

Energy Cooperation Success Stories

SUNREF (*Sustainable Use of Natural Resources and Energy Finance*)
Case Study

Wednesday 13th January, 12:30 – 14:00



Presentation of SUNREF

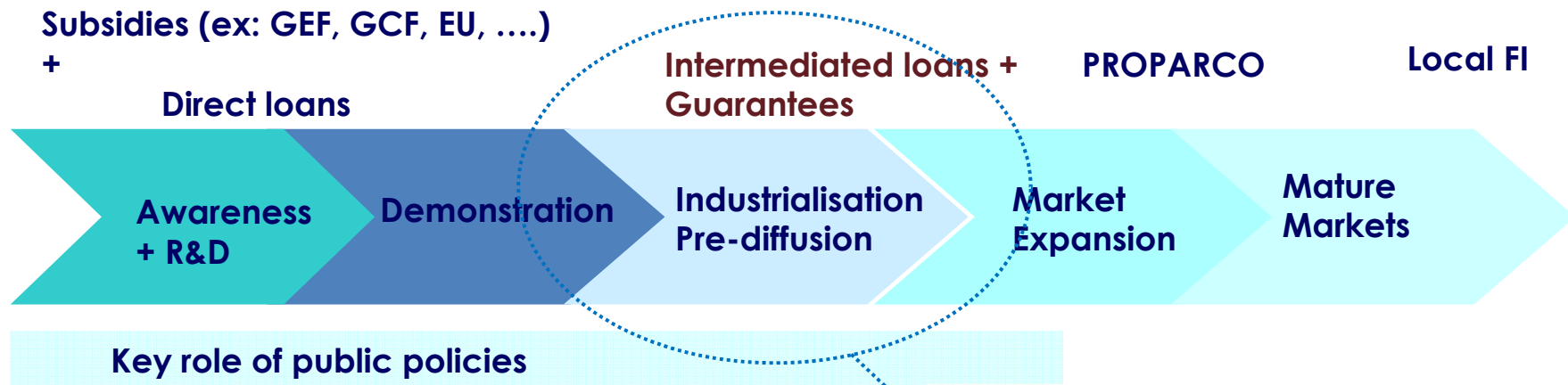


Objectives

- Mobilize private sector on ecological transition opportunities and ensure a strong leverage, dissemination and scalability
- Encourage local financial institutions to finance the ecological transition
- Support environmental local public policies
- Extend access to financing for the private sector and strengthen its competitiveness
- Disseminate technical know-how and good practices through the technical assistance



Barriers and market needs : filling the gap



■ Key steps:

- Understand **public policy** framework
- **Market analysis/market potential** (RE, EE, depollution, etc.)
- Identify **investment potentials** and **barriers** that impede « green » investments
- Mobilize **public stakeholders** and **banks**
- Target a limited number of **technologies and products** (through a set of eligibility criteria)
- Set up **supporting tools** to overcome the barriers and facilitate origination and appraisal of **high quality green projects and ensure measurable results** (technical assistance and adequate financing tools)



SUNREF program design



Map of SUNREF programs



SUNREF Key consolidated figures

SUNREF in figures (end of 2014)

- Over **35 projects** successfully implemented by AFD since 2006
- Over **50 partner financial institutions**
- Over **EUR 2bn** of loans allocated by AFD... including over **EUR 1bn** already disbursed

Results and impacts

- Annual reduction of **14 million tons** of CO₂ equivalent
- Annual saving of over **1 billion KWh**
- Creation of a new green capacity of **300,000 KW**
- Annual generation of **1.5 million MWh** of green energy

Update 2015 (on-going)

- 39 projects under implementation
- EUR 2,5bn of loans allocated

SUNREF Effects and outcomes

- To reduce the negative impacts on local and global environment and on the population health by diversifying the energy mix and reducing CO2 emission
- Have a demonstration effect on how the private sector can serve the public policy and contribute to the improvement of these policies towards the private sector
- To improve the competitiveness of the private sector and strengthen its skills
- Through a pilot experience, support the structuring of a sustainable banking offer around the green economy
- To create new job opportunities in the green economy



European Union Africa
Infrastructure Trust Fund



AGENCE FRANÇAISE
DE DÉVELOPPEMENT



SUNREF program in East Africa



Context in East Africa

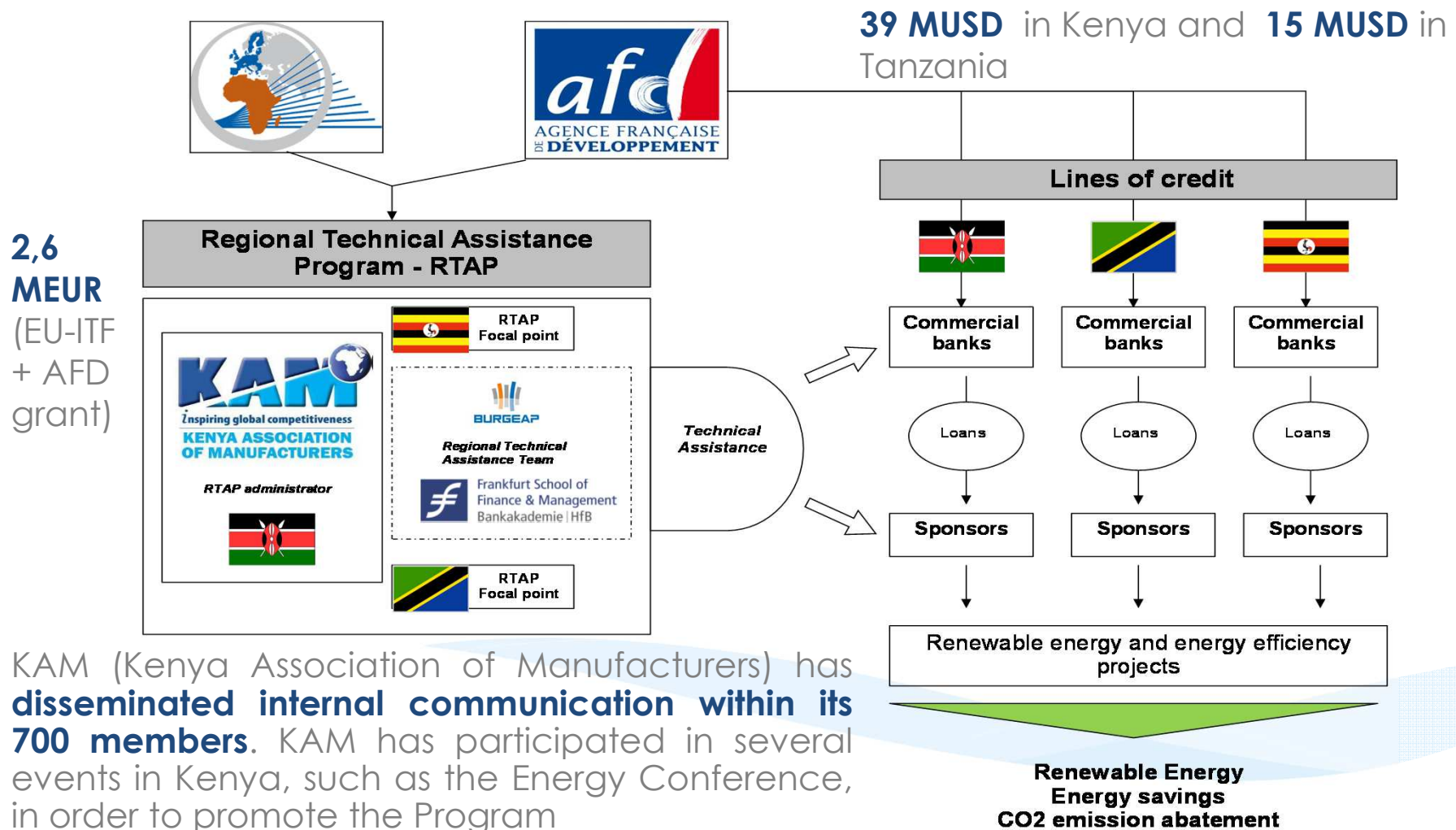
- Kenya, Uganda and Tanzania forecast for 2016 an **average growing for energy demand of 10%**; increase in energy demand leads to **shortages of energy and reliance on fossil fuels**
- **Access to electricity in remote areas is still an issue**
- **New generation capacities are needed** and have an **impact on the energy bill**, as well as on the **increase in the use of fossil-fuels** to generate power;
- The **private sector** needs **technical support** and to increase is **competitiveness**
- **Local banks could increase their involvement**
- In this context, in 2010, AFD has launched a regional SUNREF programme for East Africa, consisting of a **Technical assistance and concessional credit facilities to the banks.**

What can be done?

- ✓ **Large untapped potential in terms of Renewable Energy and Energy Efficiency**
 - ✓ Hydropower, solar, wind, geothermal
 - ✓ biomass/cogeneration (mainly in link with agro industry activity),
 - ✓ EE in manufacturing, commercial, agribusiness ...

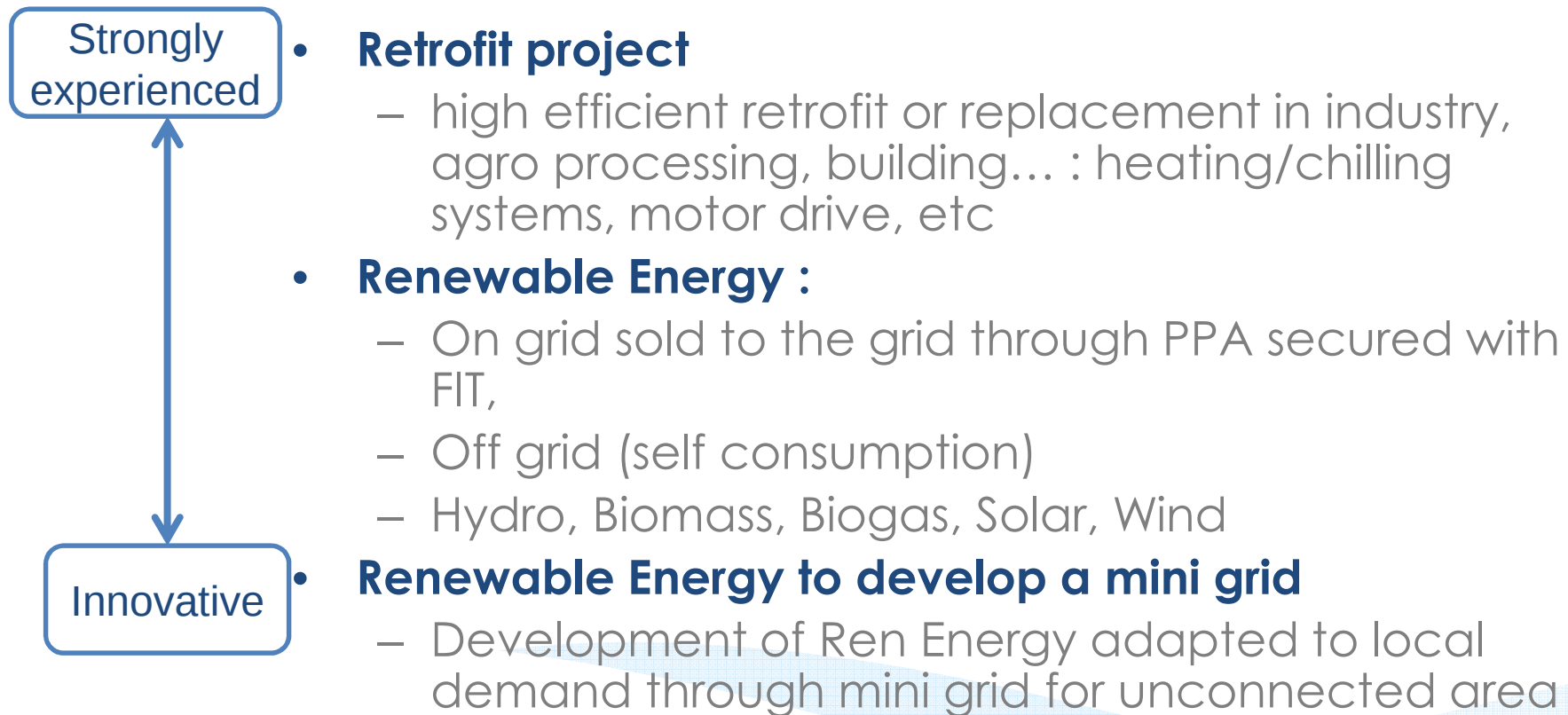
Scaling up the use of sustainable energy is essential

Structure of the program



KAM (Kenya Association of Manufacturers) has **disseminated internal communication within its 700 members**. KAM has participated in several events in Kenya, such as the Energy Conference, in order to promote the Program

What type of projects ?



Structure of the Technical Assistance (TA)

A key component

- **A technical assistance to address the main barriers** of the development of the EE/RE market and identify new EE & RE projects by:
 - **Identifying investment opportunities in energy efficiency and renewable energy**
 - **Advising investors as they develop their project to ensure their quality** (feasibility studies / audits on the design, financial model, specifications, E&S impact, etc.)
 - **Providing support for banks** (training, strategy development, portfolio screening)
 - **Checking investment eligibility**
 - **Monitoring the implementation of the projects and their results**
 - **Promoting the services available under the program** (marketing, website, List of Eligible Equipment, dissemination, etc.)
- **Team:** team leader, verification consultant, pool of short term experts (finance, energy, E&S, marketing, legal, etc.)
- **The technical assistance is free of charge** to investors and banks.

Results and Outcomes in Kenya



Three years implementation of the **MEUR 2,6** grant for the TA and **MUSD 39** concessional credit line allowed to:

- ✓ Finance a consolidated **total investment cost** of nearly **MUSD 55** for private sector eligible projects
- ✓ Install **22 MW** of renewable energy
- ✓ Have nearly **120 GWh/y** of energy saved or renewable energy produced
- ✓ Avoid emissions of **65 kteq CO₂/y**
- ✓ **Kenya Association of Manufacturers** hosting the Technical Assistance and leading the program
- ✓ A project pipeline with
 - ✓ **123 active projects**
 - ✓ accounting for an installed capacity of **450 MW**
 - ✓ an energy flux of **2079 GWh/year**
 - ✓ an annual CO₂ abatement of **over 1.5 million t/y**.
 - ✓ a total investment of **USD 1045 million**, with a debt finance requirement of **USD 694 million**.
- ✓ **SUNREF 2** signed with 2 other banks for **MEUR 60** credit line and a Regional Technical Assistance Program renewed with **MEUR 2.1** grant from the EU-ITF

Examples of projects financed

- In Agro business

Hydropower for self consumption in tea factory:

2 x 2.5 MW turbines

- Feeding 4 tea factory plant demand

Peak demand: 2.2 MW

- Excess sold to the grid

16 M\$ investment

18 GWh/y



Examples of projects financed

- In Manufacturing:

Biomass briquettes production, and operation of efficient boiler to feed-in an independent company (Textile)

- 5.3 MW boiler
- 1,3 M\$ Investment
- Briquettes made from bagasse
- The boiler is operated by the project developer
- The steam is sold to the textile company



Examples of projects financed

- In Education:

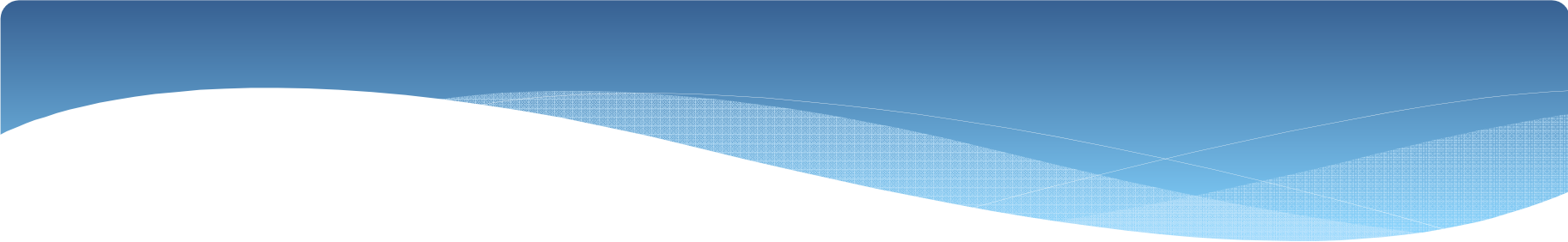
PV panels for electricity self-consumption in an Nairobi private school:

- 0,5 MW_p covering internal demand during peak hours
- 1 M\$ investment
- 0.9 GWh/y saved



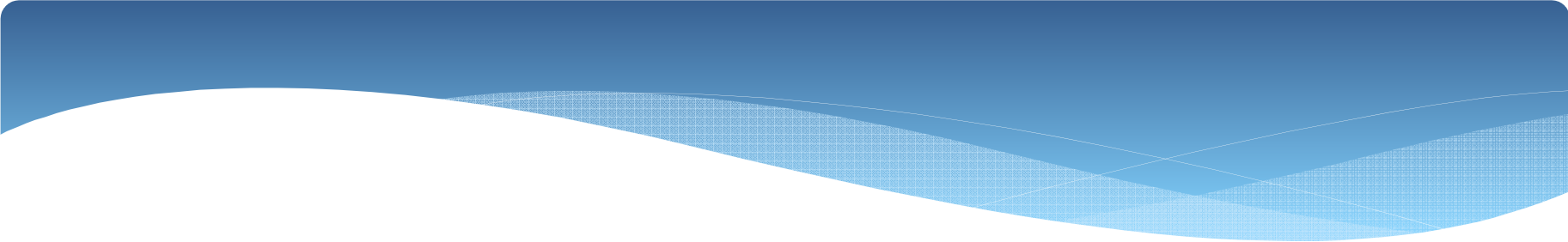
Video of Kenyan SUNREF implementation





Questions?





Thank you



Céline BERNADAT
Project Manager, Financial Institutions and Private Sector
bernadatc@afd.fr

