

MAKING RENEWABLE ENERGY THE MAIN DRIVER OF AFRICAN GROWTH

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Building African economies on renewable energies would be competitive compared to other solutions by promoting economies of scale and offering substantial advantages in terms of sustainable development, local value creation, energy security and environmental viability. However, this unprecedented transformation will not come into being on its own.

The ideal time to develop renewables

Investing in renewables energies in Africa is financially viable in a global equation that integrates environment preservation, social and ethical inclusion of local populations, with a long-term view of public-private partnerships. Due to its vast solar and hydroelectric potential, as well as bioenergy resources, wind turbines, geothermal and marine regions, Africa is able to adopt modern renewables directly. Moreover, technologies are evolving rapidly and renewables are increasingly competitive: thus, these past years, the average price of photovoltaic modules has fallen by more than 60%, falling below the \$1/watt threshold and reaching \$0.5 in some technological circumstances.

Nowadays, products based on renewable energies are the cheapest solution for off-grid electrification or via mini-networks in isolated areas that could be connected to the continental network in a second phase. African governments are voting in renewable energies to power their economies with sustainable growth. Numerous recent ministerial statements testify to the strong political commitment and the African decision-makers' long-term vision by setting-up institutions for the management of renewables and specific plans on a regional and national level. Renewable energy resources are abundant, demand is rising, technological costs are falling and political will has never been so strong. It is the perfect time to develop renewable energies in Africa.

Differed profitability

If we take a closer look at renewables in Africa, the balance sheet is positively impressive. Yet, its rapid development faces the competitiveness of renewable energy projects. Renewables are often seen as costly, mainly due to high investment costs. However, they are already competitive in isolated networks and, in many cases, reached equal average costs in power generation. This is the case for storage energies like hydroelectricity and geothermal, but also for intermittent energy resources like wind turbines and solar panels. Renewables have a very capitalistic structure of costs: development costs (connected to the evaluation of the resource) and investment costs are high, yet, operating costs are very low. Hence, these projects have differed profitability. The assessment of their financial interest compared to fossil fuels has to be done on the long-term (15 to 20 years) and following appropriate criteria: updated average kWh unit production costs for hydroelectricity and geothermal projects.

A strong political signal

To support the emergence of such projects, the African countries must first realize the potential, competitiveness and benefits of renewables. They also have to equip themselves with upstream planning strategies by integrating renewables in their master plan. Most African countries have set an objective to integrate renewables in their energy mix in 10 to 15 years.

It is a strong political sign, yet, it is not enough: objectives have to translate in their ability to produce and manage the selection of the first projects and priority sites to develop. Planning has to take stock of technical constraints that are linked to the injection of intermittent energies (wind turbines, solar panels) in the network. It will be all the more relevant if it will be founded on a renewable energies' mapping showing the countries' potential. Both in the Maghreb region and all of Africa, there is currently a true will for mid-term and long-term planning for renewables. This planning enables governments to manage the plurality of private initiatives better and to go from a supply approach to a demand approach.

Renewable energy potential in Africa is tremendous

For example, the African hydroelectric potential is estimated to 1844 TWh (IRENA, 2012), meaning 18 times more than it was in 2009. About half of this potential is considered to be financially viable (an additional potential capacity of 100GW to 150GW). Wind resources are also high and workable, even if they are not evenly distributed on the continent: 87% of high-quality resources are located on coastal areas in the East and the South. It is one of the best resources in the world. Solar resources are abundant in Africa and it is more evenly distributed on the continent. Supported by adapted public policies and by the continuous fall of production costs, photovoltaic systems could play a major role in Africa's energy supply by 2030, with estimations of 15GW to 62GW (EREC/Greenpeace, 2010). Finally, geothermal resources are also quite promising with an estimated potential of 7GW to 15GW (AU-RGP, 2010), but this resources is still rather limited to the countries of the Great Rift Valley (Eastern Africa). These tremendous potentials are still widely untapped.

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THE CO-DEVELOPMENT & INVESTMENT CONSORTIUM FOR AFRICA INITIATIVE

A recent initiative that received the political support of the United States, the Co-Development & Investment Consortium is currently working on managing the arrival of a new wave of American companies in Africa investing and funding development projects in the private sector in order to support the African companies' growth and meet the needs of untapped markets, such as the renewable energies market.

The Co-Development & Investment Consortium (CDIC) was created by a group of highly qualified African, European and American personalities whose connections, geographical influence and expertise in business, finance, economic development and management would be difficult to match. Thus, the CDIC provides the expertise of two of its American managers, David Wilhelm, former Campaign Director for Bill Clinton, President of the Democratic Party Committee, Founder of Woodland Venture and Hecate Energy, and Michael Granger, President of Africa Global Sourcing, Founder of Ark Capital and Capital Access Forum within "Power Africa", a 7 billion dollar initiative of the US government. They teamed up with two European managers, Louis-Lyonel Voiron, President of For a World in Transition, General Manager of Voiron Holdings Ltd and Jean-Claude Fontanive, Co-founder of Emedio, expert in international relations North-South, Europe-Africa and co-development with shared add-values

Creating funding structures

In order to raise the capital needed to fund projects in Africa, the CDIC's priority is to implement funding infrastructure in the private sector. The first stage is to provide these economies venture capital vehicles that are the bases of these infrastructures. Investment structures meet the expectations and the needs that have been clearly defined: they are dynamically managed in a long-term financial development perspective and have to focus on "green" investments such as renewables and agriculture (may it be for the improvement of practices or the supply chain). Furthermore, the CDIC will advise some emerging high-growth economies on the best ways to promote their entrepreneurial resources, developing public-private partnerships and create the funding infrastructures needed for renewable energy projects, while keeping in sight the objective of highlighting their potential in the 21st century. This will mainly cover the implementation of local structures and partnerships with Europe and the United States to access capitalistic resources that will create the investment vehicles large enough to meet their funding needs.

Relying on local resources

Finally, the CDIC will rely on these developing economies' core expertise to attract investors and commercial partners. It will of course utilise traditional funding methods for development such as foundations and international financial institutions (IFI), but it will also seek innovative ways to attract capital like setting-up incentive measures for multinational companies and institutional investors by designing the vehicles that they are familiar with. This approach has the advantage of being incentive and also having the traditional guarantees that they are used to. These investment funds will be presented to key international co-investors in order for them to take part in the long-term development of Africa

in a quality of initiators and leaders of dedicated funds to which they will supply additional resources and operational support. On the other hand, these funds will focus on export activities. In countries where natural resources are abundant, the effort will be to attract investors who will contribute to strengthening the local value chain and the emergence of an export transformation industry. The CDIC, already present in the Maghreb region, in Western Africa and Central Africa, will use its network in developed countries to leverage the expertise and guarantee the technological transfers needed for these projects to be successful in their countries. It will also coordinate operational assistance funds which will be used in parallel to investment funds to provide necessary expertise, wherever they would come from, to develop local skills.

A historical occasion

This collective operation's expected result is to considerably increase the capital of African economies to support the transformation of ethical, sustainable and inclusive "projects" into leading perennial achievements. The development of industries and local skills and the creation of jobs will be its indicators. In this perspective, the CDIC will focus on sustainable industries and will try to solve current problems that hinder African investments such as climate change, technological transfers or the influence of China. This impressive call to action is pointing to a "New frontier".

For all of us, whether we are living in Africa, Europe or North America, this is an exciting perspective and is a rare historical occasion that we will not be able to experience twice in our lifetime. We are very proud to be part of this fascinating and historical approach in order to set free initiatives and direct investments to help Africa to take the next step and build a better future for its populations.

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CREATING THE CONDITIONS FOR A LARGE-SCALE DEVELOPMENT OF RENEWABLES IN AFRICA

Governments have to implement the mechanisms that are necessary to attract private investments in the African energy sector. The simplification and standardisation of procedures play a major role in the public policies' success in order to promote a trade-friendly environment. In the energy sector, up- grading the governance structures, operational performance, the financial viability of national companies, securing foreign investors' access to the financial market are essential to the large-scale development of renewable energies.

Supporting local entrepreneurship

Local entrepreneurs will be essential to guarantee African citizens' access to electricity, fuel and green technologies by 2030. They are already contributing to meet the urban and rural demands of energy products and services. Leading companies and entrepreneurs of the renewable energy sector have to be supported by governments and their business models aided and reproduced. Potential markets are tremendous. For example, solar domestic heaters and photovoltaic panels can improve the energy service provided to millions of African clients.

Integrating networks

Enhancing the integration of networks and regional markets enables economies of scale and connects the abounding and cheap renewables to urban growth centres. A fully integrates energy market can save billions of dollars for an African country in annual operational costs and electric grid development. Regional planning, the harmonisation of norms and procedures, fair trade conditions and the coordination of energy pools are essential to manage a successful regional integration.

Guaranteeing universal access

Off-grid solutions are particularly important in Africa and need tailor-made public policies and innovative financial mechanisms to accelerate their implementation. Even though they only represent a small portion of the global demand, off-grid solutions enable the development of productive uses and improve household incomes. They are fundamental in guaranteeing universal access to energy by 2030 and improving living conditions for millions of African living in rural areas.

Raising local capital

In addition to foreign investors, local funding is crucial in establishing the emergence of local markets. Commercial banks and financial intermediaries have to be informed better on renewable technologies and the projects' profiles. Public funding via African governments and/or international or regional development banks could reduce the commercial banks' image of financial risk.