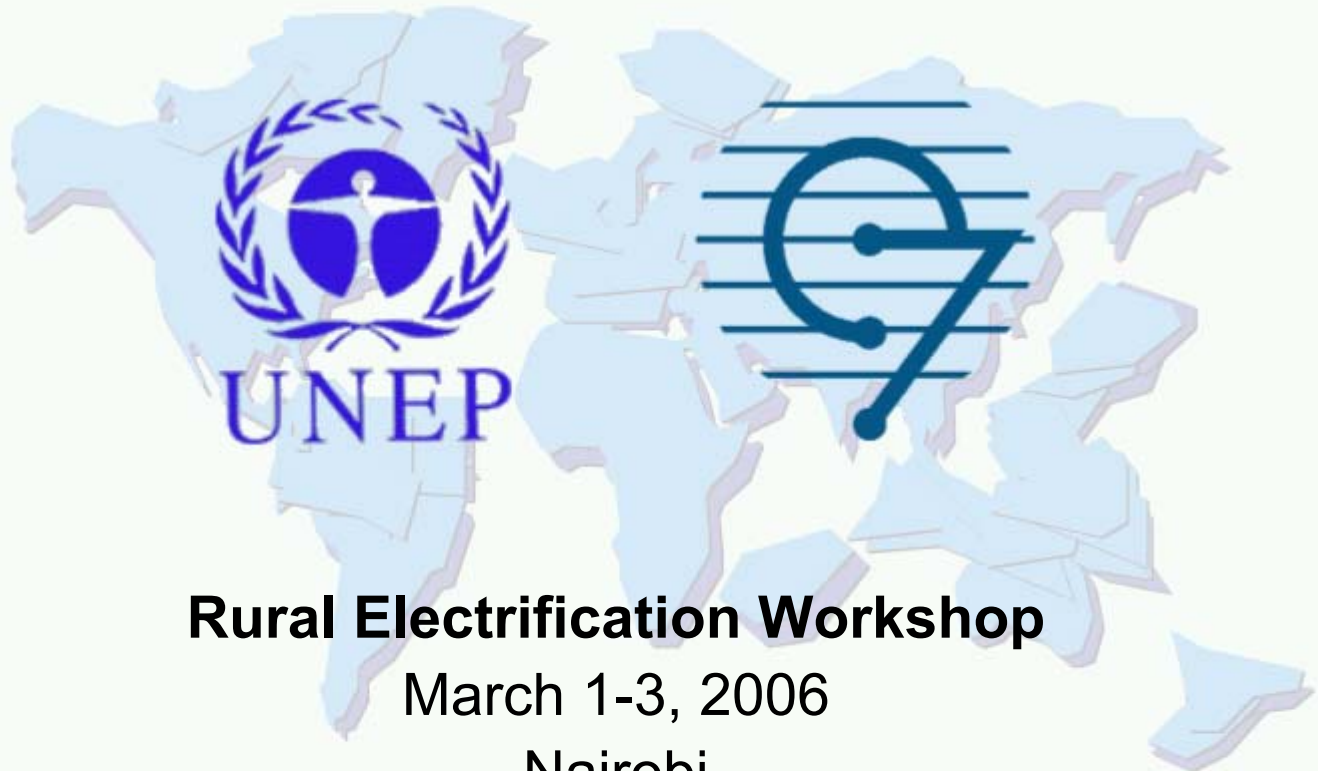


Session 3 Discussion Group 2



Rural Electrification Workshop

March 1-3, 2006

Nairobi

- **Cost Reductions**
- Pre Project Costs
 - Importance of planning
- Finance costs
 - Smart subsidies
 - Duty/ tax exemptions
 - Repayment terms (NB not cost reduction measure, affordability)
- Generation Costs
 - On Grid/ Off Grid/ Mini Grid
 - Expertise in particular technologies
 - Use of agricultural residues
- Transmission & Distribution Costs
 - New technologies (SWER etc), network design
- O&M Costs
 - Capacity building (training)
- Why must we have cost reductions?
 - Insufficient funding available
- Where are you providing electricity (location, pop. density, geographical features)

Grid Factors

- Pre Project Costs
 - Proper planning
 - Use local expertise (studies, local knowledge, equipment specs.)
- Finance costs
 - Smart subsidies
 - Duty/ tax exemptions
 - Repayment terms (NB not cost reduction measure, affordability)
- Generation Costs
 - On Grid/ Off Grid/ Mini Grid
 - Expertise in particular technologies
 - Use of agricultural residues
- Transmission & Distribution Costs
 - Minimise use of copper
 - Optimise use of equipment (e.g. transformer capacities, voltage)
 - Choice of voltage (e.g. 22kV vs. 33kV)

Off-Grid Factors

- Pre Project Costs
- Finance costs
 - Local manufacture of components/ equipment?
 - Competitive sourcing of equipment
 - Good governance & transparency
 - Conditions attached to financing (e.g. % of equipment from specific source)
 - Life cycle costs
- Generation Costs
 - Hybrid systems
- Distribution Costs
 - Loss reduction measures (cost v benefit balance)
 - Energy efficiency
 - Theft of electricity
- Affordability for end-users
 - Developing affordable standards (local)
 - ‘Ready boards’ + prepayment meters

Standalone Installations

- Choice of technology – life length
- SHS
- Taxation regime
- Reduce size of loads (e.g. LED lighting)
- Modular approach – increase capacity in line with load growth
- Subsidies