



ENHANCING THE DISTRIBUTION OF OFF-GRID ENERGY SOLUTIONS

State Of The Off-grid Energy Market In Tanzania

Presented by:

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OUTLINE

- Introduction
- Government Initiatives
 - Opportunities from Off-grid Projects
- Findings from Energy Access Report, 2016
 - Household connected to electricity
 - Population accessing electricity

INTRODUCTION

- Governed by the Rural Energy Act No. 8 of 2005;
- **Major objective** :To promote and facilitate Increase of access to modern energy service in Rural areas.
- **Major function**:To facilitate development of rural energy projects by providing grants, subsidies, technical assistance through private sector, NGOs, CBOs and Government Agencies

GOVERNMENT INITIATIVES

REA Strategic Plan for 2016/17 to 2020/21

Implemented by using two approach:

- “On-grid” Rural Electrification, i.e., GE and GD.
- “Off-grid” Rural Electrification – Supporting private sector firms/individual implementing renewable energy projects and community mini-grids.

ON-GRID RURAL ELECTRIFICATION

- **Grid Extension Projects** (7,325 Un-electrified Villages)
- **Grid Densification Projects** (4,395 Partial electrified villages)

Process

- Floated under International/National Competitive Tendering
- Eligible Electrical Contractors can apply and win the tenders
- Local preferences apply during evaluation processes.

OFF-GRID RURAL ELECTRIFICATION

- **Eligible Projects**

- 1. Grid connected mini-grids;
- 2. Isolated/green-field mini/micro-grids;
- 3. Solar Photo-Voltaic (PV) Systems;
- 4. Off-grid energy investments including hybrid systems; and Other non-electric energy sources (biomass, biogas, briquettes, pellets, energy woodlot farms and improved stoves).

OFF-GRID RURAL ELECTRIFICATION cont...

Eligible Project Developers

1. Public and Private Institutions;
2. Non-Governmental Organizations;
3. Community Based Organizations;
Co-operatives; and
4. Individuals operating in Tanzania registered as a legal entity.

AVAILABLE OPPORTUNITIES FROM OFF-GRID RURAL ELECTRIFICATION PROJECTS

Technical Assistance	Performance Grants	Credit Line Facility
<ul style="list-style-type: none"> • Feasibility Studies 	<ul style="list-style-type: none"> • Provided to buy down capital investment costs to lower the unit cost of the energy service provided; 	<ul style="list-style-type: none"> • Credit Line to provide long and short terms financing to rural energy projects: <ul style="list-style-type: none"> ➤ Long Term: Tenure up to 15 years, Grace period of 5 years; and ➤ Short Term: Tenure up to 5 years, Grace Period 2 years.
<ul style="list-style-type: none"> • Social Economic Studies and Market Analysis 	<ul style="list-style-type: none"> • Size of Performance Grant provided depend on the type of technology under consideration: <ul style="list-style-type: none"> ➤ Grid/Mini/Micro Grids : US\$ 600-25 per Connection; ➤ Solar PV: US\$ 5 per Watt- Peak Installed. 	<ul style="list-style-type: none"> • Credit Line Apply On-Lending Rate per Annum: <ul style="list-style-type: none"> ➤ Fixed during refinancing period. ➤ Interest rate accrued and capitalizes at the end of grace period
<ul style="list-style-type: none"> • Environmental and Social Impact Assessment 		
<ul style="list-style-type: none"> • Preparation of Bankable Business Plans 		
<ul style="list-style-type: none"> • Training and Capacity Building to Developers 		

KEY FINDINGS FROM *ENERGY ACCESS* *REPORT 2016*

A: HOUSEHOLD CONNECTED TO ELECTRICITY

- 3,753,615 households in Tanzania Mainland were connected to any form of electricity (32.8% of all households in Tanzania Mainland),
- Of the electrified/connected households, 74.9% electrified with grid (69.2% electrified with national grid and off-grid (5.7%)), private entity/individual electricity generated from owned sources(excluding solar) (0.4%) and solar power (24.7%),

KEY FINDINGS

cont.....

- Of the electrified households in Tanzania Mainland (3,753,615), rural households accounts for **1,301,749 (34.7%)**,
- Of the total rural households (7,701,218), electrified households (1,301,749) accounts for **16.9 %**,
- Sources of electricity for the connected rural households; grid (34.5%) of which national grid (31.4%) and **off-grid (3.1%)**, private entity/individual electricity generated from owned sources (excluding solar) (0.6%) and solar power (64.8%).

KEY FINDINGS

cont.....

- Of the electrified households in Tanzania Mainland (3,753,615), urban households accounts for 2,451,866 (65.3%),
- Sources of electricity for the electrified urban households; grid (96.4%) of which national grid (89.3%) and off-grid (7.1%), private entity/individual electricity generated from owned sources (excluding solar) (0.2%) and solar power (3.4%),

KEY FINDINGS

cont.....

- The best four regions with the highest proportion of households electrified with any form of electricity were Dar es Salaam (75.2%), Njombe (50.5%), Kilimanjaro (42.6%) and Katavi (40.0%),
- Rural households with **less than 10%** of their households connected to any form of electricity were **Rukwa (3.3%), Songwe (6.0%), Kigoma (6.7%), Shinyanga (7.0%), Simiyu (9.3%) and Manyara (9.7%)** respectively).

KEY FINDINGS

cont.....

- The best four regions with the highest proportion of households electrified with national grid were Dar es Salaam (98.9%), Kilimanjaro (86.5%), Arusha (79.9%) and Morogoro (72.7%),
- Regions with **less than 20%** of households connected to **national grid** were **Lindi (19.6%), Katavi (6.6%) and Mtwara (2.8%)**,
- The **best four regions** with highest proportion of households electrified with **off-grid** were **Rukwa (45.2%), Kigoma (34.2%), Mtwara (33.3%) and Katavi (29.9%)**

KEY FINDINGS

cont.....

- The **best four regions** with highest proportion of households connected to **solar power** were **Lindi (75.0%)**, **Njombe (67.6%)**, **Mtwara (64.0%)** and **Katavi (62.0 %)**,

KEY FINDINGS

cont.....

Sources of Energy for Lighting and Cooking

- 25.1% of households in Tanzania Mainland use electricity as one of the sources of energy for lighting,
- While the use of electricity as one of the sources of energy for cooking continue to decrease (reaches 0.3% in 2016), the use of bottled gas increases (reaches 7.2 % in 2016),

KEY FINDINGS

cont.....

- The use of firewood for cooking increased from 66.3% in 2011/12 to 71.2% households in 2016. Households in Simiyu leads in the use of firewood,
- The use of charcoal for cooking increased from 28.2% in 2011/12 to 37.0% households in 2016. Households in Dar es Salaam leads in the use of charcoal for cooking,
- The use of kerosene for cooking increased from 2.5% in 2011/12 to 5.0% households in 2016. Households in Dar es Salaam leads in the use of kerosene for cooking,

KEY FINDINGS

cont.....

- An average of 53 units of electricity is being used by households per month in Tanzania Mainland. Rural (44 units) and urban (55 units).

KEY FINDINGS

cont.....

B. ACCESSIBILITY OF ELECTRICITY

- **67.5%** of the population in Tanzania Mainland had access to grid electricity by 2016,
- **49.5%** of the Rural population in Tanzania Mainland had access to grid electricity by 2016,
- Rural areas of the **Rukwa region** had the lowest proportion of **population (15.4%)** accessing grid electricity. It is followed by **Shinyanga (23.4%)** and **Songwe region (24.5%)**.

KEY FINDINGS

cont.....

B: ACCESSIBILITY OF ELECTRICITY Cont..

- 97.5% of the Urban population in Tanzania Mainland had access to grid electricity by 2016,
- Urban areas of the Katavi region had the lowest proportion of population (70.6%) accessing grid electricity in Tanzania Mainland.

THANK YOU

