



Sustainable energy for all? - Future Funding for Rural Energy Projects

Financing – Microcredits, Private sector, CDM, Gold Standard

Annegrete Lausten



Financing need

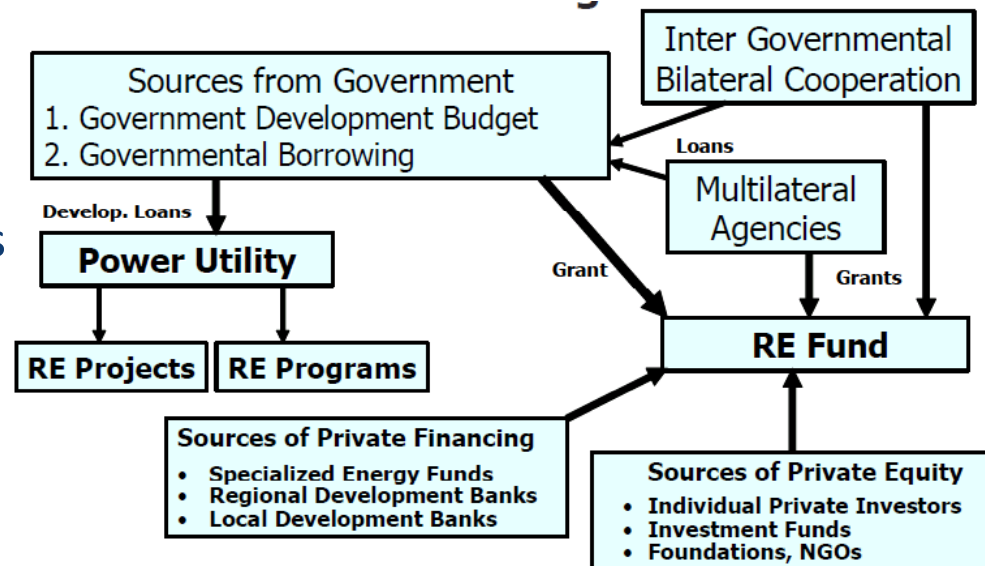
- Sub-Saharan Africa: 14% in rural areas have access to electricity
- Goal: 2030 access to energy for all
- If Africa is to meet the goal of universal energy access by 2030, electricity generation capacity needs to grow at an annual rate of 13% - compared to 2% / year over last two decades
- There is financing gap of US\$23 billion out of the required \$41 billion per year



Role of Government, Donors, and Private Stakeholders in the Capitalization of the REF

- Governments alone cannot provide all the funds required to achieve their objectives for RE
- The potential RE financing may come from

- (i) Governments,
- (ii) national and international development banks,
- (iii) bilateral cooperation,
- (iv) levies charged on consumers that use electricity,
- (v) foundations and private business donations,
- (vi) private sector investors, and
- (vii) consumers themselves



Source: Vasillaq Leno, *New Approaches in Rural Electrification Fund Design for Sustainable Development - The New Paradigm*



Consumers themselves..

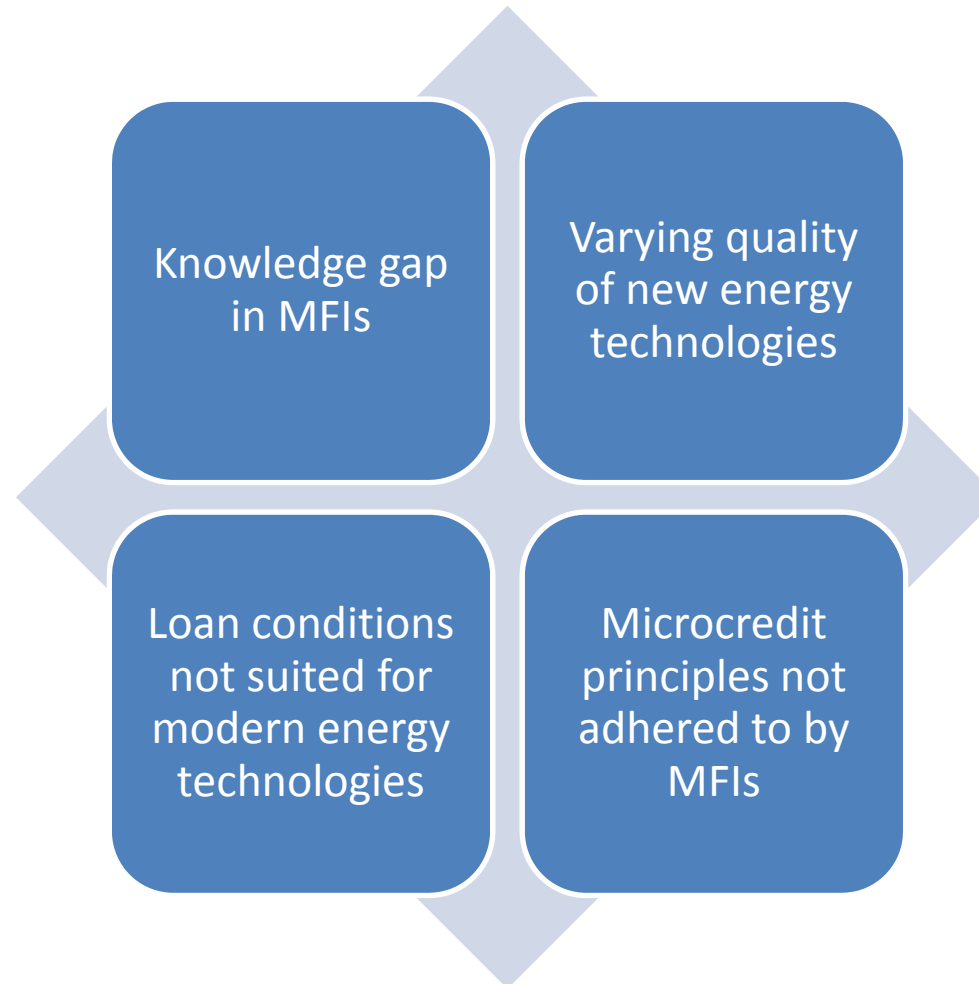
Loans to households needed for:

- Access,
- Purchase of small-scale power systems,
- Purchase of appliances

- E.g. Microfinance institutions, loans through savings and credit cooperatives, dealer credit...
- Tontine:
 - Kind of life insurance
 - Members give a sum of money to the tontine and receive an annual dividend on the investment
 - Shares are reallocated to other members if one dies
- Rotating Savings and Credit Association (ROSCA)
 - Members agree to meet for a specific period to save and borrow money from a common "pot".
 - Variation of consumer credit
- Modern Micro-credit
 - (Grameen credit, bank-NGOs partnership)
 - Village Saving and Lending Groups



Four key issues which form challenges in the provision of micro-credit to energy projects





Private participation in Infrastructure

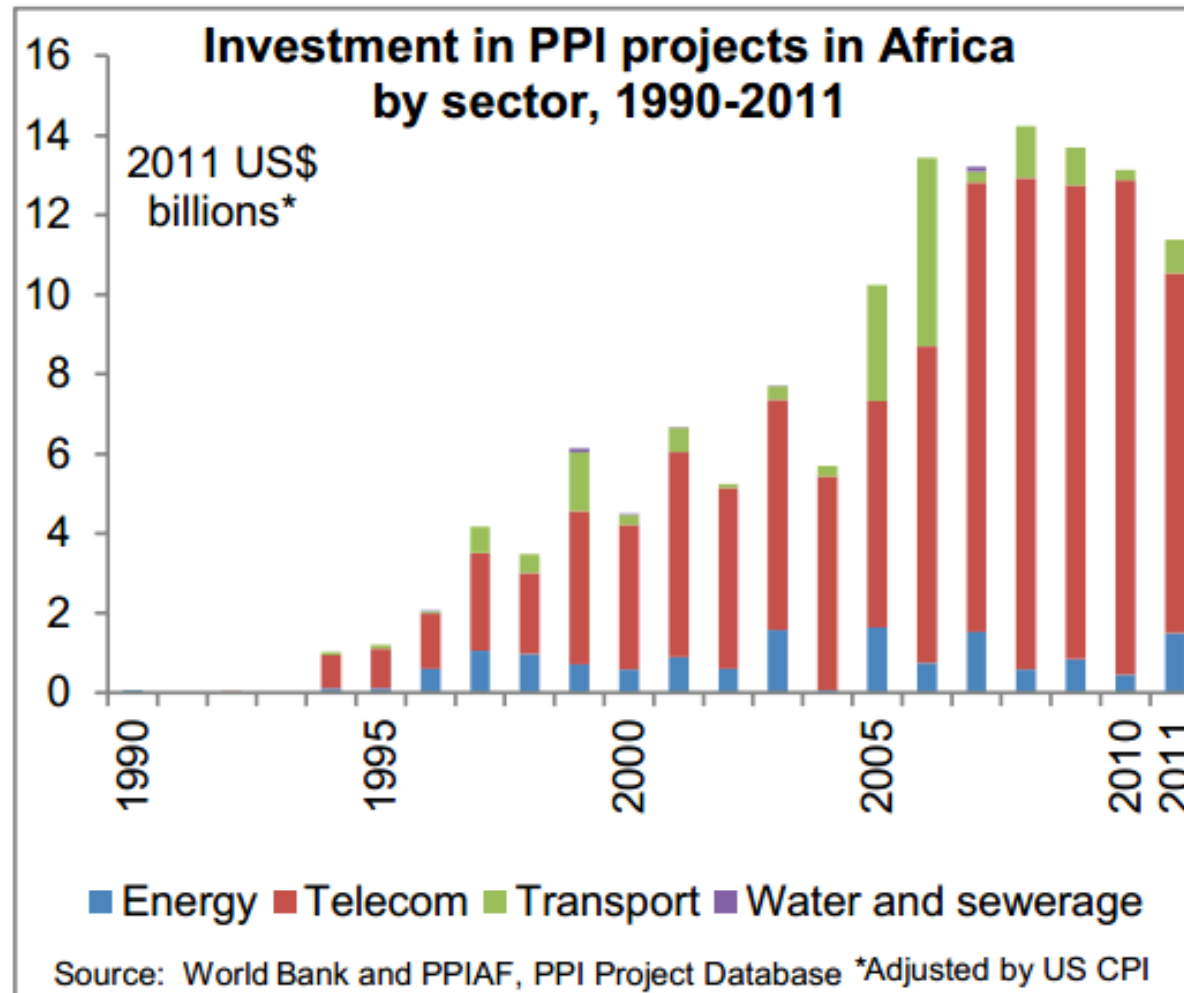
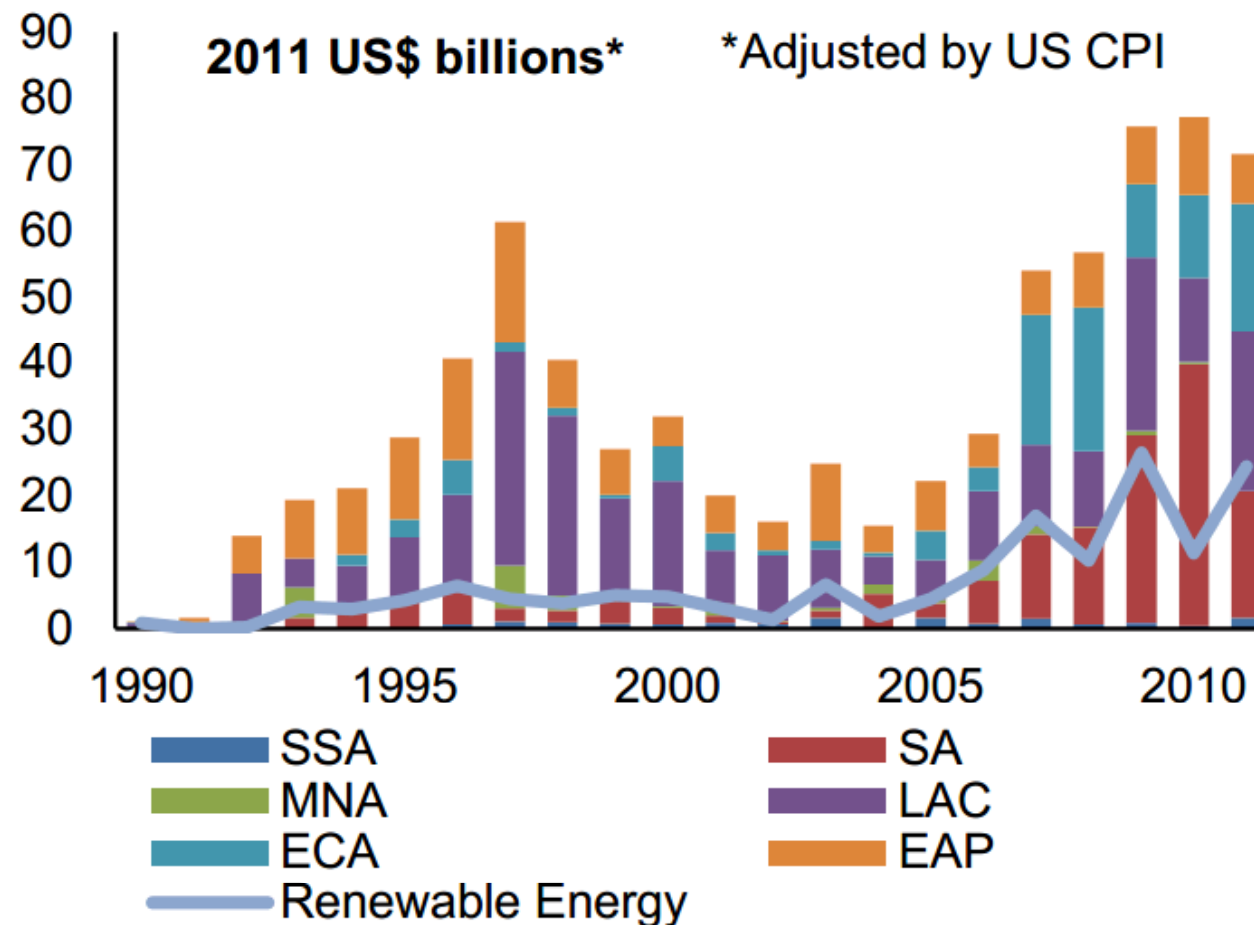




Figure 1: Investments in energy projects in developing countries, by region, 1990-2011



Source: World Bank and PPIAF, PPI Project Database



Policy frameworks

- A risk is the barriers to trade and investment – inhibiting access to new technologies and skills coming into the continent
 - High levels of taxations,
 - low support for foreign direct investment,
 - high interest rates, and
 - uncertainty about fiscal policies.
- Predictability is even more important

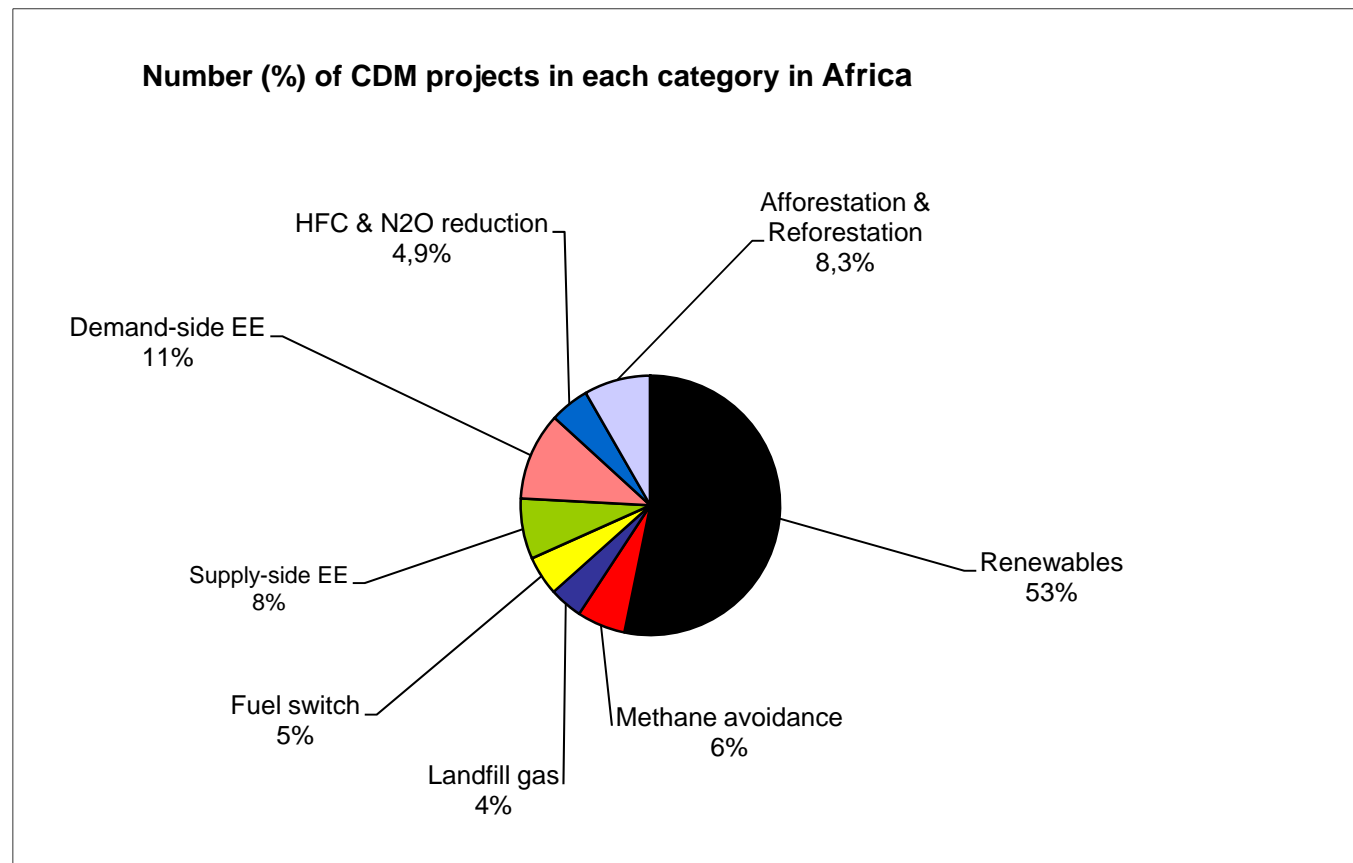


CDM – Gold Standard – Voluntary Carbon Standard

- Clean Development Mechanism, CDM: Set of rules and guidelines at www.unfccc.int.
- 1. A project idea note (PIN) investigates if there is a basis for starting the costly procedures
- 2. Develop a Project Design Document (PDD)
 - The PDD determines the project category and –type to know which of 170 approved baseline and monitoring methodologies that may be used to calculate and monitor the emission reductions obtained by the project.
 - Otherwise the applicant must follow guidelines for developing and proposing a new methodology
- 3. Get it approved by a designated operational entity (DOE)
- 4. Project can earn certified emission reduction certificates (CERs ~ carbon credits)
- 5. Project can be registered as a CDM project
- 6. Periodical monitoring reports – when approved by a DOE – will lead to issuing of CERs to the account of the project host.
- Information on CDM methodologies:
<http://cdm.unfccc.int/methodologies/index.html>



Pipeline: 9064 projects
265 projects in Africa
155 when excluding Morocco, Egypt, Tunisia, SA





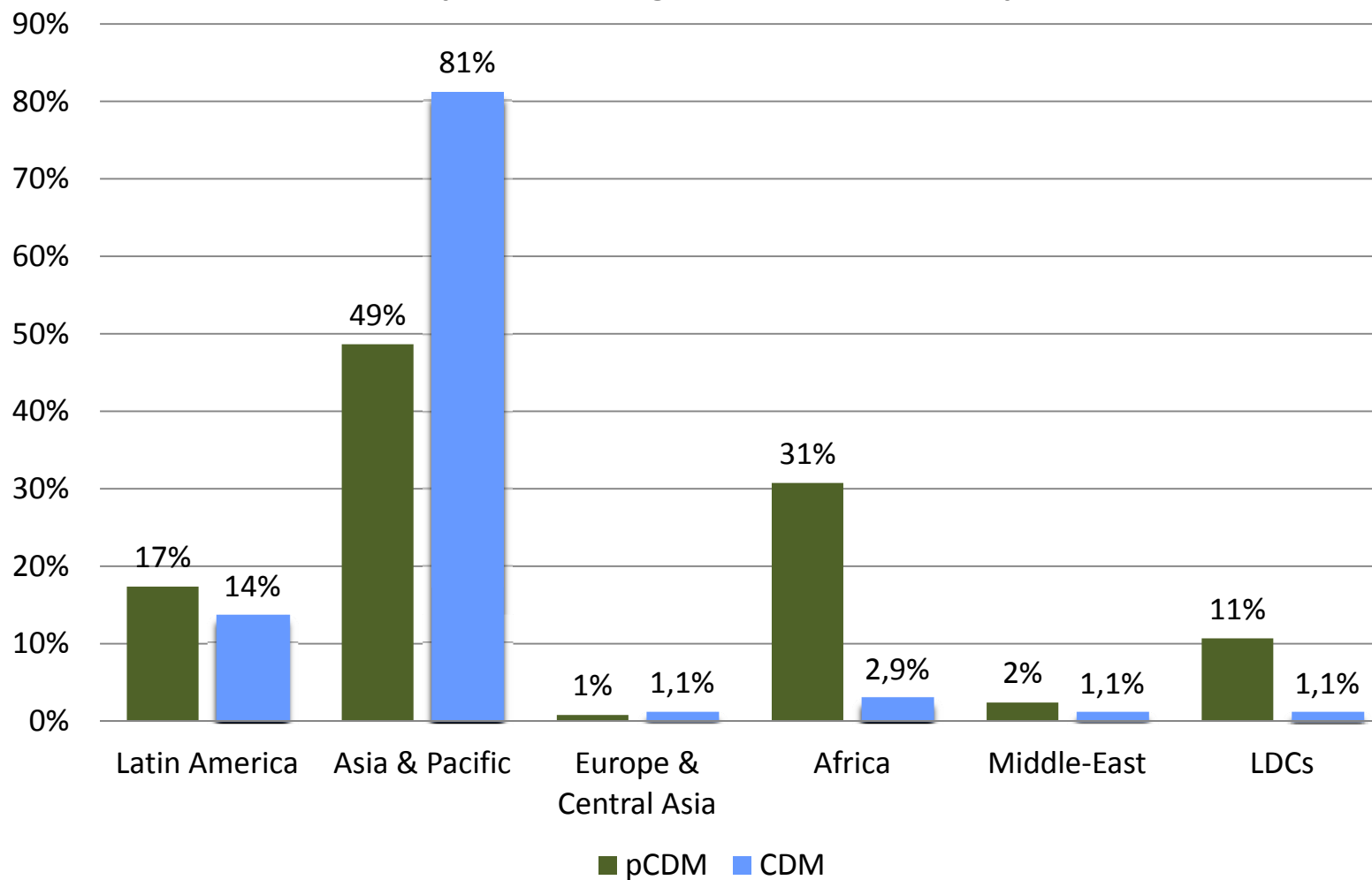
Programme of activities

- Programme of activities (PoA)
 - Group of similar CDM projects – multiple projects can be added at any time and over a wide area
 - Lower transaction costs,
 - Can cover many small and disparate emissions sources for projects that address non-renewable biomass for thermal services.
 - The approval process for individual CPAs is considerably simplified and the transaction costs are reduced.
- Programme of Activities: Set of rules and guidelines at: <http://cdm.unfccc.int/ProgrammeOfActivities/index.html>



Programme of Activities better: 115 in Africa out of total 374

% comparison of regional distribution of pCDM and CDM





Indirect Support Schemes

- Third-party projects: An entity other than the supposed owner can finance, install, own, and/or operate the electricity plant
 - Lease agreements
 - ESCO
 - metered sale of energy service (electricity, steam, heat)
 - Option: Tendering the financing - increases competition and attraction of the price bid
- Public Private Partnerships
 - build, lease, and transfer (BLT);
 - build, operate, and transfer (BOT);
 - build, own, and operate (BOO);



References

- Vasillaq Leno, *New Approaches in Rural Electrification Fund Design for Sustainable Development - The New Paradigm*
- World Bank. *The Private Participation in Infrastructure (PPI) Project Database*
- “*Financing low carbon energy access in Africa*”, Haruna Gujba et al., 2012, Elsevier
- Energy Facility Monitoring - Thematic fiches:
 - No. 3: Microcredit - a tool to improve access to modern energy
 - No. 6: Experiences on Setting up Public Private Partnerships for Energy Services
 - No. 9: ACP-EU Energy Facility Projects with CDM Potential
 - No. 10: Automatic Additionality for selected CDM projects (forthcoming)
 - No. 12: The Gold Standard micro scale: an alternative way for funding emission reduction projects