



**Energy access in Africa**  
**lessons learned and the way forward**

**WELCOME**

The logo for the Energy and Environment Partnership (EEP) in Southern and East Africa, identical to the one in the first image.



 SAIREC 2015 SAIREC side event - Energy access in Africa – 5 October 2015 

**Energy access in Africa**

---

**lessons learned and the way forward**

- ▶ **Welcome address**
- ▶ **Improving access to energy in Africa**
- ▶ **Introduction to the Energy & Environment Partnership Programme**
- ▶ **Lessons learned from implementing EEP**
- ▶ **Panel discussion – reflection on presentations**
- ▶ **Closure**

 SAIREC side event - Energy access in Africa – 5 October 2015 

**Energy access in Africa**

---

**lessons learned and the way forward**

**Welcome address**



H.E. Mr. Petri Salo  
Ambassador of Finland in South Africa

 SAIREC side event - Energy access in Africa – 5 October 2015 

**Energy access in Africa**  
**lessons learned and the way forward**

**Improving access to energy in Africa**



Mr. John Warburton  
DFID Southern Africa Climate Change Team  
Leader

 SAIREC side event - Energy access in Africa – 5 October 2015 

**Energy access in Africa**  
**lessons learned and the way forward**

**Introduction to the Energy & Environment  
Partnership Programme**

Mr. Wim Jonker Klunne  
EEP Programme Director

 SAIREC side event - Energy access in Africa – 5 October 2015 

## Introduction

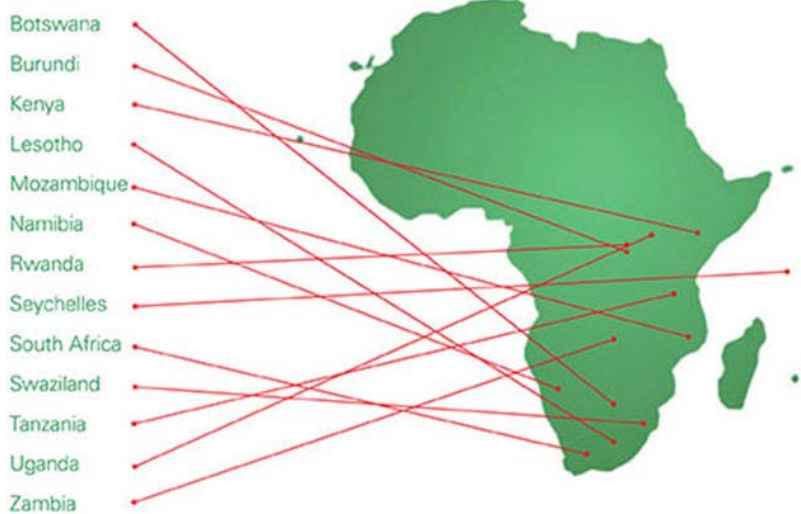
- ▶ EEP grants support to renewable energy and energy efficiency projects
- ▶ Phase I:
  - 2010 – 2013
  - Managed by DBSA
  - € 25 M
- ▶ Phase II:
  - 2013 – 2017
  - Managed by KPMG Finland
  - € 35 M



SAIREC side event - Energy access in Africa – 5 October 2015



## Countries



SAIREC side event - Energy access in Africa – 5 October 2015



## Two funding windows

EEP allocates funding through competitive windows.

### Window 1: inclusive innovation

For projects at an early stage of implementation, including feasibility studies, demonstrations and small pilot projects

Grant between € 100,000 and € 300,000

Own contribution: 30 %

### Window 2: market creation

For projects that are near-commercial private sector projects

Grant between € 300,000 and € 1,000,000

Own contribution: 30 – 90%



SAIREC side event - Energy access in Africa – 5 October 2015



## Challenge fund

A challenge fund is a financing mechanism to allocate (donor) funds for specific purposes using competition among organizations, mainly small and medium size companies as the lead principle.

A challenge fund invites for proposals from companies, organizations and institutions working in a targeted field to submit project proposals.

Challenge funds are always set up to meet specific objectives – such as extending financial services to poor people or finding solutions to a specific health problem in developing countries.



SAIREC side event - Energy access in Africa – 5 October 2015



## Challenge fund

Proposals are assessed against transparent and pre-determined criteria.

Successful applicants must usually match a certain percentage of the grant with own financing.

The challenge fund awards grants to those projects that best meet the objectives of the fund and fulfill various pre-established eligibility criteria.



SAIREC side event - Energy access in Africa – 5 October 2015

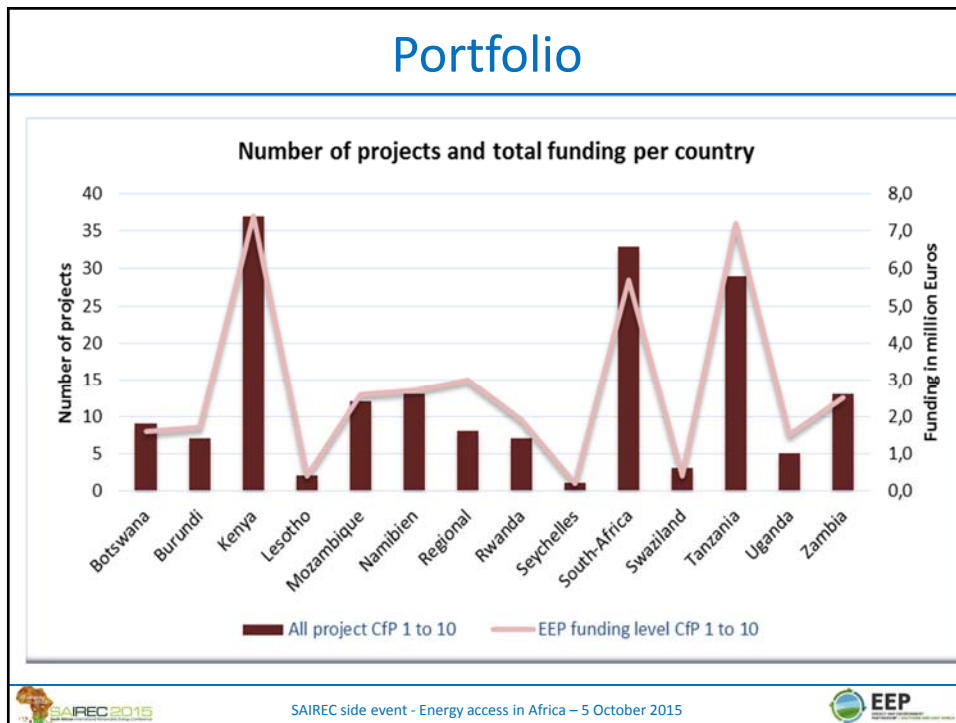
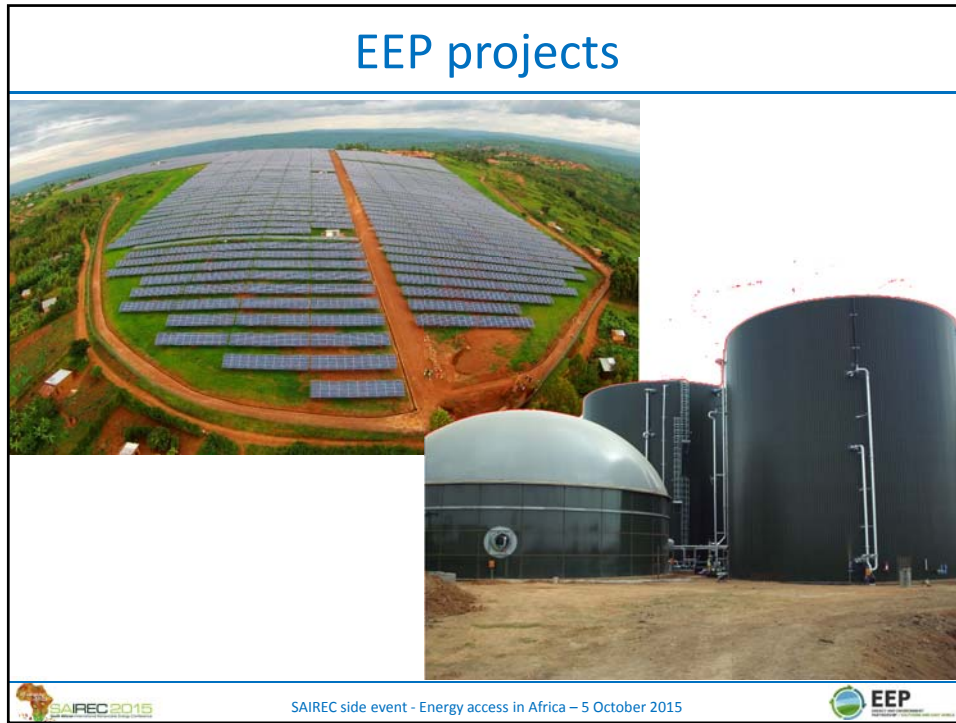


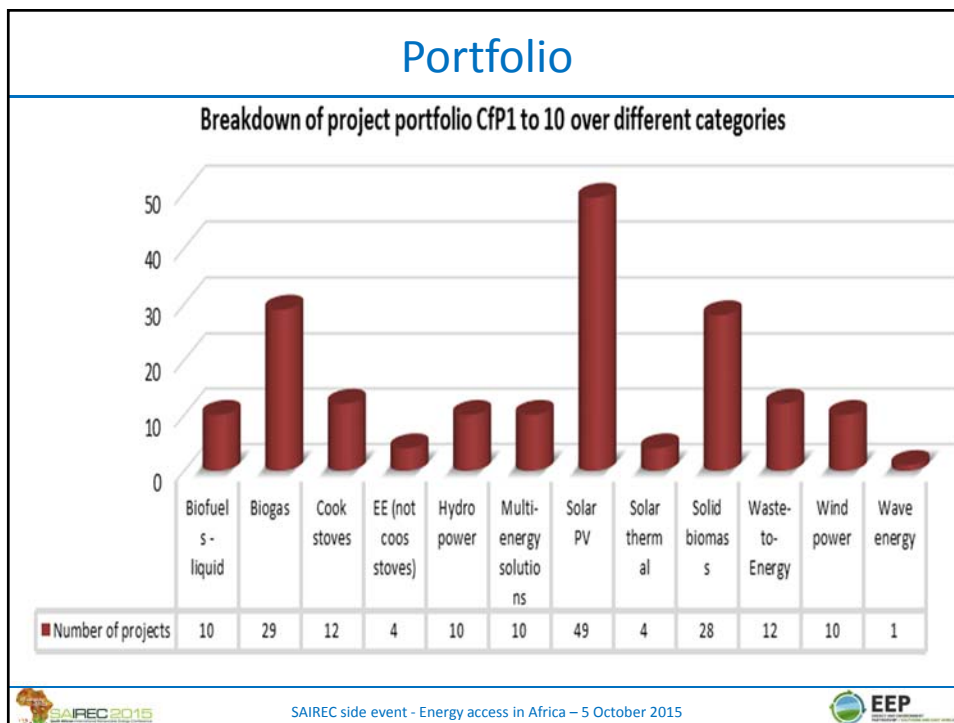
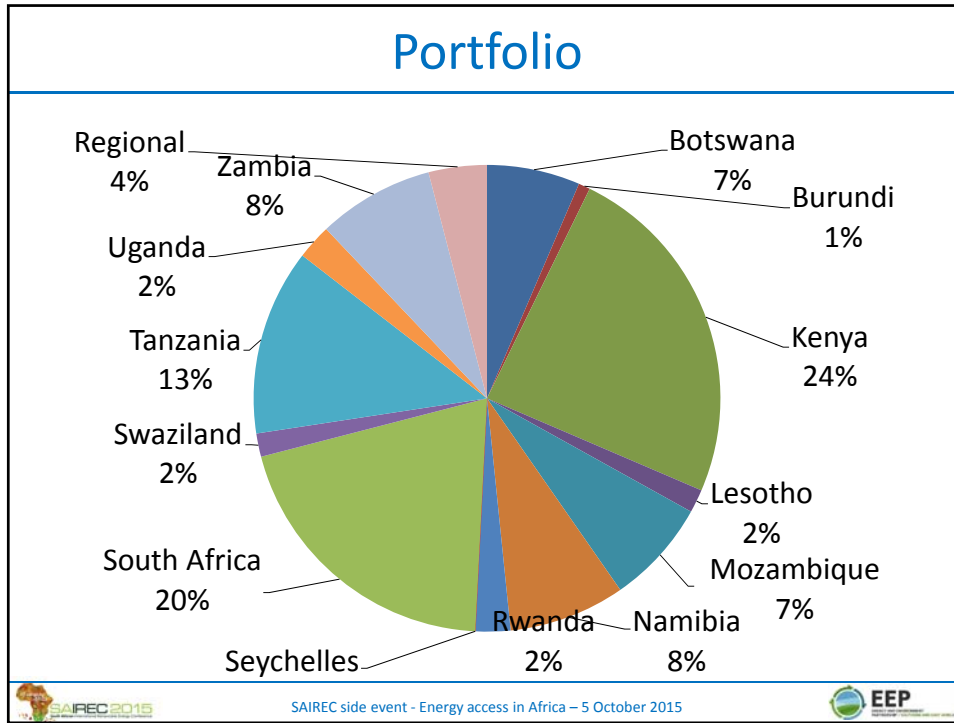
## EEP projects



SAIREC side event - Energy access in Africa – 5 October 2015









## Results so far

- ▶ around 53,000 households have benefited from improved access to sustainable energy through the projects → estimated economic benefits of around € 4.9 million.
- ▶ combined annual CO<sub>2</sub> emission reductions of the 61 completed projects of 26,000 tons
- ▶ installed 0.5 MW of new renewable energy generation capacity (mostly solar PV)
- ▶ saved an estimated 27,000 MWh through promotion of energy efficiency technologies



SAIREC side event - Energy access in Africa – 5 October 2015



## Way forward

- ▶ Programme is currently shifting from selecting projects for funding to grant management, M&E and knowledge management
- ▶ Identifying lessons learnt
- ▶ Collaboration with other initiatives to enhance impact
- ▶ Scaling up of individual EEP projects





SAIREC side event - Energy access in Africa – 5 October 2015



**Energy access in Africa**  
**lessons learned and the way forward**



**Lessons learned from implementing EEP**

Mr. Wim Jonker Klunne  
Mr. Darius Boshoff

 SAIREC side event - Energy access in Africa – 5 October 2015 

**Lessons learned**

- ▶ Currently initiating in-depth studies on the impact of EEP projects, experiences of project developers, barriers encountered, successes achieved, etc.
- ▶ Preliminary lessons learned (to be subjected to in-depth analysis)

 SAIREC side event - Energy access in Africa – 5 October 2015 

## Lessons learned

- ▶ Early stage support essential
- ▶ Be prepared for the grid reaching project location
- ▶ Revenue collection crucial for project sustainability
- ▶ Commitment of project developer key factor in project success
- ▶ Policy environment can make or break the project



SAIREC side event - Energy access in Africa – 5 October 2015



## Lessons learned: early stage support

- ▶ Very early support to project developers essential to get them from concept to bankable project



SAIREC side event - Energy access in Africa – 5 October 2015



## Lessons learned: grid encroachment

- ▶ Clear indication needed on grid expansion planning
- ▶ Prepare for eventual grid connection



SAIREC side event - Energy access in Africa – 5 October 2015



## Lessons learned: revenue collection

- ▶ Essential component of business model is payment for services



SAIREC side event - Energy access in Africa – 5 October 2015



## Lessons learned: commitment

- ▶ A very important success factor is the (personal) commitment by project developer.
- ▶ A motivated project developer can make a project a winner
- ▶ Other projects were lack of commitment resulted in less successful projects



SAIREC side event - Energy access in Africa – 5 October 2015



## Lessons learned: policy environment

- ▶ Clear, stable, long term, predictable policy environment is essential to get private sector commitment to energy access projects
- ▶ Projects have long pay back period and therefore require predictable policies



SAIREC side event - Energy access in Africa – 5 October 2015



## Lessons learned: case Tanzania/Kenya

### ▶ Tanzania

- 35 Million rural villagers without electricity
- 18% of population have access to electricity
- Currently 32% shortfall in electricity supply
- EWURA : <100 KW no license



### ▶ Kenya

- 44,4 Million people
- 81% of which don't have access to electricity
- 92% of people rely on kerosene.



SAIREC side event - Energy access in Africa – 5 October 2015



## Lessons learned: cash is king

### Solar Home Systems

- ▶ 15-50 W<sub>p</sub> solar home system (700 units reached) in Kiagata.
- ▶ Very young company with little experience
- ▶ Transfer of ownership after 5 years rental
- ▶ Manual collection of funds on weekly basis
- ▶ Total was € 322,000 of which € 120,000 own
- ▶ Ongoing improvements and networking
- ▶ Possibility to use lessons learnt.



SAIREC side event - Energy access in Africa – 5 October 2015



## Lessons Learnt: Solar Home Systems

### ► Challenges:

- Payment collection
- Low density vs high cost of servicing
- Expectations on delivery timelines

### ► Impact

- Empowering local rural retail business



SAIREC side event - Energy access in Africa – 5 October 2015



## Lessons learned: early stage support

### Off.Grid:Electric



- 5 W<sub>p</sub> solar home system
- Weekly prepayment by mobile phone
- Easy to install, call center, distribution agents on motorbikes
- EEP contributed € 200,000 of € 1,000,000
- Scale up from 100 to 1,000 households
- End last year: 31,000 households
- Next target: 100,000 around Tanzania



SAIREC side event - Energy access in Africa – 5 October 2015



## Lessons Learnt: Solar Home Systems

- ▶ **Challenges:**
  - Rapid growth and expansion
  
- ▶ **Impact:**
  - Job creation
  - Cheaper light
  - Pollution reduction



SAIREC side event - Energy access in Africa – 5 October 2015



## Lessons learned: early stage support

### BURN Manufacturing

- ▶ EEP grant was awarded in June 2014 for scaling up the production facilities and sales numbers
- ▶ The EEP funding was the lynchpin for major investments from US OPIC and the Acumen Fund totalling \$2.25 million.
- ▶ This past June, BURN received the Ashden Award for Clean Energy for Women and Girls as well as being awarded multiple grants, including a Phase 1 USAID DIV grant.
- ▶ Today, BURN is selling 10.000 cook stoves a month and expanding its operations in neighbouring countries



SAIREC side event - Energy access in Africa – 5 October 2015





## Lessons Learnt: Cookstoves

- ▶ Challenges:
  - Maintenance and training on operation
- ▶ Impact:
  - Job creation 116 employees 50/50 male female split)
  - 100 000 stoves per already supplied into market.



SAIREC side event - Energy access in Africa – 5 October 2015



## Lessons learned: rural grid expansion

- ▶ The Tanzanian national grid is further being expanded in the rural areas
  - Funds from other energy programmes have been directed to Tanesco to support the expansion of the national grid to rural areas
  - The expansions have been hard to predict and they do not necessarily follow the original plans in the Rural Electrification Programme made by Rural Energy Agency (REA)
  - EEP is funding several rural projects in Tanzania and the expansion may have an effect of some of them
- ▶ It is recommended to contact REA, or the Tanzanian National Coordinator regarding the matter when implementing rural grid projects in Tanzania



SAIREC side event - Energy access in Africa – 5 October 2015



## Onwards and Upwards

- ▶ Continued lessons to be learnt
  - Encroachment of the grid
  - Projects interfering with each other
  - Large scale projects have different challenges due to funding
  - Tougher regulation on large scale projects
- ▶ Winning recipes
  - Mobile money and payments
  - Distribution systems with motorbikes
  - Successful projects scale up
  - Mass production driven by sales/marketing



SAIREC side event - Energy access in Africa – 5 October 2015



## Energy access in Africa

### lessons learned and the way forward

#### Panel discussion – reflection on presentations

Lead by Ms. Georgina Ayre  
DFID Regional Southern Africa Climate and Environment Advisor

**Mr. Aleksi Lumijarvi**

IRENA, Programme Officer Renewable Energy Private Sector Finance

**Mr. Mark Radka**

UNEP, Chief Energy, Climate, and Technology Branch

**Mr. Linus Mofor**

UNECA, Senior Expert on Energy and Climate Change



SAIREC side event - Energy access in Africa – 5 October 2015



## Energy access in Africa lessons learned and the way forward

### Closure

Ms. Päivi Lehtonen  
Counsellor (Natural Resources and Energy)  
Embassy of Finland



SAIREC side event - Energy access in Africa – 5 October 2015



## Energy access in Africa lessons learned and the way forward

Thank you.

<http://EEPAfrica.org>



**EEP**  
ENERGY AND ENVIRONMENT  
PARTNERSHIP / SOUTHERN AND EAST AFRICA



SAIREC side event - Energy access in Africa – 5 October 2015

