

Annex 7 Initiative 4: Access to sustainable energy

Description of the initiative and its current state

The initiative

“Traditional, centralized energy supply, such as grid electricity, only reaches a small fragment of the African population, and will not do so in many years to come. The technologies for decentralised renewable energy production are well developed and are becoming more reliable and profitable with fluctuating fossil fuel prices. And most businesses and communities in rural Africa are willing to pay for energy services if these were available, affordable and closer to international standards.”¹

“The energy initiative will stimulate and expand the emerging energy market in Africa for SMEs as producers, distributors, suppliers and consumers of climate-friendly energy. The initiative will build upon positive experience with decentralised and renewable energy systems in Africa, where technologies are becoming increasingly reliable, affordable and profitable. With this initiative the Africa Commission wants to draw global attention to the huge untapped potential for renewable and climate friendly energy in Africa. Investment in renewable energy production and energy efficiency can potentially contribute considerably to sustainable growth and job creation in African countries”.²

The initiative – which is still being implemented – has the development objective of supporting sustainable private-sector led economic growth in African countries through the efficient utilization of presently untapped clean energy resources.

The Sustainable Energy Fund for Africa was originally established as a joint initiative of the Africa Commission and the African Development Bank through a technical cooperation agreement between the African Development Bank and the Ministry of Foreign Affairs dated 11th September 2011. Denmark provided DKK 300 million for the establishment and operation of Sustainable Energy Fund for Africa. Initially, Sustainable Energy Fund for Africa had two funding windows, but a third was added when the project was expanded to become a multi-donor trust fund. This occurred with the initiative being financed by the UK (GBP 10 million) and the USA (USD 20 million). In addition, Italy has recently provided EUR 7.5 million.

The Sustainable Energy Fund for Africa has been designed to operate under three components (with Ministry of Foreign Affairs supporting Components 1 and 2):

- Component I: (Project Preparation Grants) seeks to support Bank lending to renewable energy and energy efficiency projects by financing the sponsors’ cost of project preparation from pre-feasibility to project closure. The window provides cost-sharing grants and technical assistance to private project developers/promoters to facilitate pre-investment activities for renewable energy and energy

The Africa Commission’s initiative for access to sustainable energy

“Together with the African Development Bank the Africa Commission will address the African energy deficit. The initiative will stimulate and expand the emerging market for sustainable energy, primarily in rural areas, by strengthening the role of small and medium-sized enterprises in delivery and productive use of energy from local and renewable energy sources. It will build upon positive experiences with decentralised energy systems in Africa and contribute to the Africa-EU Energy Partnership.”

¹ Draft description of the Africa Commission’s initiatives, 30th January 2009.

² Growth and Employment: Visions at Work. Progress Report of the Africa Commission. July 2010.

efficiency projects. Grant funding targets development activities for projects with total capital investments in the range of USD 30 million to USD 200 million³.

- Component II: (Equity Investments) will provide equity finance and technical assistance for project preparation and business operations through investment in a private equity fund. The Sustainable Energy Fund for Africa co-sponsored the Africa Renewable Energy Fund, a pan-African Private Equity Fund solely focused on small/medium (5-50 Megawatts) independent power projects from solar, wind, biomass, hydro as well as some geothermal and stranded gas technologies. Investment decisions are the sole responsibility of Africa Renewable Energy Fund's Fund Manager – Berkeley Energy Africa Ltd – subject to the terms of the Africa Renewable Energy Fund agreements, with the Sustainable Energy Fund for Africa Secretariat's role mainly as providing general oversight to fund implementation as well as collaboration on project identification.⁴
- Component III: (Public Sector Activities) will support activities, especially those of the public sector, that create an enabling environment for private investments in sustainable energy in Africa. This component also focuses on mini-grids, with earmarked support from DFID.

Progress

Progress has been slow on Component 1; with respect to Component 2, the Sustainable Energy Fund for Africa has disbursed all their funds to the Africa Renewable Energy Fund, but the Renewable Energy Fund has only committed 40% of resources and only disbursed 16% for a “brown field” project.

Component 1 suffered slow progress due to a range of issues (project selection, problems faced by private sector beneficiaries when utilising African Development Bank procurement processes, internal African Development Bank resource management and mobilising African Development Bank task managers to make use of the facility). According to the Mid-term Review team for Sustainable Energy Fund for Africa “project screening, lead times and follow up has improved significantly in the last three months”⁵. To sum up the conclusions of the mid-term review “project implementation is moving at a slow pace, but in the right direction” and that there is a need to “bring in new [human] resources and restructure Sustainable Energy Fund for Africa's operations to focus on implementation”.⁶

The summary of progress on Component 1 is:

Project preparation – a project example

A grant of USD 420,000 was awarded to Jumeme Rural Power Supply Ltd to support the development of a portfolio of independent solar-hybrid mini-grids in rural growth centers in Tanzania. Jumeme Rural Power Supply is a local joint venture comprised of three partners: Inensus Gmbh, specialists in mini-grid development and operation; Terra Projects, a renewable energy project developer; and St. Augustine University of Tanzania in Mwanza. The grant will finance the costs related to technical studies, lenders due diligence support, and legal and financial advisory services. The Jumeme project will contribute to expanding rural electrification and increase access to energy services – using mainly clean solar energy – in some targeted 16 villages in the first phase, which includes 82,000 people, 11,000 households, 2,600 businesses, 42 public offices, 32 schools, 12 health centres and 77 religious buildings. It is also expected that a minimum of 500 new businesses will be created following the implementation of the first phase of the project.

Source: SEFA Annual Report 2014

³ The range was originally USD 30-75 million, but this was expanded when the multi-donor agreement was entered into.

⁴ Financing private projects in Sub-Saharan Africa sized between USD 10-80 million across mature technologies (such as solar, wind, hydro, and geothermal) only.

⁵ Presentation of the Mid-term Review team to African Development Bank 29th January 2016.

⁶ Ibid.

- No of Projects approved 13
- No of Projects cancelled 2
- No of Projects active 3
- Funds committed 49%
- Funds disbursed 3%
- Fund uncommitted 48%⁷

Component 2 – the Africa Renewable Energy Fund is headquartered in Nairobi and operated by a fund manager, Berkeley Energy Africa Ltd. It has raised its planned maximum investment capital of USD200 million with funding from Sustainable Energy Fund for Africa, the European Investment Bank, the Global Energy Efficiency and Renewable Energy Fund and other investors, including the West African Development Bank, ECOWAS Bank for Investment and Development, Nederlandse Financierings-Maatschappij voor Ontwikkelingslanden (FMO), Calvert Investments, CDC Group, the Belgian Investment Company for Developing Countries, Österreichische Entwicklungsbank AG (Development Bank of Austria), Wallace Global Fund, Sonen Capital, Berkeley Energy, and the African Biofuel and Renewable Energy Company. The Fund has committed 24% of its available resources, disbursed 16% and 60% remains uncommitted⁸. According to the mid-term review team “Berkeley Energy adds value through professional upstream project preparation, project management and financial modelling”.⁹

Relevance of the initiative to the recommendations of the Africa Commission

This initiative was designed to address two recommendations of the Africa Commission (Nos. 18 and 19). As can be seen the initiative fits the recommendations closely and is thus highly relevant to what the Africa Commission was seeking to achieve (despite the relatively indirect causal relationship to addressing youth unemployment).

Initiative	Related Africa Commission policy recommendations
Access to Sustainable Energy	R18: Increase production, distribution and productive use of electricity and other forms of energy in a cost-effective and climate friendly manner. This need has to be addressed at the regional, national and local levels. In communities with limited access to energy, the need can be met by an efficient utilisation of local and renewable energy sources.
	R19: The private sector, in particular SMEs, must play an important role in the provision of energy services at the local level. Their potential should be utilised by stimulating and expanding the market for decentralised,

⁷ Ibid.

⁸ Ibid.

⁹ Ibid.

Equity investment– a project example

In October 2014, the Africa Renewable Energy Fund signed an agreement to invest USD 20 million into the first 20 MW phase of the Corbetti Geothermal Project. Located in central Ethiopia, the project has an estimated potential production of at least 500 MW. Subsequent phases of 50 MW each are envisioned under future project expansion pending success of Phase one.

The Fund is the majority shareholder and is working with experienced partners, Reykjavik Geothermal (also a shareholder) and Iceland Drilling, an experienced international geothermal drilling contractor.

The project is expected to diversify Ethiopia’s dependence on hydro generation which has been susceptible to droughts in the past. Given the potential geothermal resource, it is likely that this project will have a catalytic effect and lead to the development of other private sector-driven geothermal projects on the market.

Source: SEFA Annual Report 2014.

Initiative	Related Africa Commission policy recommendations
	renewable energy services.

Effectiveness of achievement to date

The original Project Document contains a logical framework analysis (LFA) matrix at annex 1. The June 2012 Inception Review Report concluded – correctly – that “the LFA indicators are mostly concerned with disbursement of funds and number of projects commissioned. The LFA has not provided any details on the expected impacts, e.g. job creation, and the LFA is, as it stands, maybe not the best tool for measuring the impact of the Sustainable Energy Fund for Africa interventions.” However, the September 2011 Technical Cooperation Agreement between the Ministry of Foreign Affairs and African Development Bank on Sustainable Energy Fund for Africa makes no reference to the project document as being binding on African Development Bank and the logical framework matrix was considered by African Development Bank to be an Ministry of Foreign Affairs internal document rather than being binding on the Bank.¹⁰

This situation changed with the September 2014 signing of the Multi-Donor Arrangement for Sustainable Energy Fund for Africa: Article V (Reporting and Consultation) stated that “the Bank will furnish all donors with an Implementation Plan and a Performance Monitoring Framework”. The May 2015 Oversight Committee called for the “next Sustainable Energy Fund for Africa Annual Report to also report on progress towards Sustainable Energy Fund for Africa Key Performance Indicators (KPIs) and the Sustainable Energy Fund for Africa *Results Based Logical Framework*”¹¹.

A Results-based Logical Framework was prepared in October 2015 and, in the view of both the Mid-term Review Team and the Africa Commission Evaluation Team, is well designed to capture the performance of the Sustainable Energy Fund for Africa (including Component 2). No reports based on the new results-based Logical Framework have yet been made and therefore actual outcomes/impact cannot be assessed at this time.

However, according to the Mid-term Review Team “expected results, based on the results framework, show that additional MW is anticipated to exceed targets. Job creation targets are unlikely to be met directly – although jobs will indirectly be created through access to more reliable energy”¹². Given that the World Bank estimates¹³ that African manufacturing enterprises experience power outages on average 56 days per year and that informal enterprises can lose up to 20% of sales revenue where back-up generation is limited, improving reliability of supply will support both enterprise and job creation. More cost effective energy solutions¹⁴ will improve enterprise competitiveness and thus increase both enterprise numbers and employment.

Scaling up and sustainability

The Sustainable Energy Fund for Africa was an initiative of the Africa Commission and African Development Bank that has attracted significant direct additional investment from the UK, the USA and Italy (which contributed EUR 7.5 million at the end of 2015) whilst the establishment of the Africa

¹⁰ Discussions with Spokespersons for Resource Mobilization and External Finance Department and Quality Assurance and Results Department, African Development Bank.

¹¹ Sustainable Energy Fund for Africa Oversight Committee meeting minutes Friday, May 29th, 2015.

¹² Presentation of the Mid-term Review team to African Development Bank 29th January 2016.

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<http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/AFRICAEXT/0,,contentMDK:21935594~pagePK:146736~piPK:146830~theSitePK:258644,00.html>

¹⁴ Power tariffs in most parts of the developing world fall in the range of USD 0.04 to USD 0.08 per kilowatt-hour. However, in Sub-Saharan Africa, the average tariff is USD 0.13 per kilowatt-hour. In countries dependent on diesel-based systems, tariffs are higher still. Given poor reliability, many firms operate their own diesel generators at two to three times the cost with attendant environmental costs.

Renewable Energy Fund has resulted in significant additional investment by both development finance institutions and the private sector in renewable energy in Africa.

With respect to sustainability, the Sustainable Energy Fund for Africa is the African Development Bank's only dedicated renewable energy instrument and, provided it operates efficiently in developing its project pipeline from approval through implementation, it should attract further donor finance and its future as a trust fund should be assured. The Sustainable Energy Fund for Africa is well integrated into global initiatives:

- The African Energy Ministers' meeting of 16th November 2012 "call[s] upon the African Development Bank to support the African SE4All opt-in countries, through the Sustainable Energy Fund for Africa (Sustainable Energy Fund for Africa)"
- The Sustainable Energy Fund for Africa features in the UN's Sustainable Energy for All (SE4All) Initiative documentation as one of the key renewable energy and energy efficiency instruments in Africa.
- The Sustainable Energy Fund for Africa is well placed to play a pivotal role in the new President of African Development Bank's New Deal on Energy for Africa and the Transformative Partnership on Energy for Africa¹⁵. In the President's speech he highlighted that "Africa has enormous energy potential, especially for renewable energy – almost unlimited solar potential (10 TW), abundant hydro resources (350 GW), wind (110 GW) and geothermal energy sources (15 GW)." According to the President, "the Bank plans to invest USD12 billion in the energy sector over the next five years and leverage USD 40-50 billion into the energy sector. The Bank has already worked with the African Ministerial Conference on the Environment and the African Union and the G7 (especially Germany and France) to develop and launch the Africa Renewable Energy Initiative at the COP 21 in Paris. The Africa Renewable Energy Initiative expects to deliver 10 GW of electricity by 2020 and 300 GW by 2030 – with a commitment of USD 10 billion from G7 countries."

The sustainability of the private sector projects initiated by the Sustainable Energy Fund for Africa depends upon their ongoing profitability – but the high level of due diligence research and technical support they receive maximises their survival prospects. The Africa Renewable Energy Fund has likely long-term sustainability because of its anticipated return on funds: a judgement shared by the private sector investors and development finance institutions, which have invested in it.

Conclusions

"Together with the African Development Bank the Africa Commission will address the African energy deficit. The initiative will stimulate and expand the emerging market for sustainable energy, primarily in rural areas, by strengthening the role of small and medium-sized enterprises in delivery and productive use of energy from local and renewable energy sources." This statement in the Africa Commission's July 2010 progress report seems – at first sight – over ambitious in its scope.

However, the Africa Commission have established through the Sustainable Energy Fund for Africa an important structure to achieve those goals (and those of the subsequent New Deal on Energy for Africa). It has raised interest and investment from other donors, from development finance institutions and private sector investors in investing in small-scale renewable energy. The upscaling of Sustainable Energy Fund for Africa to a multi-donor arrangement brought in, not just new finance, but a new and more directed agreement requiring more effective management and control and more stringent oversight. The Sustainable Energy Fund for Africa has experienced some teething problems

¹⁵ <http://www.afdb.org/en/news-and-events/article/remarks-delivered-by-akinwumi-a-adesina-president-of-the-african-development-bank-at-the-reception-on-the-new-deal-on-energy-for-africa-and-the-launch-of-the-transformative-partnership-on-energy-for-africa-davos-switzerland-january-20-2016-15322/>

and still needs to improve its operational efficiency, but it is an achievement of which the Africa Commission can be justly satisfied.