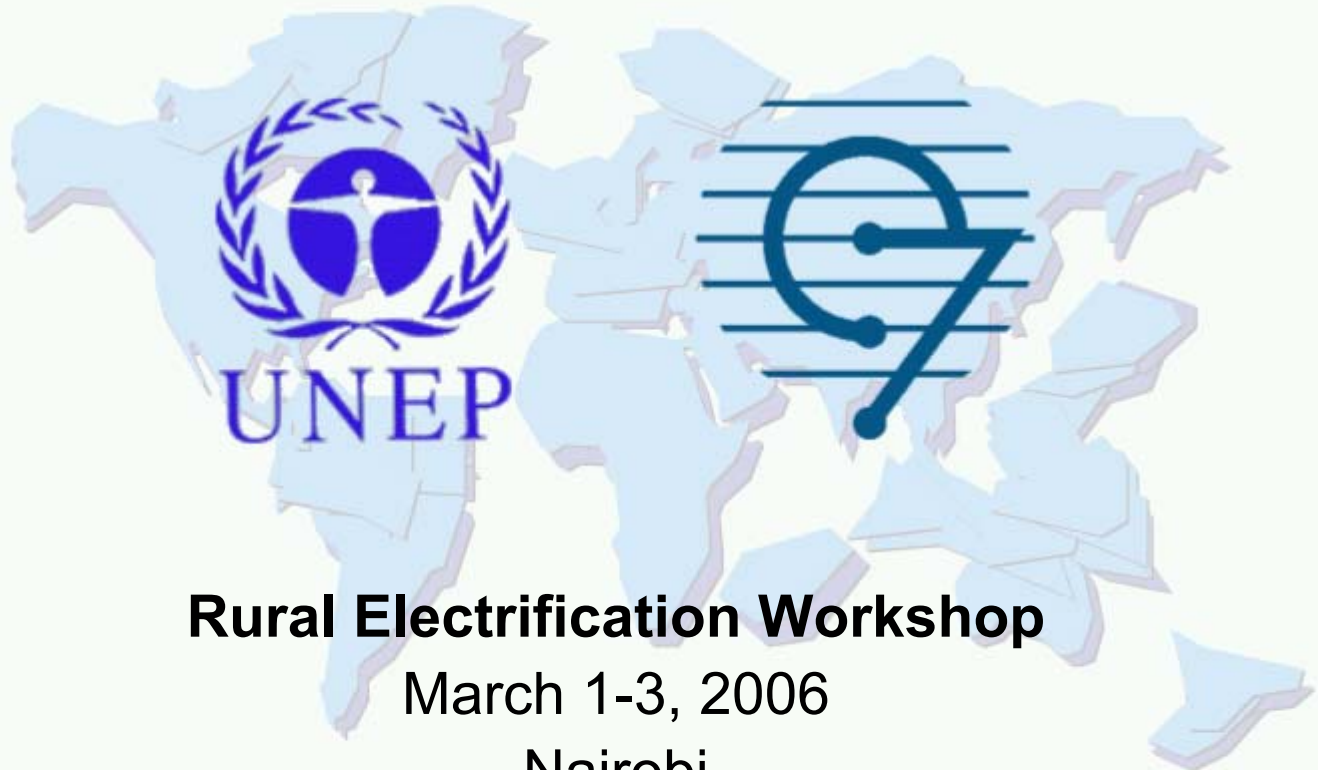


**Session 4.1**

# **Implementing Rural Electrification**

## **Projects (overview)**

**Guy Marboeuf - EDF**



# Presentation overview

- Project model
- Situation of the project before its implementation
- The place of renewable energies
- Implementation phases
- Conditions for success

# Project model



- Public Private Partnership: the case of a private operator in charge of:
  - Implementing the system...
  - ...but also its operation in the long term

# Situation of the project before its implementation

- Feasibility studies and surveys:
  - Good knowledge of the local context (socio-economical studies, demand and needs, solvability...)
  - Main technical choices (taking in account local energy resources assessment, settlement's density and structure...)
- Financing ensured (subsidies, access procedures...)
- An existing contract with local (or national) authorities
  - Concession, authorization, fee for service agreement...
  - It defines the objectives, the rules of the game, the commitments of the different actors

# The place of renewable energies



- To be favoured as far as possible: they are often the best solution
- To supply what the customers want: think “services” instead of installed kW!
- If the use of renewable energies imply over costs, the international community (or the country itself) must come to terms with them (not the beneficiaries to the detriment of their own development)
- The technologies used should be mature to enable their operational deployment (a RE project is not a R&D project)
- Pay attention to their acceptance by the population,
- The role of CDM (the case of small projects)

# Implementation phase - 1

- Company setting up
  - Legal aspects
  - Choice of establishments (head office, local agencies...)
  - Human resource implementation (Recruitment, educating, training, hiring and supervision...)
  - Management tools (adapted software...)
  - Offices, storage building, vehicles, insurance...
- Commercial implementation
  - Selling campaign...
- Technical studies (evolutionary system)
- Procurement
  - Adapted to the context
  - Turning to local markets as far as possible

## Implementation phase - 2

- Construction and commissioning – connecting the customers
- To organize customer management is prime importance
  - An adapted customer management tool (to know each customer situation at anytime)
  - Rules known by everybody (customer contract and education)
  - Manual or automatic prepayment
  - Various management procedures
    - Fixed price (+ power and energy limitation)
    - With meter
  - A rigorous and fair customer management

## Implementation phase - 3

- To organise maintenance (including spare parts procurement) and renewal of equipments
- To built financing linkages
  - To receive the subsidies dedicated to the project on time
- To educate customers
  - Use of energy
  - Energy efficiency
  - Risks of electricity
- To organise monitoring, evaluation and feedback
  - To measure the impacts of energy on human development
  - To establish improvement options
  - ...

# Conditions for success

- Stability of the rules
- Local integration
- Staff training and customer education
- To understand (and be understood by) the beneficiaries
- To supply each type of customer (domestic, collective, craft men, community...)
- Tariffs coherent with solvability of customers
- Customer management rigorous (and fair!)
- An approach in the long run
- No dogmatism in technical choices
- Use of mature solutions

**Pay attention to context, size and time!**