



## *Renewable Energy Opportunity in Africa & the Sustainable Energy Fund for Africa (SEFA)*

**Accordo di Parigi: attività di cooperazione e opportunità per l'Italia in Africa**

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Chief Climate Finance Officer

Rome, 10 May 2016





# Content

- ▶ African Energy Sector Challenges and Opportunities
- ▶ AfDB's Engagement in the Energy Sector
- ▶ SEFA Overview

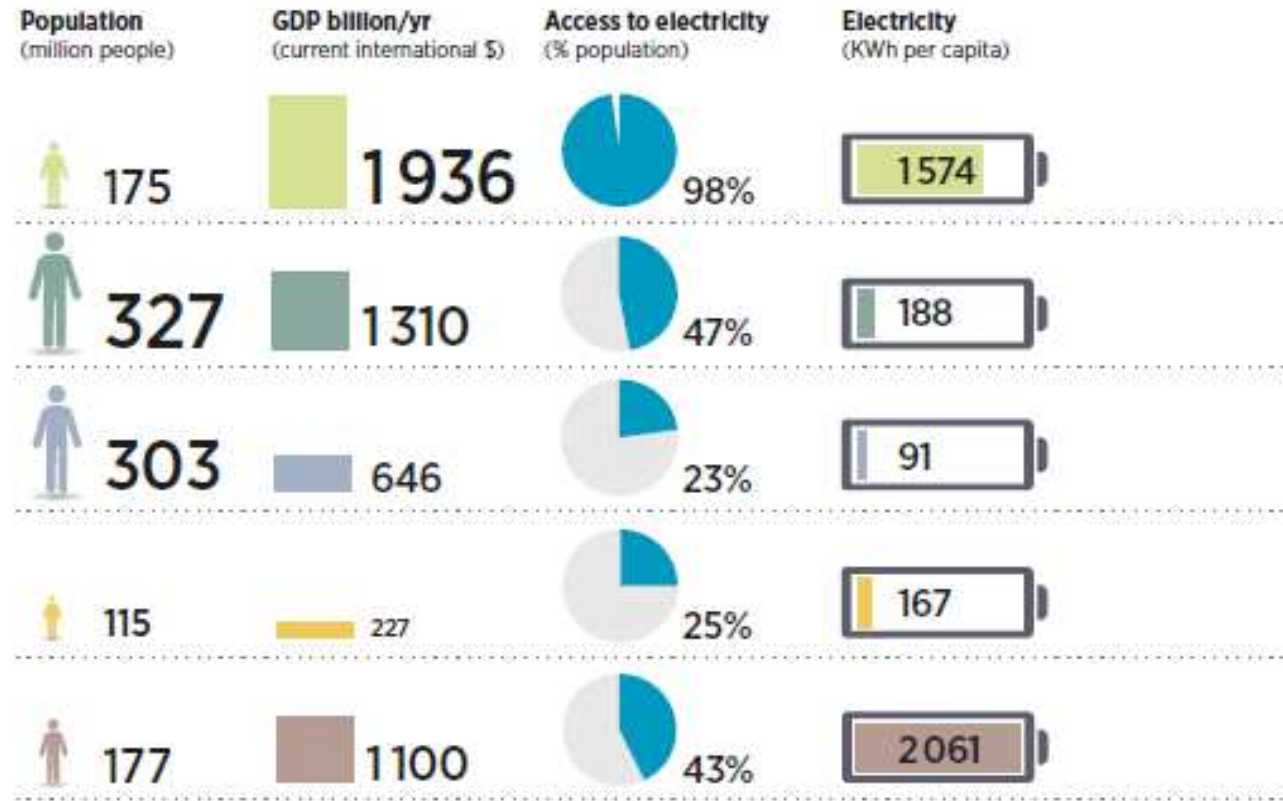
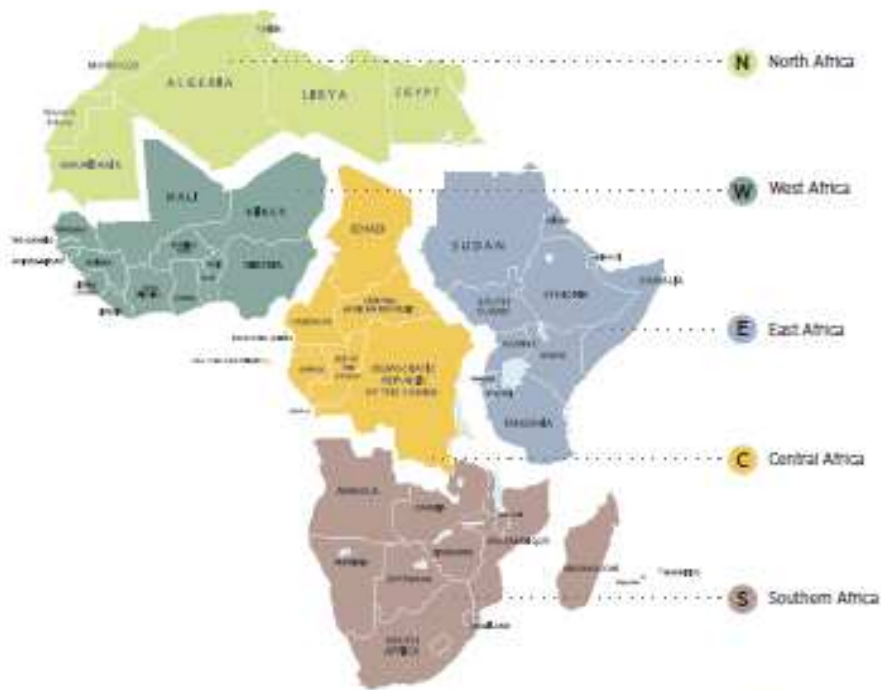


# Overview of Challenges and Opportunities in the Energy Sector in Africa

# Energy challenge in Africa

Africa's energy poverty is pervasive with the lowest access and consumption rates in the world...

Figure 1 | Africa's energy landscape: Present\*



\*Note: statistics refer to 2013, except for access to electricity which refers to 2012.

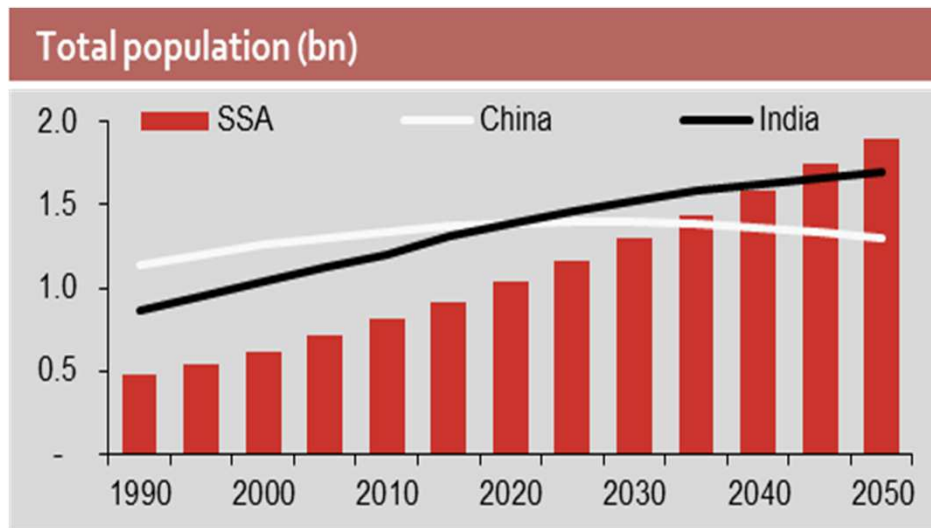
Source: IRENA Africa 2030 Remap, 2014

# Energy challenge in Africa

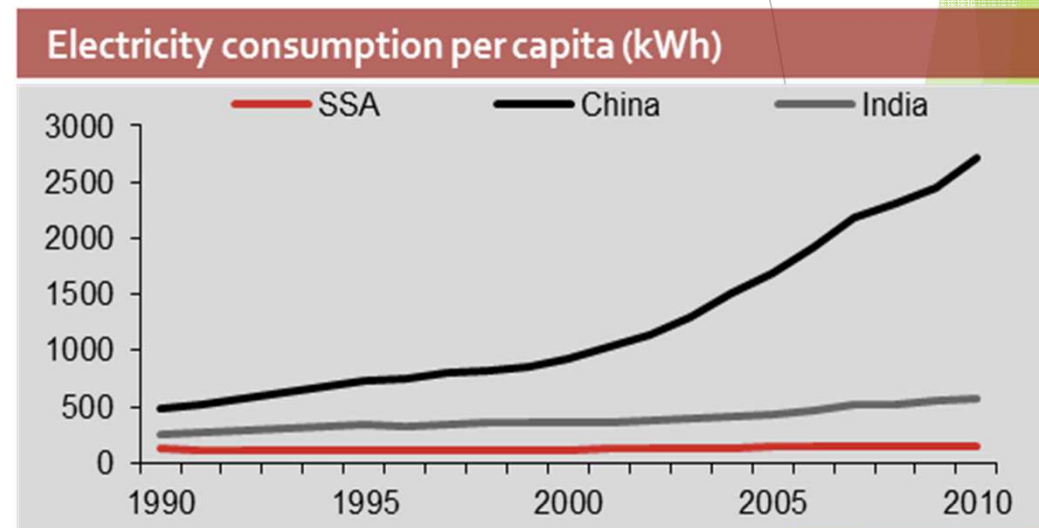
Around 600 million people in SSA lack access to electricity and 2/3 of countries experience chronic power shortages

African Population growing fast, increasingly affluent and urbanized...

...but no growth in electricity consumption due to lack of supply!



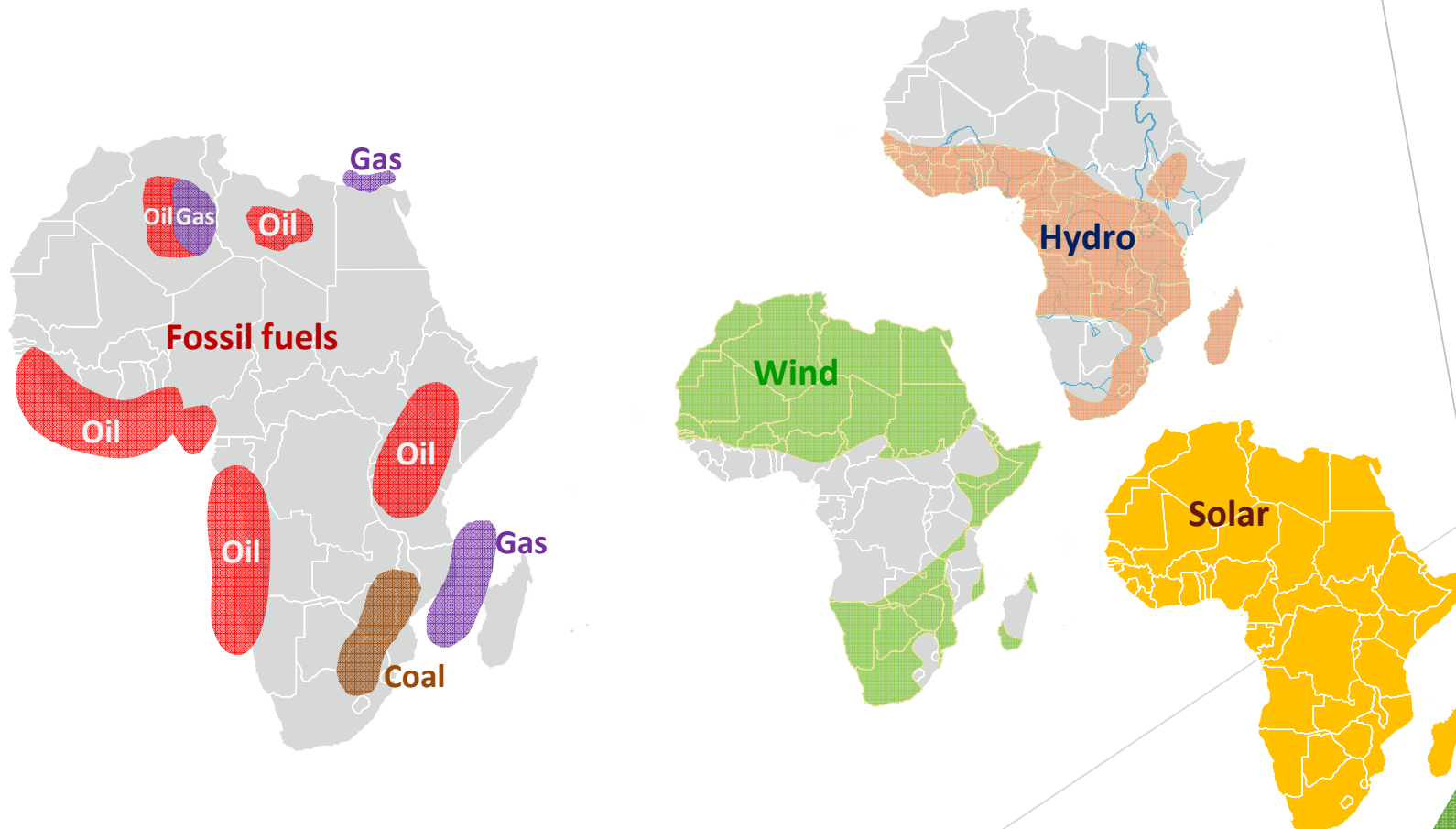
Source: WB, 2013; UN, 2013



Source: WB, 2013; EIA, 2013

# Energy challenge in Africa

Paradoxically, Africa is one of the richest continents in energy resources!



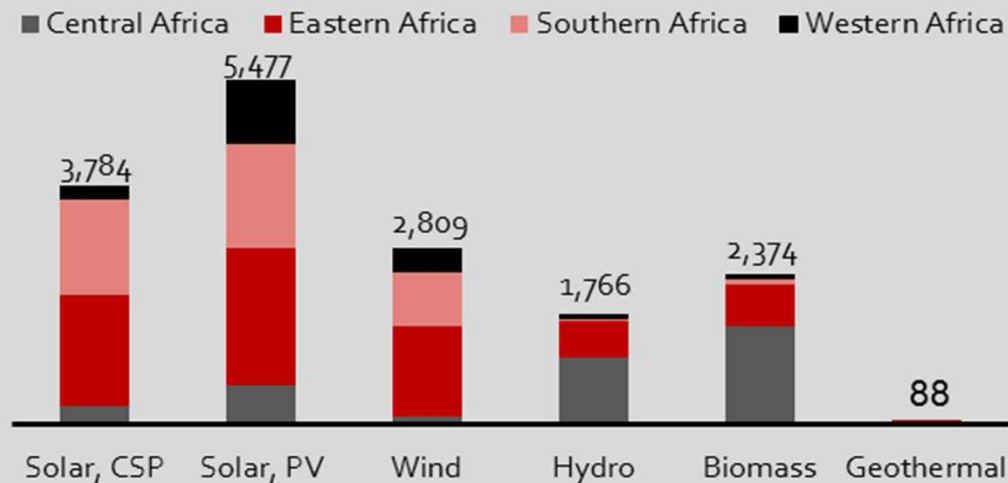
# Market Opportunity

Renewable resources are abundant in Africa, scalable and suitable for grid, and increasingly attractive in price

Africa is endowed with so some of the best renewable resources globally...

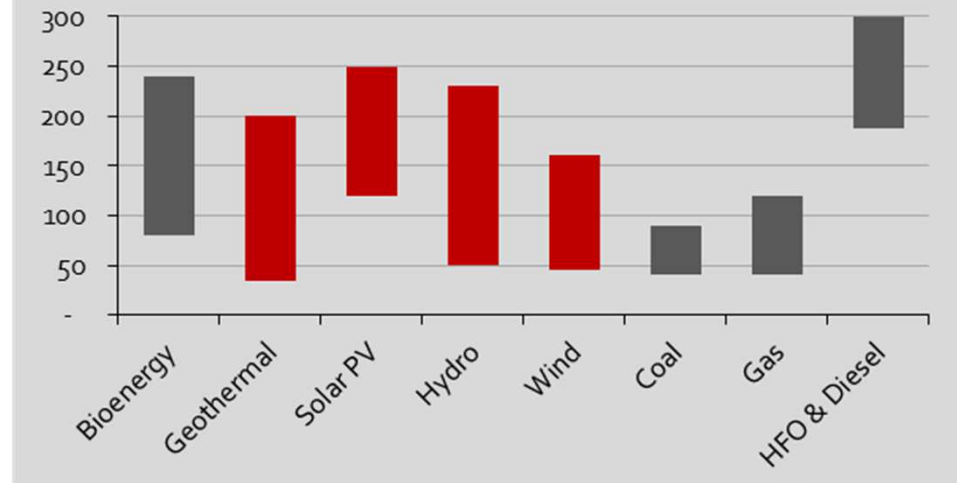
...and can compete with conventional technologies!

Renewables potential in SSA\* (TWh)



Source: IRENA, 2011

Cost of generating electricity (US\$/MWh)



Source: IEA, 2013



# Market Opportunity

Enabling environment is increasingly attractive for private investors

Several SSA countries introducing RE policy incentives...

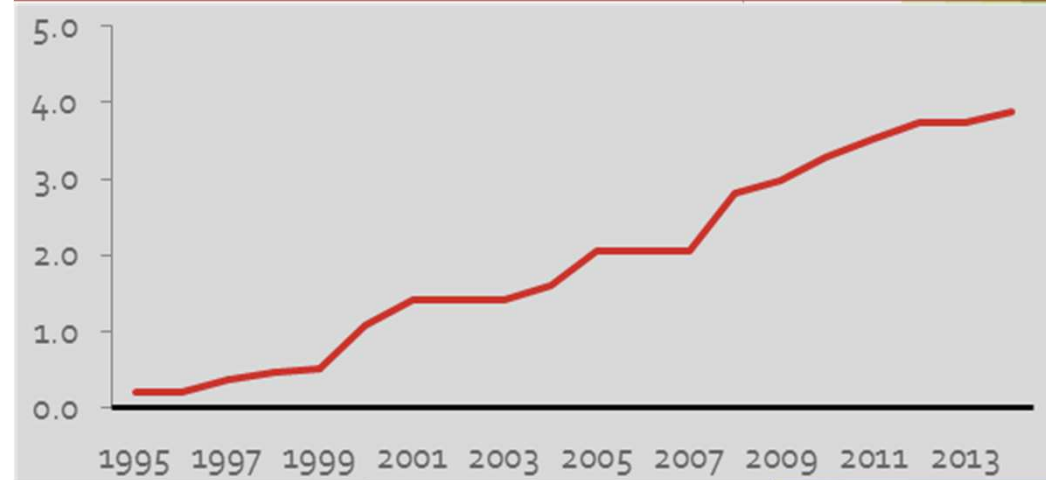
...and reforming electricity sectors to enable private sector participation

Renewable energy policies in selected countries

	RE target	FiT	Capital subsidy	Other tax reductions	Public financing
Cameroon				x	
Cote D'Ivoire	x			x	
Ethiopia	x			x	x
Ghana	x	x	x		x
Kenya	x	x		x	
Malawi	x			x	
Mozambique	x				x
Rwanda	x	x		x	x
Senegal	x	x		x	x
Tanzania		x	x	x	
Togo				x	
Uganda	x	x	x	x	x
Zambia			x	x	

Source: REN21, 2013

IPP installed capacity (GW)







# African Development Bank (AfDB) role in the Energy Sector

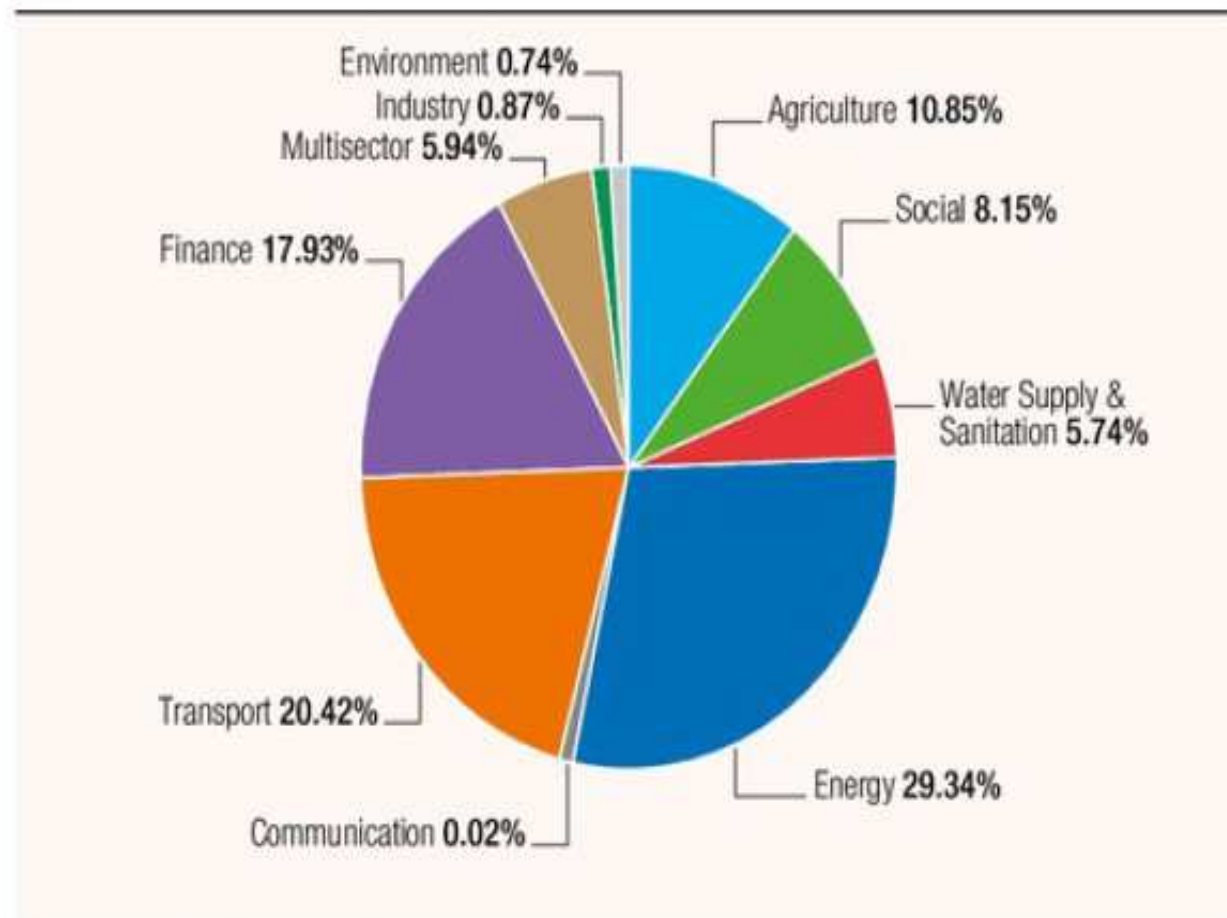




## AfDB Loan and Grant Approvals by Sector, 2014

In 2014, the Bank approved \$7.3 billion in loans and grants across all sectors

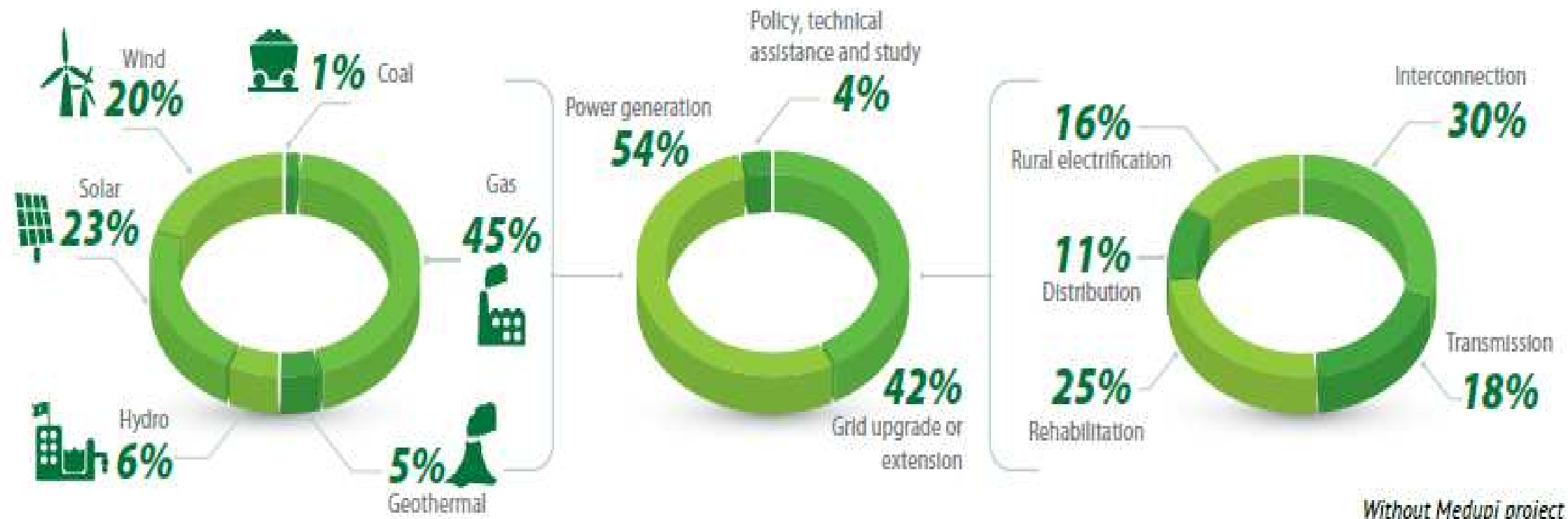
Energy is the single biggest sector representing close to 30% of the total lending volume



Source: AfDB Statistics Department.

# Public / PPP Energy Portfolio by Area of Intervention

Over half of the Bank financing in the power sector goes to a diverse portfolio of conventional and renewable technologies (generation)



*Without Medupi project*



# AfDB's Energy Portfolio

- ▶ **Utility-scale generation projects** e.g. 300 MW Lake Turkana Wind Power Project, Menegai steam field development in Kenya and 500 MW Ouarzazate CSP in Morocco, and Azito Gas-to-Power expansion in Côte d'Ivoire.
- ▶ **Regional interconnections** e.g. Côte d'Ivoire - Liberia - Sierra Leone - Guinea / Ethiopia - Kenya
- ▶ **Investments in private equity and debt funds** and more recently financial intermediaries
- ▶ **Energy sector governance** either as a focused operation, e.g. Angola, or as part of a wider program, e.g. Tanzania.
- ▶ **Sector advisory work** eg. Mozambique for gas sector development and small-scale renewables.





# Role of AfDB in renewables project finance

AfDB one of the largest financiers of clean energy in the continent...  
....with ca US\$7 billion commitments in the 2007-2014 period (BNEF)

The screenshot shows the African Development Bank Group website. At the top left are the logos for the African Development Bank Group and the Sustainable Energy Fund for Africa. The main header includes the AfDB logo and the tagline "Building today, a better Africa tomorrow". A search bar is located on the right. The navigation menu includes: Home, Countries, Topics & Sectors, Projects & Operations, News & Events, Documents, Knowledge, About us, Contact us, and Careers. The main content area features a large article titled "AfDB, largest financier of clean energy on the African continent with \$4.3 billion in energy projects". The article text states: "Between 2011 and 2012, the AfDB increased by a staggering 92% its investment in clean energy in Africa, according to a new report by Bloomberg New Energy Finance. The publication, which looks at the clean energy transactions of 26 national and multilateral development banks from 2007 to 2012, found the AfDB to be the largest source of clean energy financing for the African continent." To the right of the article is a large image of a wind farm. Below the article is a sidebar with three smaller news items: "Sierra Leone - Transitioning Towards Green Growth", "ADF 13 - \$7.3 billion for 2014 to 2016", and "Dakar-Diamniadio Toll Highway Officially Open".

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**AfDB, largest financier of clean energy on the African continent with \$4.3 billion in energy projects**

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**AfDB, largest financier of clean energy on the African continent**

Sierra Leone - Transitioning Towards Green Growth

ADF 13 - \$7.3 billion for 2014 to 2016

Dakar-Diamniadio Toll Highway Officially Open

# Climate Finance Facilities

AfDB as the  
implementing  
entity of global  
facilities



**Climate Investment  
Funds (CIF)** -  
administered by the  
World Bank



**Global Environment  
Facility (GEF)** -  
financial mechanism  
UNFCCC



**Green Climate Fund  
(GCF)** - financial  
mechanism UNFCCC

Bilateral/  
Multi-donor  
trust funds  
administered  
by the AfDB



**Sustainable  
Energy Fund for  
Africa (SEFA)**



**Africa Climate  
Change Fund (ACCF)**



SUSTAINABLE  
ENERGY FOR ALL

**Bank hosting the  
SE4ALL Africa Hub**



# Complementarity between Climate Finance Instruments

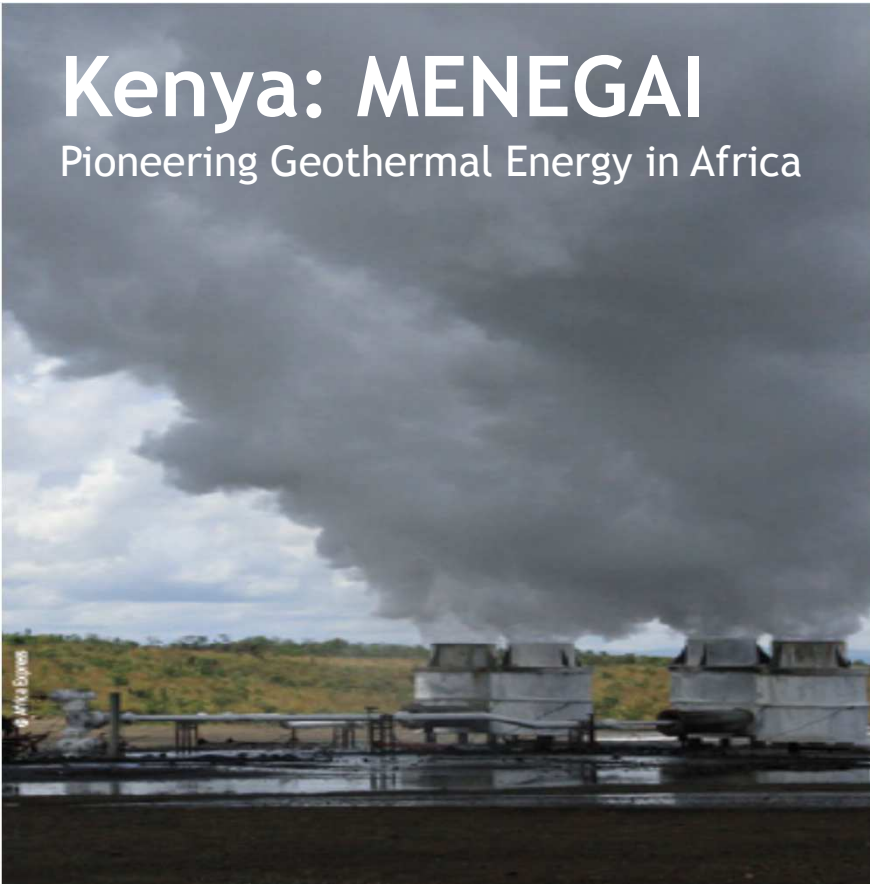


	Project Identification	Project Development	Project Finance
Screening / Advisory			
Dev't Capital / Equity			
Concessional Debt			
Senior Debt			

## Project Highlights - Geothermal

### Kenya: MENEAI

Pioneering Geothermal Energy in Africa



- ▶ **Financing:** AfDB - USD 121 million; SREP - USD 25 million
- ❑ Procurement for IPP projects (capacity of approx. **400 MW**) is currently underway, and expected to result in over USD 500 million of private sector investment.
- ❑ Produce the level of energy equivalent to the needs of **500,000 households and 300,000 small businesses**.
- ❑ Avoid **2 million tons of CO2 emissions** per annum.
- ❑ **Boost** geothermal development in East Africa - AfDB currently working with Djibouti, Tanzania and Comoros.



## Project Highlight - Solar CSP

### Morocco: OUARZAZATE | Africa's Largest CSP Plant



- ▶ AfDB financing: USD 240 million
- ▶ With the 160 MW CSP Plant (Phase I):
  - ❑ Annual **GHG reductions of 0.250 MT CO<sub>2</sub>e** per year (6 million tons).
  - ❑ **Creation of 800 jobs** between 2012 and 2014 and **50 permanent jobs** thereafter.
  - ❑ **Increase in the share of renewable energy** in Morocco's energy supply by 2020



## Towards a “New Deal on Energy for Africa”

**AfDB President Adesina set the ambition and launches a grand partnership to tackle the energy supply deficit in Africa by 2025: The New Deal for Energy for Africa**

***“We must light up and power Africa. Energy is the engine that powers economies”***

***“We must unlock Africa’s energy potential - both conventional and renewable”***

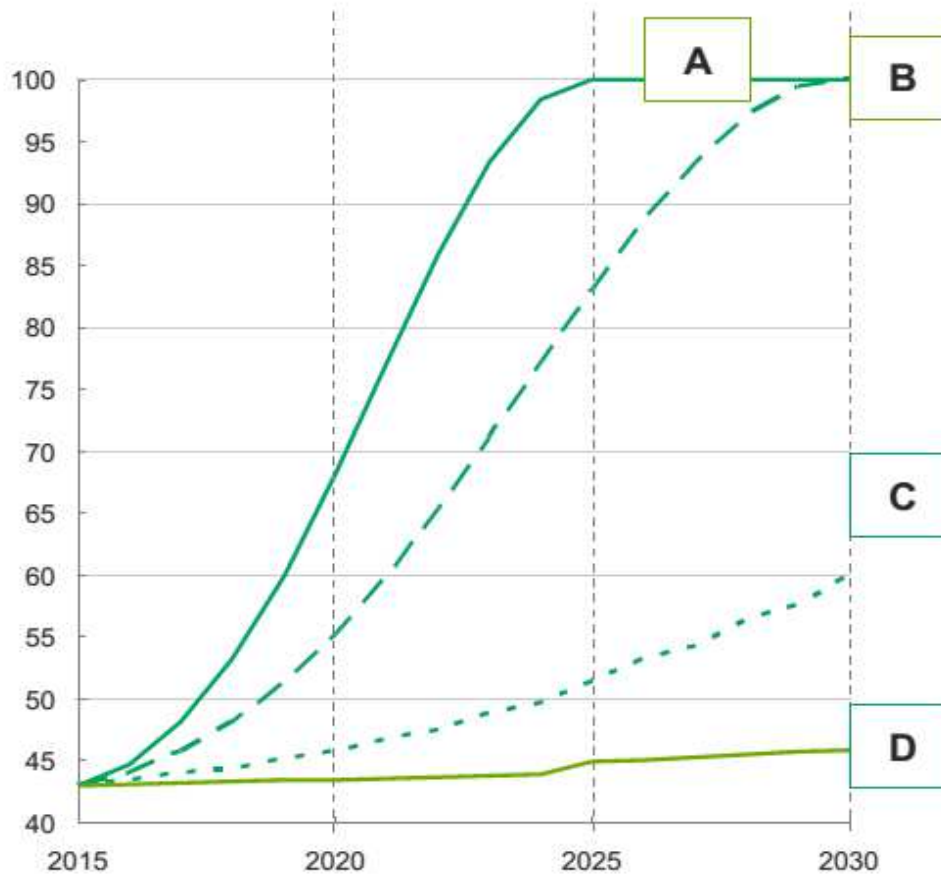
***“The Bank will be a leader on this critical issue, for nothing is more important for Africa’s economic growth”***



# Towards a “New Deal on Energy for Africa”

Defining a new aspiration for Africa!

Africa's access to electricity, % of population



## A Universal Access by 2025:

- President Adesina's vision
- 100% urban access and 95% rural access
- Sufficient energy for uninterrupted consumption

## B Universal Access by 2030:

- Achievement of SDG7 goals
- 100% urban access and 95% rural access
- Sufficient energy for uninterrupted consumption

## C Africa Power Vision Scenario: ~80% access by 2040

- Successful effort to achieve 80% access by 2040
- By 2025, overall access = ~60%

## D Business as usual: ~45% access by 2025

- Perpetuation of existing schemes
- Demographic growth absorbing most of new connections, limiting % rate impact
- By 2025, some countries still at ~20%

# Towards a “New Deal on Energy for Africa”

Universal Access to electricity by 2025 means connecting 190 Million Households, and nearly doubling grid generation capacity!

## The targets...

+ 162 GWs Generation

+ 130 million new grid connected households

+ 75 million new off-grid household connections

	From current energy situation in Africa		To Universal Access <sup>1</sup> in 2025
Population, Mn	1 174	x1.3	1 499
GDP, \$ bln	2 175	x1.7	3 742
Electrification rate, %	43%	x2.3	97%
Households <sup>2</sup> connected	101	x2.9	292
Grid	83	x2.6	213
Off-grid	4	x20	79
Grid capacity, GW	170	x1.9	332
Consumption kWh/capita	613	x1.5	941



# SEFA Overview



## SEFA Mission

SEFA is designed to scale-up AfDB's involvement in small and medium sized private-sector driven RE/EE projects, as a means of stimulating economic growth and job creation.

- Operationalized in January 2012
- Hosted by AfDB's Energy, Environment & Climate Change (ONEC) Department
- Capitalization: USD 95 million





# SEFA Contributors



- Product of the Danish-initiated Africa Commission (AC) - 2009
- Approved DKK 300 million (USD 52 million equivalent) for SEFA - 2011



- USD 20 million under president Obama's Power Africa initiative - 2013



- GBP 10 million (USD 15 million equivalent) under the Green Mini-Grid Regional Facility for Africa - 2014



MINISTERO DELL'AMBIENTE  
E DELLA TUTELA DEL TERRITORIO E DEL MARE

- EUR 7,4 million (USD 8 million equivalent) as part of the COP 21 Italy commitments.



## Results expected

### Impact

Promoting job creation, private sector led growth, and human development through the use of sustainable (affordable, reliable, clean) energy.



**1 billion USD**  
raised for renewable  
energy projects



**150,000**  
new connections  
for SMEs and households



**3 million**  
tons of CO2 equivalent  
reduced or avoided.



**500 MW**  
of renewable energy  
in the energy mix



**450**  
direct jobs created



**21** PROJECTS

**16** COUNTRIES + 3 multinational projects

**3** COMPONENTS = \$ 49.5 million



Project Preparation



Equity Investments



Enabling Environment

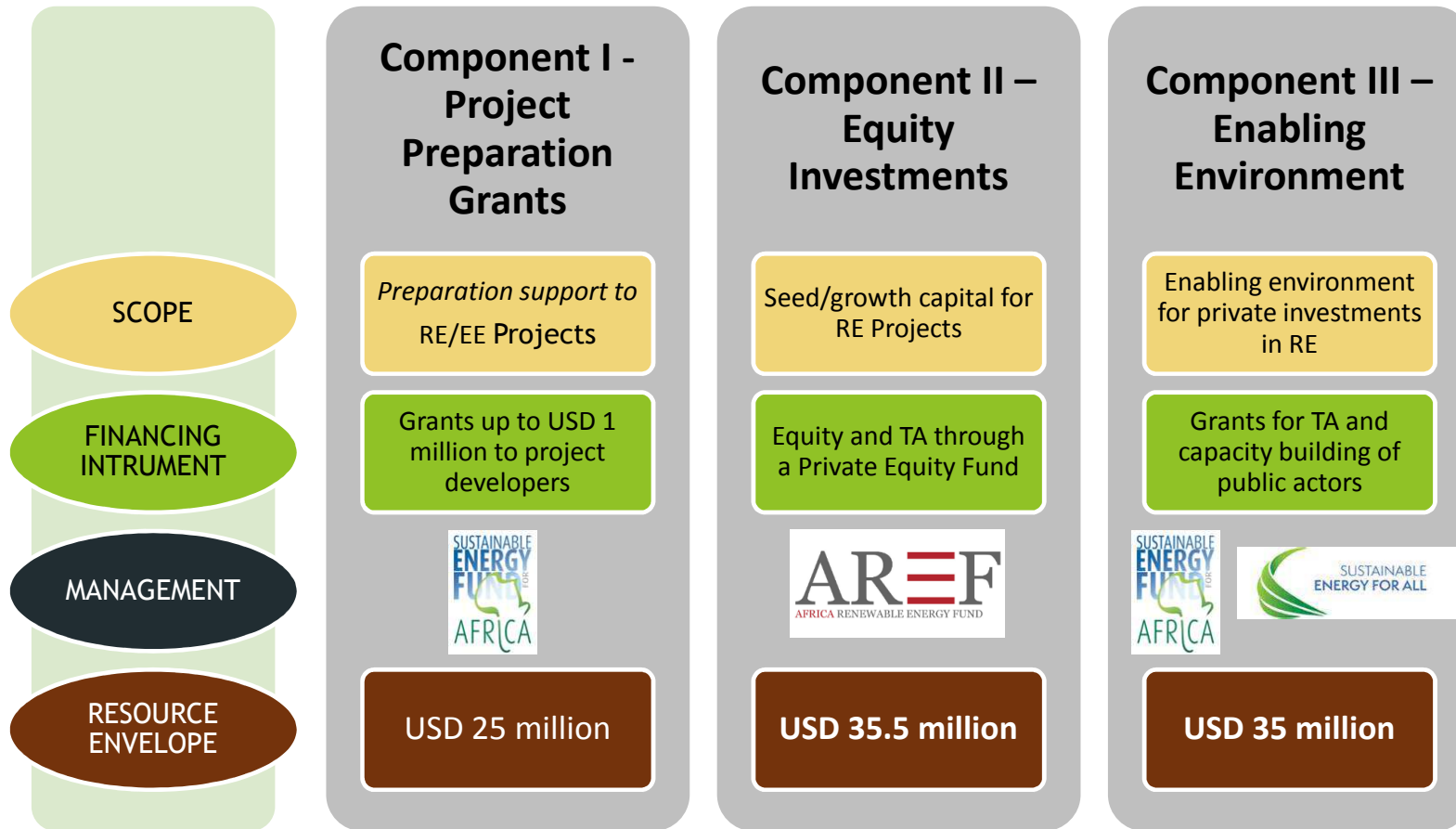
**PPG** - \$711 million in Investments and  
230MW of installed capacity

**Equity** - \$181 million in Investments and  
75MW of installed capacity

\$892 million  
305 MW

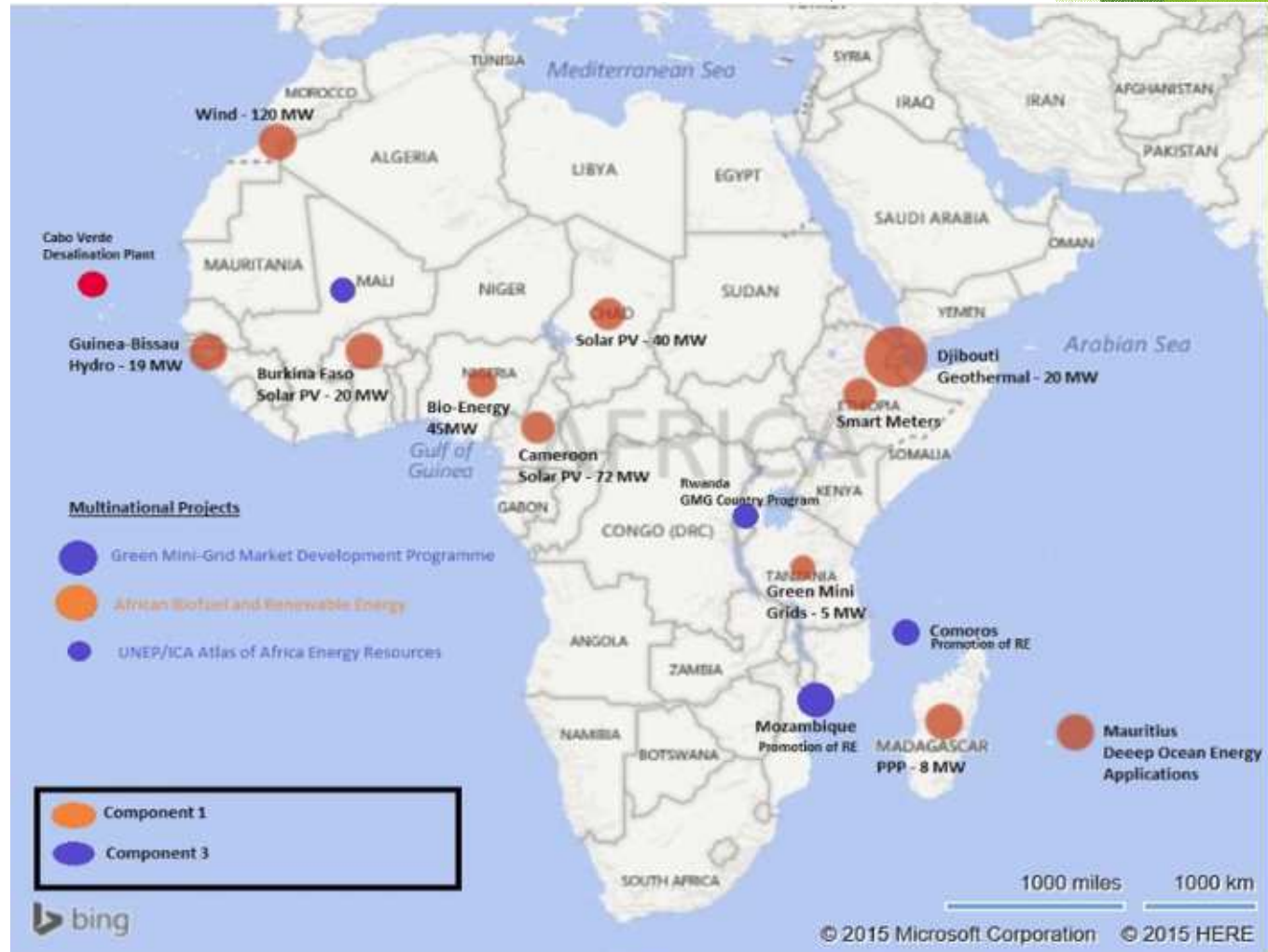


# Overview of Instruments



# SEFA Project Preparation footprint

Committed USD 10m+ to 11 projects totaling 711 million in investments and 230MW of installed capacity



# Promoting energy access in rural Tanzania



## Tanzania: Jumeme Rural Energy Supply Ltd

- ▶ Sponsored by joint venture led by INENSUS
- ▶ Solar/ hybrid Mini-grids in 16 villages in NW TZ
- ▶ USD 20 million CAPEX
- ▶ Late development stage / Transaction Advisory
- ▶ Looking for equity and debt partners

# Delivering clean water from wave energy in Cape Verde

RME systems - smooth.png



## Cape Verde: Wave20 Project

- ▶ Sponsored by Resolute Marine Energy (RME US)
- ▶ Desalination plant powered by wave energy
- ▶ USD 21 million CAPEX
- ▶ Early development stage
- ▶ Looking for equity and debt partners



# SEFA Operations - Equity Investments

Achwa Hydro Project - Uganda - 42 MW  
Final Investment Committee



Corbetti Geothermal Project - Ethiopia - 20 MW  
Final Investment Committee



Bugoye Hydro Project - Uganda - 13 MW  
Final Investment Committee



# Developing a policy framework for private investments in renewables



## MALI RE Policy framework / PAPERM

- National Directorate of Energy
- SEFA: USD 0.5m co-funding for SREP/PAPERM project
- Revision of National Energy Policy & Strategy
- Develop Standard Power Purchase Agreements (PPA)
- Develop standard bidding documents
- Guidelines for investors in RE
- RE Skills enhancement programme



# How to Apply to SEFA Funding

1. Fill the SEFA questionnaire available in the Bank's internet: [www.afdb.org](http://www.afdb.org)
  - ▶ Basic Data (Applicant details)
  - ▶ Project Parameters
    - ▶ Technology, Country, MW, CAPEX, Delivery Approach
    - ▶ SEFA Request - Which activities do you pretend to be funded?
    - ▶ Brief description of the project
    - ▶ Track record of the company
  - ▶ Project Status (Indicate the progress achieved to date)
    - ▶ Business Plan, Pre-feasibility studies, Licenses and Permits, etc.
2. Send the questionnaire to [SEFA@AFDB.ORG](mailto:SEFA@AFDB.ORG) for further review and processing



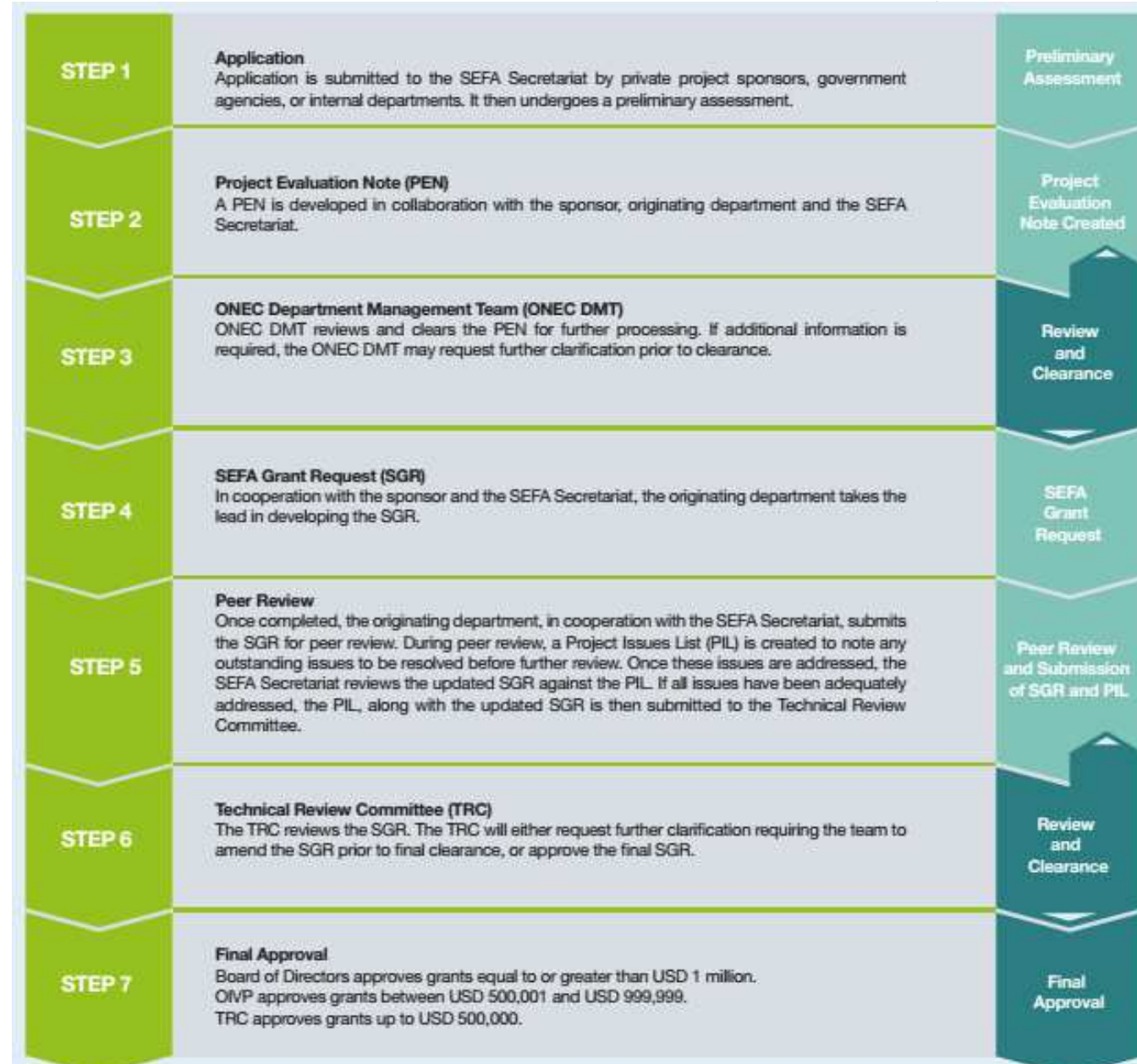


## SEFA REVIEW & APPROVAL PROCESS

4- 8 months average turnaround time from preliminary assessment to final approval...

...but this depends on:

- Quality of project
- Readiness for process
- Client responsiveness
- Timings of DMT / TRC
- Availability of SEFA support





# Service Provider - Access to Bank's procurement opportunities

- ▶ Access to Bank's opportunities - providing Services, Works and Goods
- ▶ Bank's website > Projects & Operations > Procurement

<http://www.afdb.org/en/projects-and-operations/procurement/>

- ▶ Rules and Procedures for Procurement

## Expressions of interest for consultants

Country:

Sector:

Displaying results 1 to 30 out of 164

1 2 3 4 5 Next >

Date	Title:
03/05/2016	EOI - Social Development Specialist Consultant (248 kB)
27/04/2016	EOI - Supply, installation and commissioning of met mast and related equipment and instruments for carrying a Wind Resource Assessment for the purposes of checking, validation and verification of the wind potential in the project area (194 kB)
25/04/2016	EOI - Tanzania - Berkeley Energy Africa Limited (195 kB)
13/04/2016	EOI - Cote d'Ivoire - Evaluation Expert - Individual Short-term Consultant - ONEC (301 kB)
13/04/2016	EOI - Cote d'Ivoire - Individual Consultants - Climate Investment Fund (CIF) Renewable Energy Specialist - ONEC (187 kB)
11/04/2016	EOI - Burkina Faso - Service de consultant - Contrôle et la surveillance des travaux d'extension et de restructuration des réseaux MT/BT de Ouagadougou et de Bobo Dioulasso - PEPUI (353 kB)



# THANK YOU!

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Topics

Initiatives & Partnerships

- Sustainable Energy Fund for Africa

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Explore Our Activities

Please select a country

## Sustainable Energy Fund for Africa

**"Unlocking Africa's clean energy potential for employment and economic growth"**

### Background

The Sustainable Energy Fund for Africa (SEFA) is a bilateral trust fund administered by the African Development Bank - anchored in a generous commitment of USD 57 million by the Government of Denmark - to support small and medium clean energy and energy efficiency projects in Africa. In many African countries, smaller clean energy projects are potentially viable from a commercial perspective but the initial development costs often prevent these from accessing necessary financing. SEFA provides advisory, grant resources for technical assistance and capacity-building, as well as investment capital, to both off-set preparation costs and crowd-in additional investment.

### Description

The development objective of SEFA is to support sustainable private-sector led economic growth in African countries through the efficient utilization of presently untapped clean energy resources. SEFA has been designed to operate under two components to provide grants, seed/growth capital, and technical assistance.

- Project Preparation Grants (Component I):

### Latest news

- 04/10/2013 - SEFA and WAFCEF partners gather in Ghana to present best clean energy entrepreneurs in West Africa
- 03/10/2013 - AfDB, largest financier of clean energy on the African continent with \$4.3 billion in energy projects
- 23/09/2013 - Sustainable Energy Fund for Africa scales-up operations with USAID support.
- 28/08/2013 - AfDB boosting geothermal development in East Africa: Geothermal Exploration Project in Lake Assal Region Launched
- 12/07/2013 - AfDB Continues to Support Low-carbon Development Pathways for ...

- Further information from AfDB's webpage and from SEFA team

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