



## **Opportunities for the diversification of the energy matrix : *the role of Financial Institutions (FI)***

Geneva  
April 20,  
2010



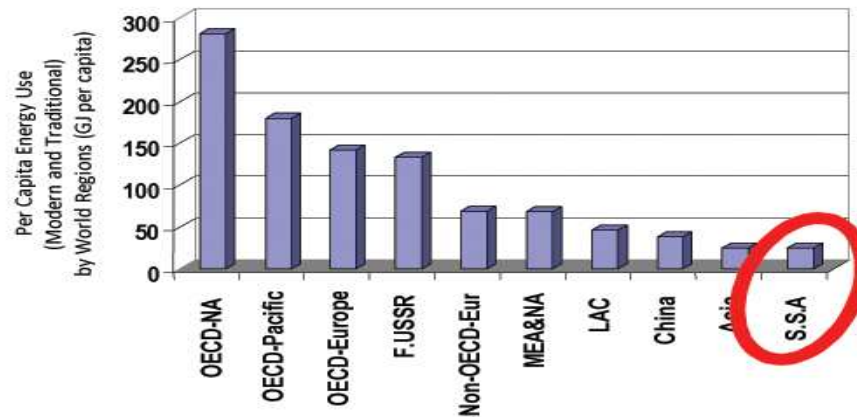
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## *Renewable Energy context in Africa : Challenges & opportunities*

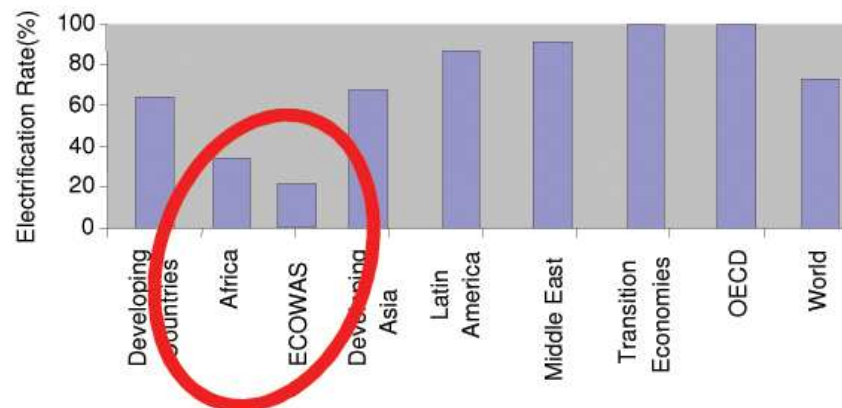
# I. Energy Situation in Africa



- ▶ More than 70% of the population of sub-Saharan Africa has no access to electricity and more than 70% of the final energy consumption in sub-Saharan Africa is based on wood energy with all its consequence for the environment.



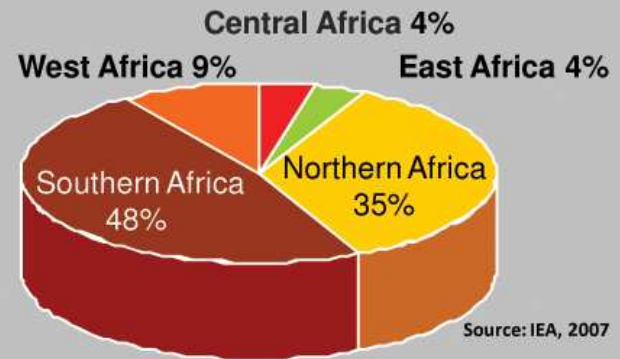
- ▶ 1 of 4 people in Africa has access to electricity
- ▶ Electrification rates are expected to increase from 38% currently to 58% by 2030



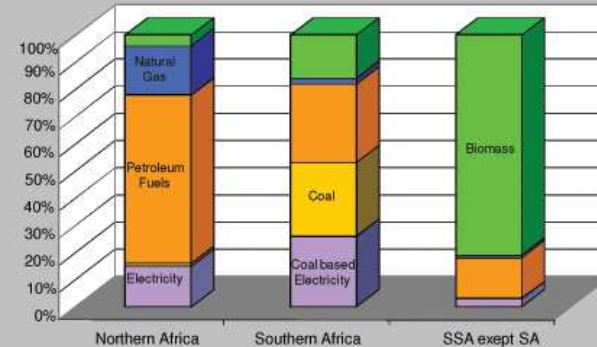
# II. Energy in use in Africa



Electricity Generation in Africa by Sub-Regions



Energy Mix by African Sub-Regions

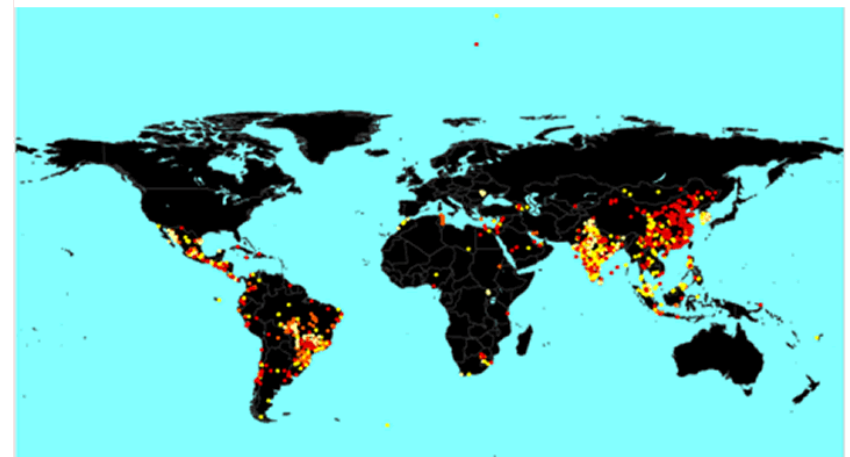


# III. Investment context in Africa



- ▶ Of the 70.9 billion \$ invested in sustainable energy in 2006 globally, only 99 million was invested in Africa .
- ▶ It is estimated that Sub-Saharan Africa spends 20 to 30 percent of its export earnings to pay for petroleum, although Africa has the lowest per-capita energy consumption in the world
- ▶ In 2007, there was no recorded venture capital investment in Africa and asset finance flows reached only US\$1.3 billion, most of which into biofuels and geothermal; this compares with global investment in clean energy of close to US\$150 billion in the same year.

CDM Project activities



## IV. Opportunities in RE in Africa



- ▶ **Africa is endowed with substantial renewable energy resources, but just as in the specific case of the electricity sector, the Continent has been relatively slow at harnessing this potential. The indicators on the extent of the gap between potential and implementation are quite striking :**
  - More than 12% of the global hydropower potential is located in Sub-Saharan Africa but less than 10% of the 1.1 GW capacity is exploited;
  - More than 9,000 MW could be produced through geothermal power but few countries are even exploiting this source of energy.
  - Most African countries enjoy about 325 days of sunlight per year but solar power remains marginal in most countries. Average sunshine potential in West Africa represents 5 to 6 kWh/m<sup>2</sup> per day;
  - 9m/s of average wind speed per 80m;
  - Total forest cover of 650 million hectares accounting for approximately 17% of the world's total forest cover;
  - Of the 650 millions hectares of land very suitable for agriculture only 200 million hectares are currently being utilized
  - With favourable agro-climatic conditions and available arable land (in-cluding semi-arid lands which are suitable for crops like Jatropha) Africa can become a global superpower in the supply of biofuels but most countries do not even have a specific national biofuels policy or consumption targets.

# V. Barriers for RET in Africa



- ▶ **Financial barriers (high perceived risks);**
  - Weak domestic public investment
  - Low foreign direct investment
  - Low private sector participation
  - Limited international public risk capital instruments/funds
  - Limited financial expertise and sector experience locally
  
- ▶ **Lack of skilled human resources;**
  
- ▶ **institutional and regulatory hurdles;**
  
- ▶ **lack of awareness and information sharing;**
  
- ▶ **general awareness of new technologies.**

# VI. Solutions for RET in Africa



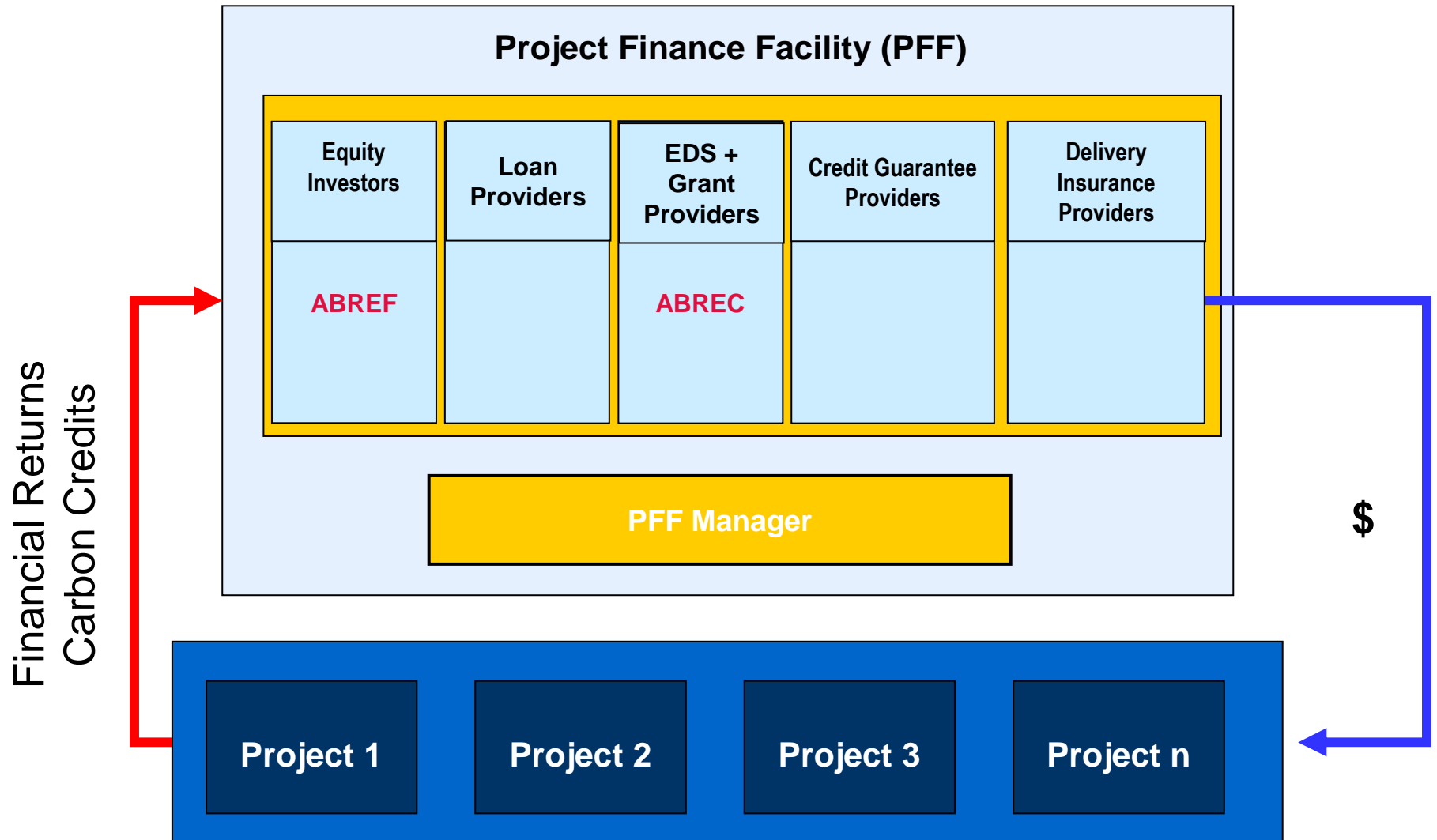
- ▶ **Provide entrepreneurial development services (including assistance with feasibility studies and business plan writing);**
- ▶ **Provide developers with a unique opportunity to receive both seed capital financing and to qualify for expansion financing or even through the external financing network;**
- ▶ **Disseminate information about country policy frameworks and investment opportunities; encourage regional policy harmonization; and conduct analytical and diagnostic national studies ;**
- ▶ **Create innovative public-private risk capital instruments**
- ▶ **Promote private sector participation**
- ▶ **Raise awareness of opportunities and challenges**
- ▶ **Organize technical seminars to ensure that entrepreneurs, financial firms and policymakers are informed of best practices in technical and financial areas. These seminars will be conducted in close collaboration with local and international centres of excellence and educational institutions.**



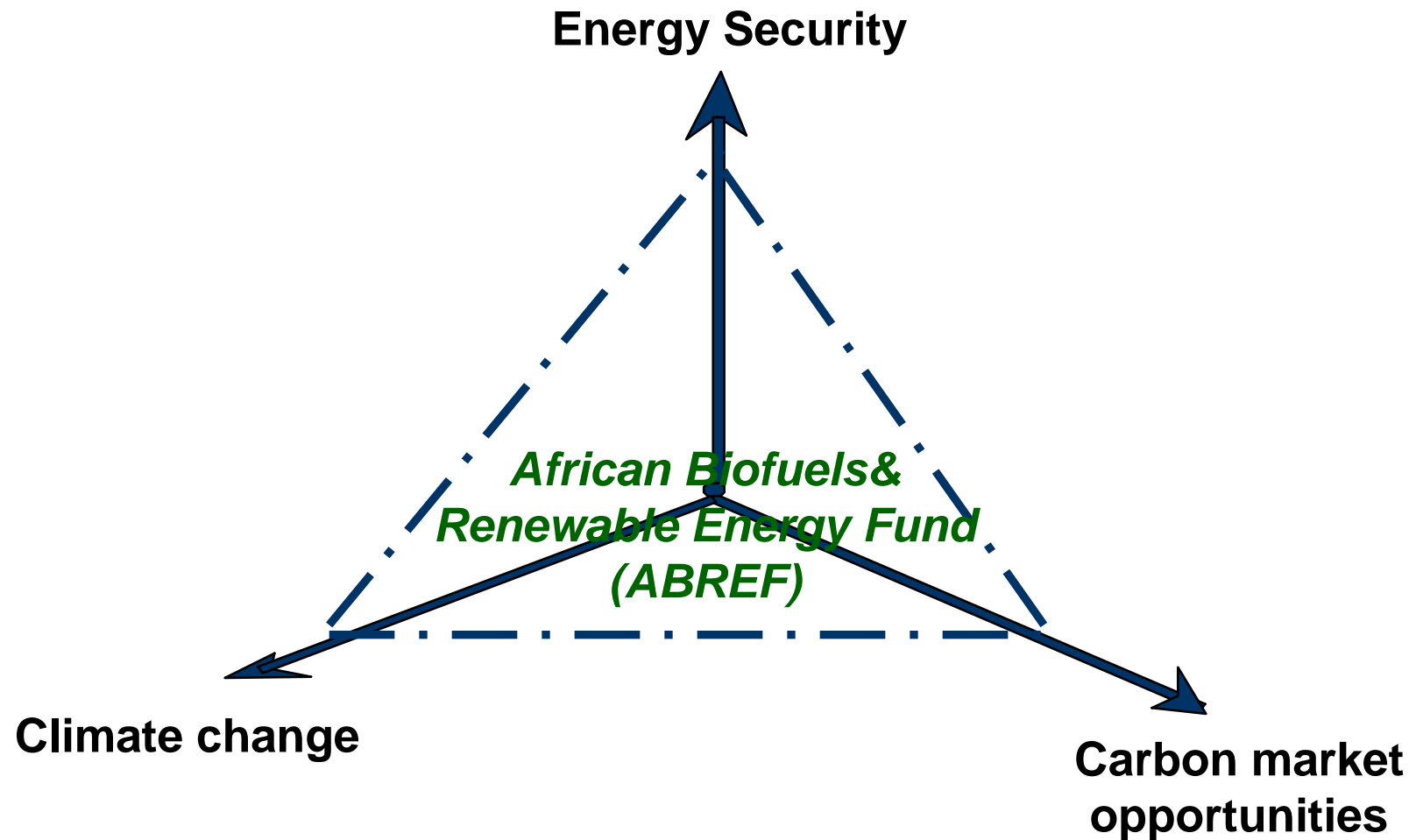
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*The role of Financial  
Institutions : ABREF*

# I. A CDM Project Finance Facility



## II. Three pillars of ABREF



# III. Our Vision



*To become in long term a leader Fund in Clean Energy development focused on African region the Fund will aim to :*

- ▶ Reinforce the African energy and economy independence
- ▶ Profit from clean energy market
- ▶ Face the challenges resulted from global warming

# IV. Objectives



*Fund will :*

- ▶ **Contribute to the development of the biofuels and renewable energy industry in the African regions.**
- ▶ **Provide investors with superior returns through investments in biofuels and renewable energy projects which generate Certified Emission Reductions (CERs).**

# V. ACE TAF : a Strategic Role



*The African Clean Energy Technical Assistance Facility (ACE TAF) would mainly be responsible for :*

- ▶ **identification of projects;**
- ▶ **feasibility studies of projects;**
- ▶ **capacity building;**
- ▶ **preparation of documents and registration of CDM projects;**
- ▶ **transfer of technology;**
- ▶ **any activity that would make the ACE TAF a centre of excellence and innovation, and a hub of research and development in renewable energies.**

## VI. Capital and Investment Conditions of the Fund



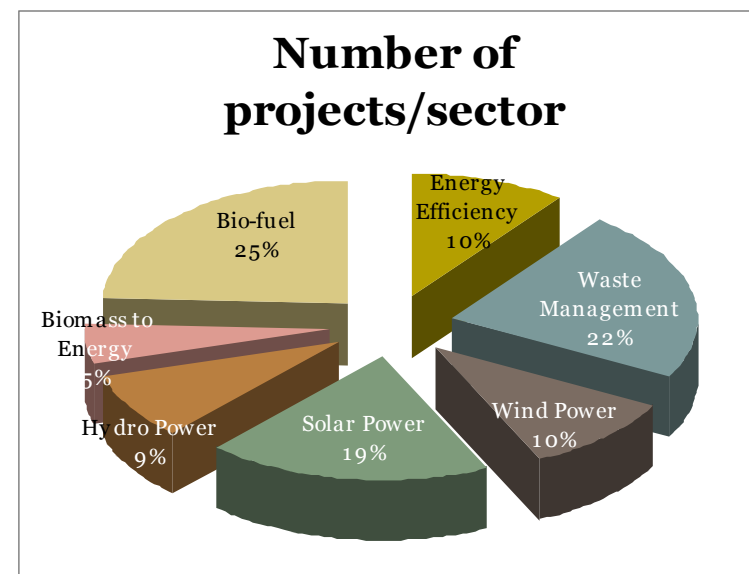
*The key information in respect of ABREF is as follows:*

- ▶ **Capital:** USD1 billion
- ▶ **Duration:** 10 years
- ▶ **« First Close »:** January 2010
- ▶ **Class of shares:** Class A (for private investors with a return on Investment of 25%)  
Class B (for bilateral development partners with a return on investment of 5%)
- ▶ **Target market:** The entire African continent
- ▶ **Target investments:** all bio-fuel and renewable energy projects
- ▶ **Period of investment:** 3 years
- ▶ **Restrictions/country:** not more than 15% of funds can be invested in one country
- ▶ **Restriction/investment :** not more than 15% of funds can be invested in one single project

# VII. Pipeline of projects



SECTORS	NUMBER OF PROJECTS
Biofuels	14
Biomass	03
Energy efficiency	06
Hydro Power	05
Solar Power	11
Waste management	13
Wind Power	06
<b>TOTAL</b>	<b>58</b>





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*Study Cases*

# Study cases



COUNTRY	PROJECT NAME	SECTOR
CÔTE D'IVOIRE	Municipal Waste to energy	Waste Management & Energy Efficiency
GHANA	Distribution of CFLs as replacement for ICLs	Energy Efficiency & Biofuel project from Jatropha plant
GUINEA	Solar Street lighting in Conakry & other seven cities (112km of lighting)	Solar power
	6 mini hydro power plants with access to electricity of 34% to its population (162 GWh/year)	Hydro power
MALI	Rural solar lighting (18 power stations for 28,600 households)	Solar power
	3 mini hydro power plant covering energy needs of 6 villages with 3,500 households (21.5 GWh/year)	Hydro power
NIGERIA	Grid electricity generation from bagasse surplus	Biofuel from Sugar sorghum
SIERRA LEONE	Urban Solar Street lighting (250km)	Solar power



## ***Head of Project***

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**THANK YOU FOR YOUR KIND ATTENTION**