

GLOBAL CONFERENCE "RURAL ENERGY ACCESS: A NEXUS APPROACH TO SUSTAINABLE DEVELOPMENT AND POVERTY ERADICATION"

4 -6 December 2013, Addis Ababa, Ethiopia

AREED BUSINESS MODEL

Prof F.D Yamba

Centre for Energy, Environment and Engineering Zambia

yambdf@yahoo.com, ceeez@zamnet.zm

Presentation Outline

- Introduction
- Achievements
- Challenges
- Conclusion

Introduction

AREED Program was established in 2000 by a group of multi-lateral (UNEP), international (E&Co,SIDA) and national partners (Ghana, Mali, Senegal, Tanzania and Zambia) to:

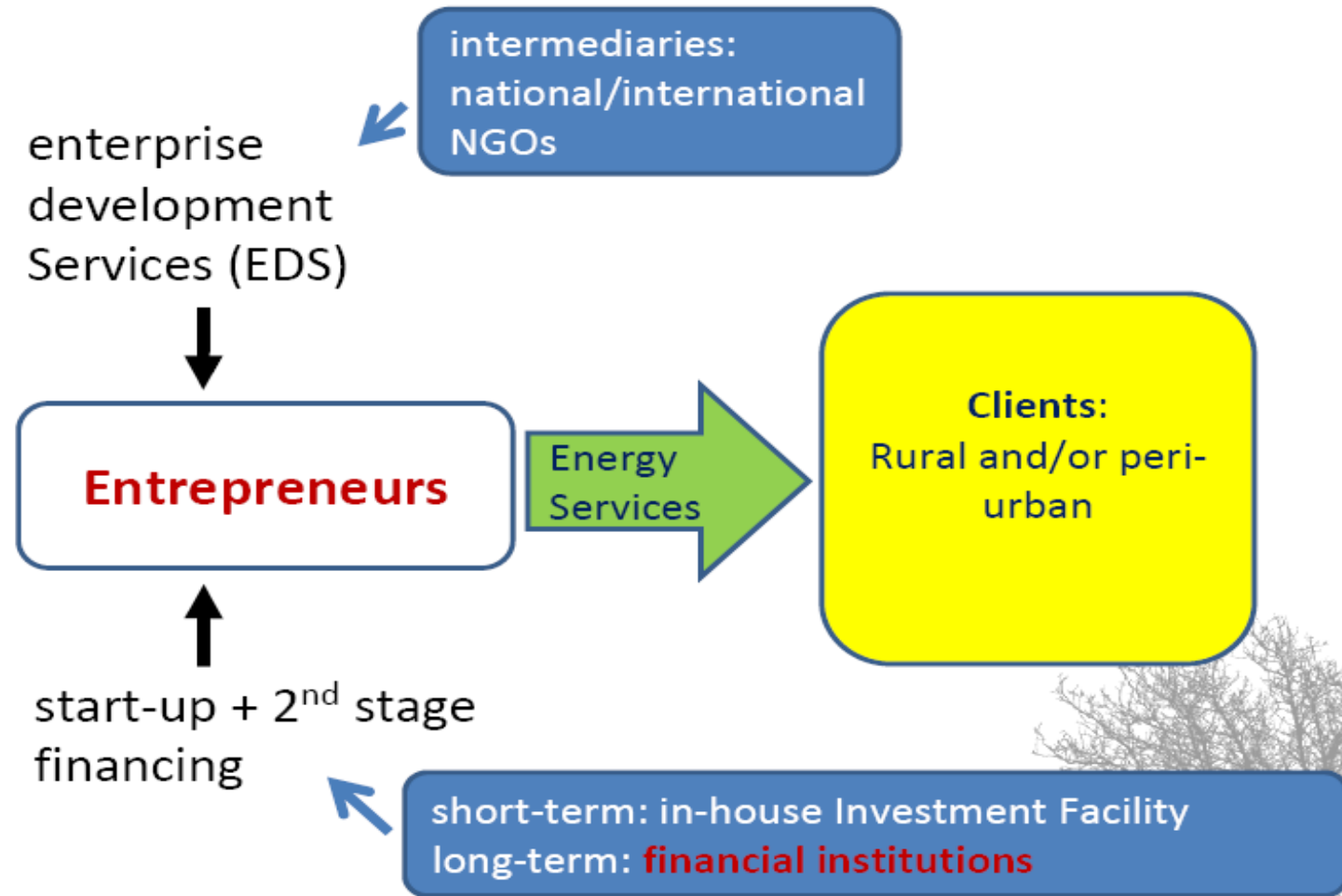
- Address this need by helping to build and sustain energy enterprises capable of delivering energy services, and promotion of clean and sustainable energy technologies for productive uses for income generating activities.**
- Meet on-the-ground needs of entrepreneurs and start-up businesses with a business orientation.**

Introd” Cont

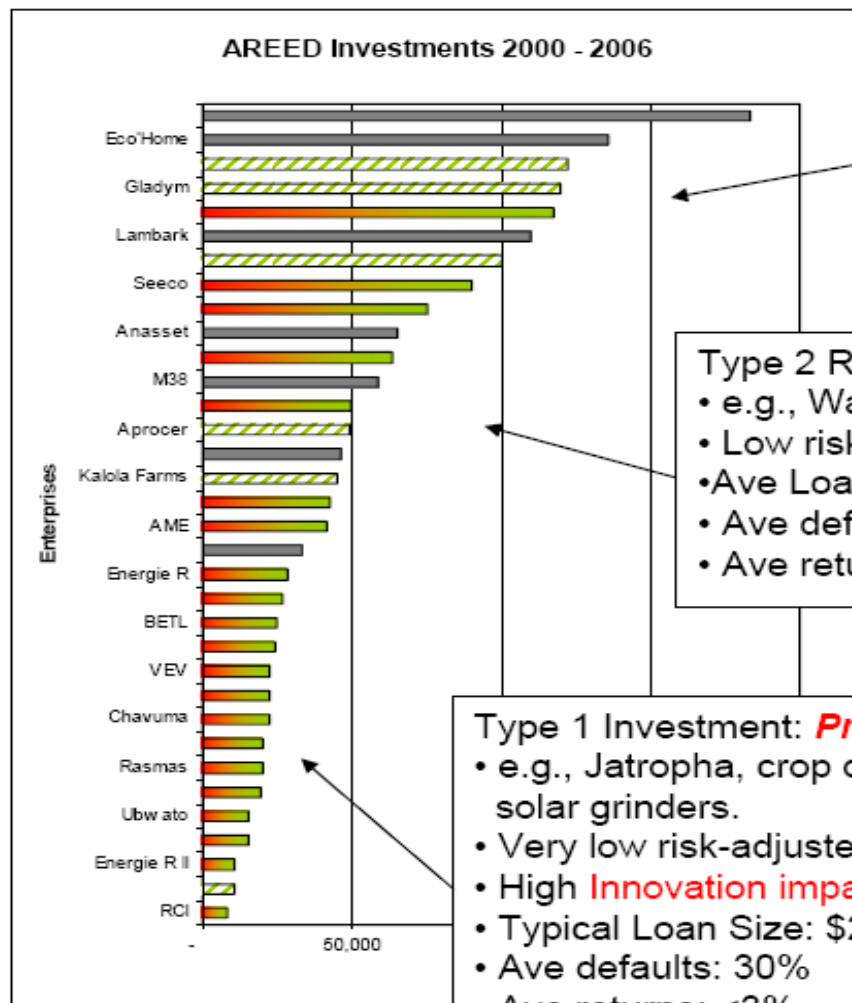
Based on an enterprise development approach the AREED specific objectives were to:

- Establish and strengthen enterprises (private sector and public-private partnerships) that offer clean modern energy services to rural and peri-urban populations.
- Increase the capacity of local NGOs to offer enterprise development services critical to the start-up of small and mid-size energy enterprises.
- Engage local and regional financial institutions to invest in the clean energy sector.
- Enhance the ability of local, regional and national governments to support business-like, solutions to the delivery of sustainable energy services by small and mid-size energy enterprises.

ENTERPRISE DEVELOPMENT SERVICES AND SEED CAPITAL ARRANGEMENT



ENTERPRISE DEVELOPMENT SERVICES AND SEED CAPITAL TO ENTREPRENEURS



Type 3 REED Investment: **Expansion**

- e.g., Urban LPG, efficient lighting
- Moderate risk-adjusted returns
- **High direct impacts**
- Low Innovation impact
- Ave Loan Size: \$130,000
- Ave defaults: 10%
- Ave returns: 5% - 8%

Type 2 REED Investment: **Commercialization**

- e.g., Waste to energy, rural LPG
- Low risk-adjusted returns
- Ave Loan Size: \$70,000
- Ave defaults: 15%
- Ave returns: 3%-5%

Type 1 Investment: **Proof of Concept**

- e.g., Jatropha, crop drying, solar grinders.
- Very low risk-adjusted returns.
- High **Innovation impact** on sector dev.
- Typical Loan Size: \$25,000
- Ave defaults: 30%
- Ave returns: <3%



ACHIEVEMENTS

AREED has invested in in the following technologies

- ✓ solar crop drying,
- ✓ charcoal production from sawmill waste,
- ✓ efficient cook stove manufacture,
- ✓ wind water pumping,
- ✓ solar water heating,
- ✓ solar bakeries,
- ✓ liquified Petroleum Gas (LPG) distribution,
- ✓ bio-diesel multi-function platforms
- ✓ energy efficiency

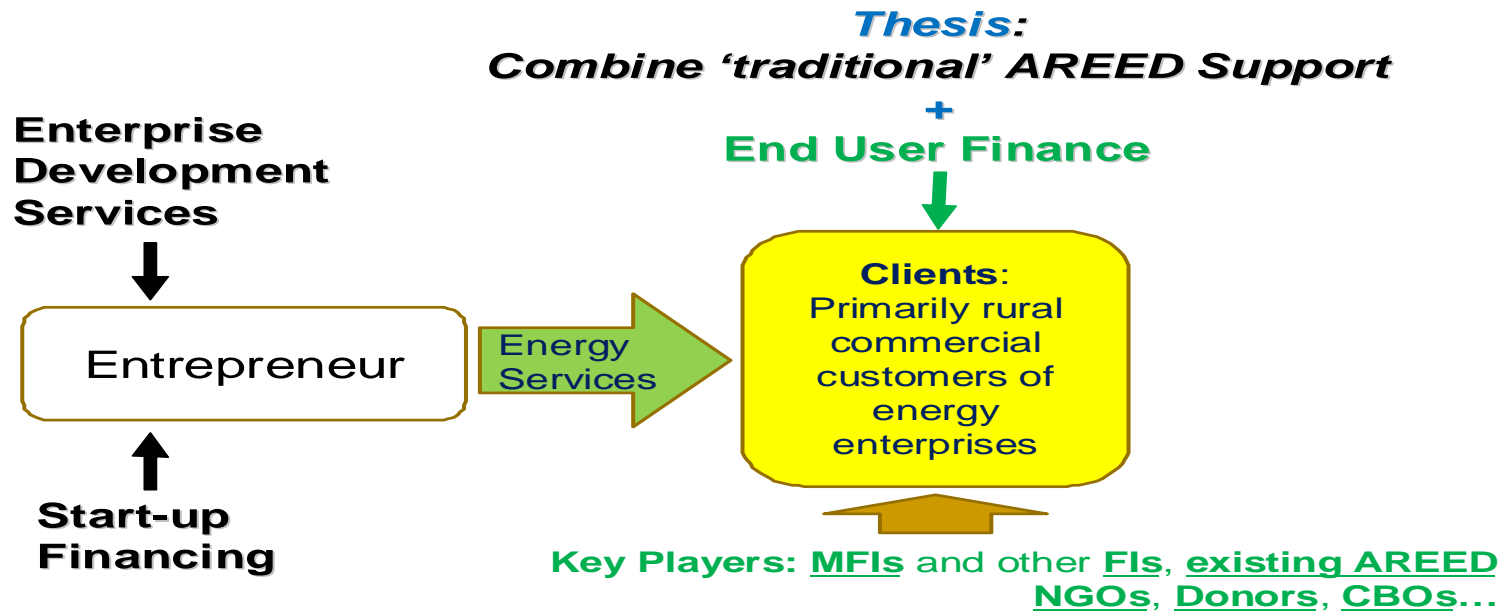
CHALLENGES

The challenges above are being caused by the following negative conditions prevailing on the ground.

- **Contact between partners and RBEs is limited**
- **Entrepreneurs do not have knowledge of technologies for delivery of energy products and services**
- **Entrepreneurs, particularly those in rural area, are unaware of application of clean/renewable energy technologies for productive use.**
- **Entrepreneurs have limited awareness of business opportunities in the energy sector**
- **Entrepreneurs capacity to write project proposals is limited.**
- **End –use affordability is also a problem inhibiting upscaling of the business**

CHALLENGES

- To address the problem of end-use affordability Phase II of the project introduces end-user finance credit



CHALLENGES

- **While it is acknowledged that a good start and foundation have been achieved, the most pressing challenge is attainment of long term sustainability and contribution of AREED to national development priorities of partner countries.**
- **Problems that are seen as threatening the long term sustainability include:**
 - **limited flow of rural-based enterprises (RBEs) through the pipeline**
 - **insufficient resources to support long term EDS delivery and investments**

CONCLUSION

Enterprise-centered model can be a powerful means for achieving concrete and sustainable solutions to problems in energy and a variety of other development sectors.

Growing evidence from the five countries where AREED is active demonstrates that these types of energy enterprises can generate measurable co-benefits beyond the provision of energy services including:

- **creation of jobs;**
- **protection of land and forest resources;**
- **increased productivity and incomes;**
- **provision of clean water;**
- **other development priorities**



THE END