

Renewable Energy Support Schemes & Capacity Building Needs

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Background

- The national electricity access is 14% while in the rural areas, access is only 7%.
- The electricity sector was unbundled into generation, transmission and distribution following the Electricity Act 1999.
- The generation companies sell electricity in bulk to transmission company which in turn sells it to distribution companies
- The Electricity Act 1999 also provide for the established of a Regulator and the Rural Electrification Agency (REA)
 - REA is responsible for promoting, supporting rural electrification programs in addition, RE below 20MW.
- The rural electrification target is 26% by 2022 from 7% in 2013, (1,415,000 new connections on grid and off-grid)

RE Feed-in-Tariff 2013

- The Revised FiT applicable 2013-2016

Technology	Tariff (US\$)/kWh	O&M %age	Cumulative Capacity Limits (MW)				Payment Period (Yrs)
			2013	2014	2015	2016	
Hydro (9 >= 20 MW)	0.079	7.61%	30	90	135	180	20
Hydro (1 >= 9 MW)	Linear tariff ¹	7.24%	30	75	105	135	20
Hydro (500kW >= 1 MW)	0.109	7.08%	1	2	2.5	5.5	20
Bagasse	0.081	22.65%	30	70	95	120	20
Biomass (MSW)	0.103	16.23%	5	15	25	45	20
Biogas	0.115	19.23%	5	15	25	45	20
Landfill gas	0.089	19.71%	0	10	20	40	20
Geothermal	0.077	4.29%	10	30	50	75	20
Wind	0.124	6.34%	25	75	100	150	20

Global Energy Transfer Feed-in-Tariff (GET-FiT) Programme

- The purpose is to fast track implementation of at least 15 small-scale RE generation project of 1-20MW promoted by private developers with an installed capacity of 150MW. An additional 20MW is targeted from solar through a tender
- GET FIT is supported by Governments of Norway, United Kingdom, Germany, EU and the World Bank with the Partial Risk Guarantee
- Objectives
 - Reduce emission of 11Mton in 20year
 - Increase energy production by 20%
 - Facilitate energy access to 200,000 households
 - Leverage close to EURO 400million in public and private sector investment in RE projects.

GET-FiT Programme for Uganda

- **Why was GET-FiT Necessary?**
 - The current feed-in-tariff has been considered low by the private sector.
 - The supply-demand gap is narrowing and there is an urgent need to avoid expensive thermal or load shedding before the hydro power station under implementation are commissioned.

What does GET-FiT provide?

- Premium
 - A top up payment to RE projects of USc1.4/kWh for hydro and USc1.0/kWh for biomass and bagasse for 20 yrs operation.
 - 50% of premium is paid at the commercial operation date and the remaining during the 5yrs of operation.
- World Bank Partial Risk Guarantee Facility provide:
 - Facility short term liquidity support to UETCL PPA obligation
 - Termination compensation in the event that government/utility default under PPA/IA
 - Commercial debt guarantee
- GET-FiT solar facility grid connected:
 - PV tender/reverse auctioning for 20MWp (4x5MWp):
 - GET-FiT will provide top-up between pre-determined tariff of USc 11 and tariff of the successful bidders. .

GET-FiT Progress

- 12 RE projects with a capacity of 103 MW total approved by Investment Committee. The expected investment is USD 327m
- Uganda's first ever solar PV reverse tender for 20MW successfully completed.
- USD160 M window approved for support under the WB GET FiT Partial Risk Guarantee program.
- GET-Fit announced to developers intention to request for proposals for prequalification under the 3rd round of GET-FiT mechanism in 4th Quarter of 2014. The target is up to 185MW of RE

Financial Schemes

- There are a number of financial instruments available for RE in Uganda
 - Capital subsidies from REA covering the cost of the local distribution grid in order to buy down the end-user tariff
 - The liquidity insurance facility from Uganda Energy Credit Capitalization Company Ltd (UECCC) to enable Participating Financial Institutions (PFIs) extend the tenure of the loans.
 - Partial Risk Guarantee facility from UECCC available during the construction phase to cover for cost overruns of up to 15% of the total project cost. Any addition cost overrun up to 50% is finance 50:50 by both parties.
 - Bridge Financing Facility from UECCC to cover interest payments during the construction stage of a project, before it starts generating cash flows but payable after commissioning.
 - Transaction Advisory Services from UECCC

Capacity Building Needs for Distributed Renewable

Constraints

- Distributed renewables consist a variety of technologies that require different professions. Even when dealing with one technology, distributed renewable require professions in generation, distribution, sales/operations and maintenance.
- There is rapid change technology, prices and business models.
- There are few renewable projects that have been implemented in the country

Capacity building requirements should be look at 3 levels

- National Institutions:
 - Ministry responsible for Energy to be able to design favorable policy. There is a need for demonstration/pilot projects
 - Rural Electrification Agency to identify renewable energy resources, map areas suited for distributed renewable, undertake studies and appraise projects.
 - Regulatory Authority to formulate appropriate guideline and licensing to create good enabling environments to enable private companies to implement RE mini-grids.
 - Academic and research institutions involved in training and research.
 - Electricity utility to analysis the suitability of the grid to absorb grid connected renewables.
- Private sector: They lack of the broader understanding of distribute renewable technologies, skills for design, installation and maintenance.
(Consultants, Developers and Financial Institutions)
- Local communities: to be able to organize themselves, operate and maintain isolated renewable energy systems.