

RURAL ENERGY AGENCY (REA)



“Experience in terms of policies (subsidizing/ financing programmes) implemented by REA to improve access to sustainable/renewable energies in rural areas”.

Paper Presented on:

“UN Expert Meeting on Renewable Technologies as Energy Solutions for Rural Development - 9 to 11 February 2010”

Outline

- Overview of REA
- Roles & Functions of REA
- Energy Situation in Tanzania
- Electricity Generation and Supply
- Challenges
- Subsidy Provision

Rural Energy Agency/Rural Energy Fund

- Established under the **Rural Energy Act No.8 of 2005**;
- Promotes, coordinates and facilitates **private and public sector initiatives and entrepreneurship** in rural energy supply;
- Ensure continued electrification of **rural commercial centers and households**;
- Promotes **accessibility** and **affordability** to modern energy services by low income groups;
- Continued **research, development** and application of appropriate rural energy solutions;

Roles and Functions of the Agency

- Promote, stimulate, and facilitate, improved access to modern energy services in rural areas;
- Providing finance through the REF
 - Primarily as co-financing of those projects identified by the REA
 - REF provides subsidies
- Monitoring and evaluating progress
 - Learning from experience
 - Activities to improve chances for future success and improved impacts

Energy Situation in Tanzania

- Energy consumption in rural areas accounts for 85% of total national consumption,
- Energy balance is dominated by biomass-based fuels particularly fuel-wood,
- Biomass-based fuel accounts for more than 90% of primary energy supply,
- Commercial energy sources i.e., petroleum and electricity accounts for about 8% and 1.5% resp. of the primary energy used.

Energy Situation in Tanzania cont..

- Coal, solar, and wind account for about 0.5% of energy used,
- Tanzania has a forest area of about 35.5 million hectares of which around 80,000 hectares are plantation forest and 70,000 hectares are privately owned.

Energy Situation in Tanzania cont..

- Energy consumption per annum > 22 million tones of oil equivalent (TOE) per annum or 0.7 TOE per capita;
- Per capita electricity consumption: 150 KWh (versus 500 KWh required for quality life);
- Poor spend 35% of their income on energy
- Potential
 - Hydro: 4.7 GW (only 12% developed);
 - Coal: 1.2 billion tones of which 304 million tonnes are proven;
 - Natural Gas: > 45 billion cubic meters;
 - Others: Solar, Biomass, Wind, Geothermal
 - Petroleum/Oil: Prospecting activities on-going.

Electricity: Generation & Supply

- Installed Capacity stands at (1006 MW) of which
 - hydropower comprise 561 MW
 - thermal 445 MW
- Co-generation (Sugar & Wood Processing Plants^{u3}) accounts for: 35.8 MW
- Total connections in the country is 794,921;
- Average connections per annum is 50,000 customers (plan 100,000 customers/annum);

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u3

when Aggreko & Dowans are included (add 100MW)

user; 19.07.2007

Percentage of households with access to grid electricity (HBS 2000/2001)



Challenges

- **Increased electricity demand** which require massive investments in generation, transmission and distribution;
- Escalating petroleum prices;
- Inadequate **private sector participation** in investment;
- Limited long-term financing especially for small / isolated rural energy projects;
- High interest rates loans from commercial banks;

Subsidies to Project Developers

- Tanzania Energy Development Access Project (TEDAP) provides two types of subsidies to project developers:
 - Performance grant
 - Matching grant
- These grants are provided to buy down developers investment costs.

Performance Grant

- Eligible project
 - (i) Grid connected mini-grids;
 - (ii) Isolated/green-field mini/micro-grids;
 - (iii) Solar Photo-Voltaic (PV) Systems;
 - (iv) Off-grid energy investments including hybrid systems,
 - (v) Other non electric energy sources (biomass, biogas, and improved stoves).
- Funds cannot be used for financing or acquisition of existing assets (including land) or refinancing of existing debts or accrued interest.

Eligible project developers

- Any private enterprise,
- NGOs,
- Community,
- Co-operative
- Individual operating in Tanzania, registered as a legal entity, and having the capacity to enter into a binding contract under the laws of the United Republic of Tanzania, with sufficient technical, financial management and procurement capacity to implement the proposed project

Eligible products

- Power generators using renewable energy,
- Transmission and distribution networks and consumer connections to serve consumers on the mini-grids
- Solar photovoltaic systems ranging from solar lanterns to larger systems to meet household and institutional requirements.

Subsidy Provided

- ❖ Tanzania Energy Development Access Project (TEDAP) support facilities to project developers:

- ❖ **Mini-grid projects**

- ❖ US\$ 500 for each new connection in rural energy projects under mini-grids, and green-field areas ;
 - ❖ Maximum amount up to 80% of total investment cost

- ❖ **Commercial PV**

- ❖ Average of US\$ 2 per Watt-peak for solar PV installations

Subsidy payment

A: Mini-grid payment modalities:

- 40% mobilization and after signing;
- 40% after delivery of goods on site;
- 20% after approval of customer acceptance receipts by REA

Matching Grant

- MG will provide technical assistance to:
 - Government Institutions (MEM, REA, EWURA, Project Developers)
 - Financial institutions
 - Other stakeholders
- Forms of assistance provided
 - Training
 - Consultancy services

Disbursement

- First payment after at least fifty percent of counterpart contribution (in cash) from project promoter for the assignment has been disbursed and proof of this cleared by REA
- First payment is an amount equal to fifty percent (50%) of agreed level of support
- The balance 50% will be released when a completion report, acceptable to REA is submitted, together with supporting evidence of completion and achievement of agreed activities and supporting procurement documentation including ToRs;
- Payments based on agreed deliverables in Grant Agreement

THANK YOU