogue Facility (EUEI PDF), March 2017.

## 4. The role of the Agence Française de Développement (AFD) in blended PPPs in Africa

#### 4.1. The AFD's commitment for infrastructure projects

Since 2007, when it was recognized by the EU as a Development Finance Institution able to manage European funds, the AFD offers several financial tools such as grants, sovereign and non-sovereign loans, guarantees and risk-sharing mechanisms for local banks to encourage them to allocate loans for investment, job creation and social and environmental responsibility.

It also set up innovative co-financing mechanisms such as blending loans and grants.

Blending facilities are especially used to support infrastructure projects and to encourage MSMEs projects in the energy, agriculture and social services (health and education) sectors by means of:

- the unlocking of loans from public as well as private entities;
- the reduction of borrowing cost;
- the provision of technical assistance.

Between 2008 and 2016, AFD was delegated by the EU to manage EUR 1.4 billion, of which EUR 823 million came from blending mechanisms. According to the AFD, these resources allowed to support 172 projects and to leverage EUR 15 billion of investments<sup>25</sup>.

About a 20% of the EUR 823 million derived from blending facilities was targeted to Africa. EUR 230 million were financed in the frame of the EU-AITF and EUR 59,9 million in the frame of the African Investment Facility created in 2015<sup>26</sup>.

In the next section, we will analyze case studies which were implemented in the framework of the EU-African Infrastructure Trust Fund (EU-AITF) as, being one of the more ancient blending facilities, financed projects have already achieved a maturity phase.

The EU-AITF's main objective is to facilitate interconnectivity and regional integration through regional and cross-border infrastructure projects in the energy, water, transport and communication and telecoms sectors. Financed projects must be financially sustainable and must demonstrate a development impact in terms of poverty reduction and economic development and trade, economic viability, sustainable operation and maintenance and African ownership. Indeed, projects must be identified according to the priorities set by the African Union and by one of the African regional or national bodies<sup>27</sup>.

The pledged contribution of the EU-AITF from donors is an indicator of the leading role of the AFD as donor: with EUR 11,5 million, France in one of the most active donors, just behind the European Commission and the UK<sup>28</sup>.

<sup>&</sup>lt;sup>25</sup> Agence Française de Développement (2017), Partenariat Européen. Brochure AFD et Partenariat Européen, downloaded the 4th December 2017 from <a href="https://www.afd.fr/index.php/en/brochure-afd-ans-european-partnership">https://www.afd.fr/index.php/en/brochure-afd-ans-european-partnership</a>.

<sup>&</sup>lt;sup>26</sup> Data are taken from : "Projet de loi de finances pour 2018 : aide publique au développement » ( avis - première lecture ) par M. Jean-Pierre VIAL et Mme Marie-Françoise PEROL-DUMONT au nom de la commission des affaires étrangères, de la défense et des forces armées, 23 Novembre 2017.

<sup>&</sup>lt;sup>27</sup> Hultquist, I. (2015), Mapping of EU blending. UTV Working Paper 2015:1.

<sup>&</sup>lt;sup>28</sup> European Investment Bank (2017), Annual Report EU-Africa Infrastructure Trust Fund 2016, 07/2017.

#### 4.2. The AFD's commitment for the energy sector

Since 2017, the AFD is the first bilateral development bank with the exclusive mandate of implementing the Paris agreement, announced during the COP21 in Paris for renewable energies and energy access in Africa and that went into effect on November 2016.

France aims at becoming one of the largest providers of funds in fighting climate change, with an increase in climate funding of EUR 2 billion by 2020.

One third of its commitment is targeted to sub-Saharan Africa, with a financial engagement between 2012 and 2015 that stood at EUR 3.5 billion. With this sums, AFD reached more than 50% of "climate" allocations on its total operations, with a growth in volume of 17%. This data do not consider the operations implemented by the AFD's financial arm, PROPARCO, which, with EUR 481 million, reached a record level (36%) of activity with a "climate" co-benefit since the AFD's climate strategy was defined in 2012. These financing mainly contributed to private renewable energy programs<sup>29</sup>.

Supported projects aim to:

- promote renewable energy and energy efficiency projects;
- develop the access to electricity in rural and peri-urban areas;
- secure power systems;
- assist the definition of public policies and the implementation of appropriate regulatory and institutional frameworks.

The EU-AITF is one of the facilities used by AFD to finance energy projects. The EU-AITF is indeed aimed at supporting infrastructure projects in sub-Saharan Africa. In fact, the EU-AITF facility is articulated in two envelopes:

- a "regional envelope" (EUR 485 million), which, until 2015, allocated 17 grants, among which 8 were for regional projects.
- a "Sustainable Energy for All (SE4ALL) Envelope" (EUR 330 million), which, since its introduction in 2013 and until 2016, allocated 253.4 million of grants aimed at ensuring universal access to modern energy services, at doubling the global rate of improvement in energy efficiency and the share of renewable energy in the global energy mix<sup>30</sup>.

In the period 2007-2016, 83 projects and a total of 111 grants were allocated under the EU-AITF, reaching a total amount of more than EUR 698.4 million. 30% of these projects are in the energy sector.

# 5. Case studies analysis: AFD's blended PPPs AFD's implemented in West Africa in the frame of the EU-AITF

This section provides an in-depth analysis of the following case studies:

<sup>&</sup>lt;sup>29</sup> AFD and Proparco (2016), Climate activity of the AFD group in 2016. Institutional publication downloaded the 4<sup>th</sup> December 2017 from https://www.afd.fr .

<sup>&</sup>lt;sup>30</sup> European Investment Bank (2017), Annual Report EU-Africa Infrastructure Trust Fund 2016, 07/2017.

- The "ECOWAS Electricity Regulation" project (ERERA Project): approved in 2009, it ended in 2003 as planned. The project was aimed at supporting the implementation of a regional regulatory authority (ECOWAS Regional Electricity Regulatory Authority ERERA) in the Economic Community of West African States (ECOWAS) and to facilitate the construction and operation of regional power generation and transmission projects.
- The "Financing energy efficiency and renewable energy investments of private companies in West Africa" project: approved in 2013, it is still ongoing. It is aimed at engaging West African local banks in the financing of energy efficiency and renewable energy investments through the AFD's green credit line known as SUNREF program (Sustainable Use of Natural Resources and Energy Financing).

| Project title   | Type of support | Total<br>facility<br>contribution<br>managed by<br>AfD (EUR) | Total<br>project<br>budget<br>(EUR) | State of progress as at December 2015 |
|---|-----------------|--|-------------------------------------|---------------------------------------|
| Ecowas Electricity Regulation                                       | TA              | 1.7 mln  | 8.39<br>mln                         | Approved in 2009, completed           |
| Financing EE and RE investments of private companies in West Africa | IG and TA       | 4.5 mln (IG)<br>1.5 mln (TA)                                 | 45 mln                              | Approved in 2013, ongoing             |

*Source*: <a href="https://ec.europa.eu/europeaid/policies/innovative-financial-instruments-blending/blending-operations\_en">https://ec.europa.eu/europeaid/policies/innovative-financial-instruments-blending/blending-operations\_en</a>, website consulted the 15<sup>th</sup> September 2017.

#### 5.1. The "ECOWAS Electricity Regulation" project (ERERA)

#### 5.1.1.Background

The ECOWAS<sup>31</sup> is a regional community which includes 15 states: Benin, Burkina Faso, Cape Verde, Cote d'Ivoire The Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Mali, Niger, Nigeria, Sierra Leone, Senegal and Togo.

Established in 1975 via the treaty of Lagos, it was set up "to foster the ideal of collective self-sufficiency for its member states". It is a trading union that also aims to create an integrated economic community in the industry, transport, telecommunications, energy, agriculture, natural resources, commerce, monetary and financial issues, social as well as cultural matters.

Among the objectives of the ECOWAS community, the enhancement of the power self-sufficiency in the region is crucial to ensure the energy access to a growing population and to provide means for economic growth. West African countries face challenges in meeting their increasing domestic demand for electricity, estimated at 5% per year. Among the key problems there are the lack of cost-reflecting tariffs, the low levels of investments in the sector with the consequent low levels of quality and services and the lack of cross-border infrastructure.

Then, despite the huge power generation potential, especially in the coastal region, ECOWAS member states need to increase the power generation capacities of sites closer to the energy

<sup>&</sup>lt;sup>31</sup> Information for this section is largely taken from <a href="http://www.ecowas.int">http://www.ecowas.int</a> (consulted the 10<sup>th</sup> November 2017).

resources and to develop the transmission systems notably in the remote northern parts of the region<sup>32</sup>.

Since 2003, thus, the ECOWAS Member States act under an agreement of long-term cooperation in the energy sector, based on the principle of complementarity and mutual benefits with a view to enhancing investment in the energy sector and developing power trade within the West African region. In 2003, the decision to implement a Regional Regulatory Authority to foster power exchanges and reduce power costs was also adopted. It was in this framework that the West African Regional Electricity Regulation Project was launched, as grant funding was needed for this regional initiative.

#### 5.1.2.Project overview

The West African Regional Electricity Regulation Project overall objective was "to foster regional integration in the energy sector in West Africa" through the facilitation of the construction and operation of regional power generation and transmission to optimize the use of natural resources in the region and the reduction of the vulnerability of energy systems by sharing risks and generate economies of scale.

The specific objective was "to establish the missing element for regional energy integration: a well-functioning regional regulatory authority" <sup>33</sup>. The ERERA project <sup>34</sup> thus supported the implementation of a specialized agency with the role of regional regulatory authority in the ECOWAS regional community: the ERERA (ECOWAS Regional Electricity Regulatory Authority). The ERERA is responsible to regulate regional cross border trade of electricity and electricity interconnections in West Africa.

The project was approved in 2009 and ended, as planned, in 2013. It was undertaken in two phases. The first phase of the project – from March 2006 to September 2009 - led to the creation and establishment of the ERERA. The second phase regarded the actual establishment of the ERERA and its initial regulatory activities.

The ERERA project was supported by the AFD for EUR 2.965.084 and by the ECOWAS for EUR 1.187.568, for a total Project cost of EUR 8.390.631.

The EU-AITF serves to deliver some technical assistance (TA), in form of grant, to let the ERERA implement its first regulatory activities: regional benchmarking of the electricity sector, assistance to OMVS (Senegal river basin commission) and OMVG (Gambia river basin commission) to improve cross-border electricity exchanges, assistance to national regulators for setting international exchange tariffs, and settlement of disputes, among other activities.

<sup>&</sup>lt;sup>32</sup> ECOWAS/AFD/ERERA (2009), Regional Regulation of the West African Power Sector Phase 2 Multiannual Activity Program and Budget: 2009 –2013. Accra.

<sup>&</sup>lt;sup>33</sup> Buhl-Nielsen E. et al. (2016), Evaluation of blending. Final report. Volume III – Methodological approach. Report prepared for the Evaluation Unit of the Directorate-General for International Cooperation and Development (European Commission). December 2016.

<sup>&</sup>lt;sup>34</sup> Information for this section is taken from <a href="http://www.eu-africa-infrastructure-tf.net/activities/grants/ecowas-electricity-regulation.htm">http://www.eu-africa-infrastructure-tf.net/activities/grants/ecowas-electricity-regulation.htm</a> (consulted the 10th November 2017) and from <a href="https://ec.europa.eu/europeaid/ecowas-electricity-regulation\_en">https://ec.europa.eu/europeaid/ecowas-electricity-regulation\_en</a> (consulted the 10th November 2017).

The EU-AITF grant was used by the ERERA to:

- create and install in Accra the ERERA;
- carry out many formal and informal consultations with stakeholders;
- annually organize a regulatory forum;
- issue reports on harmonization of contracts, third party access to the regional networks, benchmarking and market organization.

#### 5.1.3. Achieved results

According to the evaluation of blending projects carried out on behalf of the European Commission in December 2016<sup>35</sup>, the ERERA project achieved the planned outputs within the costs envisaged and in the planned timeframe: the establishment of the ERERA in Accra (Ghana) and some regulatory activities (e.g. assistance to Senegal river basin organizations to improve electricity exchanges and ECOWAS directive to have a legal framework on electricity exchanges).

Nonetheless, the relative outcomes were only partially achieved ("not to the extent initially envisaged") (p. 31): the "ERERA could not act - as yet - as per mandate due to the unwillingness of the national authorities to involve ERERA" (p.191, Annex B2)<sup>36</sup> to effectively increase regulation at the regional level and in their own countries. The lack of political commitment from ECOWAS Member States to this regional regulatory authority and the absence to date of an effective energy market which it was intended to regulate means that there is currently no strong regional regulatory activity in the West African energy sector and the regulation capacities at country level have only slightly increased.

The assessment also pointed to understand whether blending add some value to the initiative's financing scheme: the ERERA project was one of the two among the 25 cases examined by the assessment for which it was "not fully clear why this all-grant support was funded by a blending facility (ITF) versus the EU's (all-grant) regional envelope"(p.85)<sup>37</sup>. The donor grant funding was required to establish the regional regulatory authority and to implement its activities in the first years of operation, as the ECOWAS's budget or contributions from its Member States would have been difficult to collect.

To date, "ERERA do not have yet sustainable funding, being the operating cost need to be covered by donors and their projects financed by grants or loans" (p.754).

<sup>&</sup>lt;sup>35</sup> Buhl-Nielsen E. et al. (2016), Evaluation of blending. Final report. Volume III – Methodological approach. Report prepared for the Evaluation Unit of the Directorate-General for International Cooperation and Development (European Commission). December 2016.

<sup>&</sup>lt;sup>36</sup> Buhl-Nielsen E. et al. (2016), Evaluation of blending. Final report. Volume II – Evidence documents. Report prepared for the Evaluation Unit of the Directorate-General for International Cooperation and Development (European Commission). December 2016.

<sup>&</sup>lt;sup>37</sup> Ibidem.

## 5.2. The "Financing energy efficiency and renewable energy investments of private companies in West Africa" project

#### 5.2.1.Background

AFD developed a green finance label for companies as an innovative initiative to promote investments in energy and environmental services in developing countries: SUNREF (Sustainable Use of Natural Resources and Energy Financing) program.

AFD recognized that one of the biggest barriers to investments in sustainable energy supply in the South is access to finance for the small and medium enterprises of the sector. As a matter of fact, the sector is perceived as risky, so that local commercial banks often provide only short term loans and for high interest rates.

To address this issue, AFD's SUNREF program offers a credit facility through an innovative approach in promoting investments in energy and environmental services in developing countries: on the one hand, AFD provides its expertise and financial resources to attract investments in sectors and countries which have been to date poorly covered; on the other hand, local banks provides their knowledge of the local context, of local businesses and thus provide a network <sup>38</sup>. As well, partnerships are created with local institutions (e.g. professional associations, chambers of commerce, technical agencies) which have a specific mandate on environmental issues. The aim is to identify investments barriers, capitalize opportunities and inform the public power to develop public policies.

The approach is innovative as it combines financial incentives – providing local partner banks with long-term loans – and technical assistance – assisting banks in project financing and capacity building of companies investing in the "green economy".

Since 2006, when the program was launched, SUNREF implemented over 42 projects in 30 countries of operation (e.g. Egypt, Turkey, South Africa, Kenya, Nigeria and India), creating partnerships with around 70 local banks, for a over 2,5 billion of loans allocated.

According to the SUNREF website, the results and impacts of the initiative to date are positive: 14 million tons equivalent CO2 saved every year and over 1 billion KWh saved every year thanks to 300.000 KW of new green capacity created and 1,5 million MWh of green energy generated every year<sup>39</sup>.

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<sup>&</sup>lt;sup>38</sup> Agence Française de Développement (2015), Sunref, AFD's green finance label, July 2015, Paris.

<sup>&</sup>lt;sup>39</sup> Data from the SUNREF website: https://www.sunref.org/en/about/afds-green-finance-label/, consulted the 24<sup>th</sup> November 2017.

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Source: Agence Française de Développement (2015), « Sunref, AFD's green finance label », July 2015

Since 2014 a SUNREF West Africa was launched and will be at the center of our analysis. SUNREF West Africa has been welcomed by the ECOWAS Community for its catalytic role in the promotion of renewable energy and energy efficiency investments. This was also recognized through a financial innovation award offered to AFD by the participant of the ECOWAS Sustainable Energy Forum held in Dakar in October 2017. At the end of 2016, a SUNREF West Africa II was thus launched in Ghana and Nigeria as an extension for English speaking countries of the SUNREF West Africa I project.

#### **5.2.2.Project overview**

Developed by the AFD, in partnership with the Fond Français pour l'Environnement Mondial (FFEM) and with the EC financial support through the EU-African Infrastructure Trust Fund, it targets countries as Benin, Burkina Faso, Ivory Coast, Guinea-Bissau, Mali, Niger, Senegal and Togo, where population growth and urbanization have led to an increase in electricity demand that is hardly met.

The program is aimed at helping West African companies to seize the opportunities created by the ecological transition towards a low-carbon economy by:

- ensuring the promotion of renewable energy in the private sector, thus encouraging the private sector in supporting public policies,
- supporting the improvement of the private sector competitiveness and the creation of employment opportunities in the green economy;

• structuring a sustainable banking offer around the green economy, by engaging regional and local banks in financing more efficient use of energy.

Approved in 2013, the project was expected to end in 2017 but, to date, is still ongoing. The total project budget allocated in the frame of the blending facility is of EUR 45 million, with a facility contribution of EUR 6 million and an AFD contribution of EUR 30 million.

A portion of the EU-AITF investment grant (up to EUR 3 million) is used to fund incentive payments, on average equivalent to 10% of the loan amount. The rest of the investment grant is deployed in the project financing plan, through – for example – a contribution to feasibility studies.

The rest of the facility contribution is provided through technical assistance. The aim is to support project developers in creating bankable projects, in close coordination with local financial intermediaries. It is thus aimed to help identify sustainable energy investment opportunities, to assist the partner banks in achieving sustainable financing of identified investments, and to contribute to training and marketing campaigns. At the same time, local financial intermediaries are supported through technical assistance in developing methods to collect data and information from the financed enterprises (ex ante and ex post) in order to allow monitoring and evaluation.

The contribution of AFD is provided through technical assistance and support to local banks to identify a portfolio of potential eligible investments made by private companies. Selected projects are provided with a technical assistance programme and by a credit facility mechanism which softens market based conditions applied by commercial banks to loans.

Eligible projects are renewable energy projects (solar, wind, geothermal, hydraulics, biomass...) that experience difficulties in terms of their size and innovative character despite their technical viability. Projects must: ensure a reduction in energy consumption of at least 20% compared to standard technologies; have an internal rate of return of at least 8% calculated on the basis of energy savings achieved; have an internal rate of return of at least 20% of energy efficiency gains for investments involving an expansion of production capacity of at least 50% <sup>40</sup>.

#### 5.2.3. Achieved results

To date, the SUNREF West Africa project developed partnerships with two local banks, i.e ORAGROUP and Société Générale de Banque, and committed EUR 30 million of credit line for financing green investments in West Africa.

More than 50 projects have been identified that can benefit from technical assistance before being submitted to partner banks. Among these 50, some have been already selected by the banks to be financed. In December 2016, a second set of projects should have been approved for funding.

Other activities concern the marketing strategy and capacity building activities for local banks and potential project developers: three rounds of coaching have been implemented in all partner banks. Four banks have decided to join the SUNREF program in order to implement the EUR 30 million Loan Facility provided by AFD:

<sup>&</sup>lt;sup>40</sup> Sylla, O. (2016), Présentation du Programme SUNREF, le label finance verte de l'AFD, SUNREF Afrique de l'Ouest, 06/12/2016.

In September 2017, SUNREF is counting 20 active projects in Senegal, including 3 in energy efficiency, 9 in renewable energy and 8 in energy efficiency/renewable energy, in sectors such as services, agriculture and industry. In terms of impacts, it is 7.6 MWh/year in energy saving, 10.5 MWh/year in renewable energy production and 17.642 tCO<sup>2</sup> avoided.

In Togo, SUNREF financed 6 projects: 3 projects in the industrial sector of which one in the hotelier sector have already been financed and 3 other projects are ongoing applications for funding. According to the project manager that we interviewed, these projects not only have an economic, but also and foremost, a social impact: the financed initiatives provide employment opportunities and on a long term basis.

#### 6. Lessons learnt from the experience of blended PPPs in West Africa

#### 6.1. Leverage effect and the principle of additionality

Blended finance has been welcomed for its potential to leverage private resources that are additional to public funds and are aimed at reaching development objectives.

In both the analyzed case studies, grants have been used by AFD to finance soft components of investments projects, such as expertise and capacity building. Capacity building is indeed recognized as a core tool of blended finance, required to advance local markets by facilitating private investments in high-impact projects, by supplementing the capacity of investors and by lowering their transaction costs<sup>41</sup>.

In this sense, it is crucial to assess whether blending allowed to mobilize private resources that would otherwise not been invested and whether the public finance components added some value in terms of technical, social, environmental, innovative or of governance standards (the concept of additionality).

In the case of the ERERA project, as seen in section 5.1.3, the EC assessed that it was not fully clear whether the blending facility added some value compared with other forms of funding, such as the EU's regional envelope<sup>42</sup>. Nonetheless, a donor grant funding was required to establish the regional regulatory authority and to implement its activities in the first years of operation, as it would have been more difficult to collect funds from ECOWAS's Member States.

Additionally, ERERA operating costs are to date not covered by the ECOWAS Member States, neither the ERERA project seemed to succeed in leveraging funds from private investors. Indeed, to date, ERERA does not have sustainable funding "being the operating cost need to be covered by donors and their projects financed by grants or loans" (p.754).

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<sup>&</sup>lt;sup>41</sup> World Economic Forum (2015), Blended Finance Vol. 1: a primer for development finance and philanthropic funders. Geneva, September 2015.

<sup>&</sup>lt;sup>42</sup> Buhl-Nielsen E. et al. (2016), Evaluation of blending. Final report. Volume II – Evidence documents. Report prepared for the Evaluation Unit of the Directorate-General for International Cooperation and Development (European Commission). December 2016.

The case of SUNREF West Africa seems to have more leveraging potentials: grants used for technical assistance and capacity building (e.g. support for project design) aim to stimulate the local demand for financing energy projects.

Further, AFD provides intermediate loans to local banks and support them in developing their offer around the green economy. This way, supply is stimulated and local projects implemented by SMEs, which would be too small to be financed directly by the AFD, can be reached. The improved access to capital for MSMEs is expected to increase the efficiency of local markets, to enhance local enterprises financial viability and to improve their risk-return profile.

The SUNREF West Africa has not yet been specifically assessed with reference to its leverage effect. The only available data are from the previous SUNREF regional projects, for which a leverage potential of around 15 has been calculated.

#### **6.2.** Development impact assessment: aid effectiveness

The ERERA project has a regional relevance, aimed at contributing to solve the electrical energy issue in West Africa by giving support to the creation of a regional institution.

Despite the creation of ERERA as a specialized agency with the role of regional regulatory authority in the ECOWAS regional community, there is currently no strong regional regulatory activity in the West African energy sector and the regulation capacities at country level have only slightly increased.

This can be due, at least partially, to a poorly defined theory of change in the project design documentation. In the Activities Programme 2009-2013 there is indeed a summary of expected results, deliverables and deadlines, but there is no logical framework or theory of change <sup>43</sup>. Moreover, the envisaged activities and results of the project are not explicitly linked to poverty reduction objectives.

The SUNREF West Africa project, on the other hand, has clearer development objectives of energy efficiency and green energy development. The ambition is to obtain a reduction of more than 22 thousand tons of Co2 equivalent per year; to save more than 20 GWh/year and to produce almost 17 GWh/year of green energy<sup>44</sup>. According to one of our informants, at the very beginning of the project, a feasibility study and a market analysis ware conducted to identify opportunities and also define criteria for project selection. Financial intermediaries were then expected to collect data from the financed initiatives (ex ante and ex post) in order to allow monitoring and evaluation.

#### **6.3.** Participatory approach and ownership by developing countries

The ERERA project was focused on improving the efficiency of the energy sector, which is one of the key sector challenges in the region. The project fully aligned with the political priorities of ECOWAS: the establishment of the ERERA as a specialized institution of ECOWAS was decided in January 2008 in the framework of the Energy Protocol and the West African Power Pool (WAPP) Programme by the Member States through the Supplementary Act A/SA.2/08.

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<sup>&</sup>lt;sup>43</sup> CEDEAO/AFD/ARREC (2009), Régulation Régionale du Secteur de l'Electricité Ouest Africain Programme d'activités et Budget Pluriannuel Phase 2 : 2009 –2013. Accra, Ghana.

<sup>44</sup> https://www.sunref.org/afriquedelouest/a-propos/decouvrir-sunref/

The contribution to policy reforms was assessed as positive when evaluated by the European Commission. The role of the "AFD's in-house expertise in regional infrastructure and familiarity with the energy issues affecting West Africa" was assessed as crucial. The TA provided was effective in building an electricity and energy policy at national and regional levels, as "it created the conditions for a regional electricity market, supporting national regulators and others" (p.52).

However, it was reported that "ERERA suffers essentially from lack of political commitment from ECOWAS Member States to this regional regulatory authority and from the absence to date of an effective energy market which it would be intended to regulate". Because of this lack of participation of Member States, in December 2016, the "ERERA could not act – as yet - as per mandate due to the unwillingness of the national authorities to involve ERERA" (p.191, Annex B2)<sup>45</sup>.

The case of SUNREF West Africa, which rather operates on a micro-level, is different. In the SUNREF programs local banks are the key private sector actors and other institutional partners, such as local authorities, play a role in facilitating the implementation and coordination of the technical assistance program. The SUNREF program has been welcomed by the ECOWAS Member States for its development potentialities and the catalytic role that it may play in promoting renewable energy and energy efficiency investments. On the occasion of the ECOWAS Sustainable Energy Forum held from 11 to 13 October in Dakar, AFD received the financial innovation award for its SUNREF program.

#### 6.4. Support to the MSMEs and occupational impact

Unemployment is one of the main obstacles for development. Considering that MSMEs creates a lot of employment opportunities (two thirds of all formal jobs in developing countries and 80% in low income countries 46), sustaining their creation and development is crucial. The local bank supply is often insufficient and inadequate in providing credits to small and medium enterprises, especially on the long term. Recurring to other sources of funding for investments becomes thus necessary to ensure a complement to the local bank supply.

Moreover, one of the most reported problems among the West African local banks is the lack of transparency and of skills due to the family structures of most of the SMEs, which makes it more risky to grant loans. At the same time, local banks report a lack of technical expertise to face with these financing problems<sup>47</sup>.

To face these challenges, the SUNREF West Africa project seems to have an effective design to encourage and sustain investments in the renewable energy and energy efficiency sector for two main reasons: first, it engages regional and local banks in financing them and in developing a green credit line; second, it provides technical assistance to the partner banks in identifying the investment

<sup>47</sup> Diamantis E., Gonnet, M. and Chevreau A. (2010), Mesures pour favoriser et garantir l'investissement en Méditerranée. IPEMED, Paris.

<sup>&</sup>lt;sup>45</sup> Buhl-Nielsen E. et al. (2016), Evaluation of blending. Final report. Volume II – Evidence documents. Report prepared for the Evaluation Unit of the Directorate-General for International Cooperation and Development (European Commission). December 2016.

<sup>&</sup>lt;sup>46</sup> EDFI – European Development Finance Institutions, ASBL (2016), Investing to create jobs, boost growth and fight poverty. Brussels.

opportunity, setting up and monitoring the project, selecting the most appropriate technologies and monitoring the environmental and social impacts of the investment.

According to one of the interviewees, the added value of this objective is twofold: on the one hand, to create a sustainable market in the financing of the sector; on the other hand, to face the growing import of foreign product – especially from China – in the region. As a consequence, the project seems to have a positive potential in terms of creation of employment opportunities, also on the long term.

Reached enterprises which submitted a project to obtain credit are generally – according to one of the interviewees – big and medium enterprises and industries that are sufficiently big to be exposed to the international competitiveness or which face with energy efficiency issues; exporting companies; firms in the tertiary sector (tourism in particular) which have a greater sensibility for the environmental issues. Financed projects are nonetheless small, since the objectives are (i) to promote initiatives that could be easily replicated; (ii) to finance initiatives that otherwise would have not been financed; (iii) to sustain those enterprises with the more high-performing technologies; (iv) to ensure long term loans (minimum of 4-5 years and until 10-12 years). To reach very small and artisanal enterprises is more complicated because of informality and financial exclusion. Nonetheless, the SUNREF label, according to one of our informants, aims to encourage partner banks to target these customer segments in further and more mature phases of the program.

#### 7. Conclusions

This study aimed at shedding some light on good and bad practices in the implementation of blended PPPs for the energy sector through the analysis of specific case studies.

The selected case studies are implemented in West Africa in the frame of the EU-AITF and under the leading role of the AFD. They are: i) the ERERA project for the constitution of the ECOWAS Electricity Regulation Authority and ii) the "Financing energy efficiency and renewable energy investments of private companies in West Africa" project.

We analyzed these programs focusing on some key aspects that are crucial for the success of blended PPPs: the leverage effect and the respect of the principle of additionality in blending finance, the development impact; the levels of participation and ownership of local partners, the support to MSMEs and the occupational impact.

In both the analyzed case studies, grants have been used by AFD to finance soft components of investments projects, such as expertise and capacity building. Capacity building is a core tool of blended finance, useful to advance local markets by facilitating private investments in high-impact projects, by supplementing the capacity of investors and by lowering their transaction costs. In this sense, while it is not fully clear whether the blending facility of the ERERA project added some value compared to other forms of funding and to date the ERERA operating costs are not covered and still dependent on donors' grants, the SUNREF West Africa program seems to have more potential in leveraging resources. SUNREF is indeed aimed at stimulating the local demand for financing green energy projects by providing intermediate loans to local banks and by supporting them in developing their offer around green economy. Moreover, it provides technical assistance to

the partner banks in identifying investment opportunities, setting up and monitoring the project, selecting the most appropriate technologies and monitoring the environmental and social impacts of the investment.

As a consequence, SUNREF West Africa has been welcomed by local actors as a program able to have significant development impacts. First, by financing renewable energy and energy efficiency projects, it should lead to a reduction of GHG emissions, energy saving and an increased production of green energy. Second, by financing the sector, improving access to capital and sustaining the local banks as well as the MSMEs, it is expected to have a strong potential in terms of efficiency and creation of employment opportunities, also in the long run. In particular, SUNREF is aimed at finance initiatives that are generally sufficiently small to be replicable, which are proposed by enterprises with high-performing technologies and which would have not financed otherwise.

The developmental impacts of the ERERA project are less clear. Despite the project has a regional relevance in West Africa and was fully aligned with the political priorities of the ECOWAS community, the created specialized agency is still not having a strong regulatory activity to improve the efficiency of the regional energy sector and the regulation capacities at country level have only slightly increased. This might mainly be due to a lack of political commitment from ECOWAS Member States to this regional regulatory authority, as well as to the absence to date of an effective energy market which it would be intended to regulate. As a consequence, ERERA cannot act – at least for the time being - as per mandate.