Supporting Renewable Energy Production with Sound Regulatory Frameworks: Insights into the Global Energy Transfer Feed-in Tariffs

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The electricity sector was unbundled in 2001 separating generation, transmission and distribution.

Established an independent electricity regulator “Electricity Regulatory Authority”.

The regulator is responsible for issuance of licenses, setting and enforcement of standards, setting of tariffs and other charges, etc.
Overview of the Electricity Sector

- More than 80% of power supply is from hydro.
- Peak demand for electricity stands at about 512 MW.
- Load shedding reached 150 MW or 30% of total demand in 2011.
- The commissioning of the 250 MW Bujagali hydropower plant helped to eliminate load shedding significantly.
- Demand for electricity is growing at 12% per annum.
- Projections indicate that the country might return to load shedding by end 2014 or switch on expensive HFO generators.
Renewable Energy Potential

- Uganda has unexploited RE potential (hydro, bagasse cogeneration, biomass, solar, etc).
- Key challenges highlighted by private investors included:
  - Lack financial viability of investments (low FITs);
  - Significant perceived political risk;
  - Lack of creditworthiness by the off taker;
  - Absence of a standardised PPA leading to long and protracted negotiations;
  - Lack of clarity on the interconnection arrangements.
What is GETFiT?

- Global Energy Transfer for Feed-in-Tariff (GETFiT) is a program to fast track development of Renewable energy projects in East Africa (EA).

- Main objective of GETFiT is to assist EA nations pursue climate resilient low-carbon development.

- To be achieved through supporting development of small-scale RE generation projects by private developers.

- Uganda is the pilot country.
Why Uganda became a Pilot Country?

- The institutional and legal framework is conducive for private sector participation.
- Clear RE policy.
- Regulatory commitment to increase tariffs to cost reflective levels.
- A comprehensive study initiated by the regulator to review the REFIT phase 2 had already been initiated in 2011.
- The review of the REFIT was aimed at providing a special incentive scheme to fast track the uptake of RE.
## Revised REFIT

<table>
<thead>
<tr>
<th>Technology</th>
<th>Current REFIT (Usc/kWh)</th>
<th>Revised REFIT (USc/kWh)</th>
<th>Top Premium (Usc/kWh)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydro (9&lt;=20 MW)</td>
<td>8.5</td>
<td>9.8</td>
<td>1.3</td>
</tr>
<tr>
<td>Hydro (1&lt;=9MW)</td>
<td>9.8</td>
<td>11.1</td>
<td>1.3</td>
</tr>
<tr>
<td>Hydro (0.5&lt;=1MW)</td>
<td>10.9</td>
<td>12.7</td>
<td>1.8</td>
</tr>
<tr>
<td>Bagasse</td>
<td>8.1</td>
<td>9.1</td>
<td>1</td>
</tr>
<tr>
<td>Biomass</td>
<td>10.3</td>
<td>10.9</td>
<td>0.6</td>
</tr>
<tr>
<td>Biogas</td>
<td>11.5</td>
<td>11.5</td>
<td>0</td>
</tr>
<tr>
<td>Landfill gas</td>
<td>8.9</td>
<td>8.9</td>
<td>0</td>
</tr>
<tr>
<td>Geothermal</td>
<td>7.7</td>
<td>7.8</td>
<td>0.1</td>
</tr>
<tr>
<td>Wind</td>
<td>12.4</td>
<td>13.0</td>
<td>0.6</td>
</tr>
</tbody>
</table>
GETFiT utilises three separate instruments:-

1) FiT Premium/top-up payment mechanism

2) Off taker and Political Risk Guarantee from World Bank

3) Private Sector Financing
Participating Partners

i. Norway

ii. Germany

iii. UK

iv. World Bank

v. EU

vi. Deutsche Bank

vii. KfW
Eligibility Criteria

- Must be a RE project covered by the REFIT.
- Projects should be holding relevant permits and licenses prescribed by the Electricity Act, 1999.
- Projects must satisfy the technical, financial as well as environmental/social due diligence.
Governance Structure of GETFiT

1) Steering Committee
2) Investment Committee
3) Secretariat
Expected Benefits

- Help stabilize power sector financing by adding least cost RE generation capacity.
- Funding by Development Partners expected to exceed 95 mil Euro.
- Reduce average generation costs.
- Foster competition in Ugandan RE construction space.
- Reduce transaction costs for future RE projects through use of standardized PPA, cost reflective REFiT, improved permit & licensing procedures, etc.
In April 2013 the Program called for proposals for 1st phase.

15 private developers applied to GETFiT for consideration.

Second Round of GETFiT Call for Proposals will be in November 2013.
### Approved GETFit projects phase 1

<table>
<thead>
<tr>
<th>Projects</th>
<th>Technology</th>
<th>Installed Capacity (MW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kakira Sugar</td>
<td>Bagasse</td>
<td>20</td>
</tr>
<tr>
<td>Kikagati</td>
<td>Hydro</td>
<td>16</td>
</tr>
<tr>
<td>Nyamwamba</td>
<td>Hydro</td>
<td>9.2</td>
</tr>
<tr>
<td>Rwimi</td>
<td>Hydro</td>
<td>5.5</td>
</tr>
<tr>
<td>Nengo Bridge</td>
<td>Hydro</td>
<td>6.7</td>
</tr>
<tr>
<td>Waki</td>
<td>Hydro</td>
<td>4.8</td>
</tr>
<tr>
<td>Siti 2</td>
<td>Hydro</td>
<td>16.5</td>
</tr>
<tr>
<td>Siti</td>
<td>Hydro</td>
<td>5</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td></td>
<td><strong>83.7</strong></td>
</tr>
</tbody>
</table>
## Deferred GETFiT projects Phase 1

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Technology</th>
<th>Capacity (MW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sindilia / Butama Hemas</td>
<td>Hydro</td>
<td>7.5</td>
</tr>
<tr>
<td>Ndugutu / Butama Hemas</td>
<td>Hydro</td>
<td>5.1</td>
</tr>
<tr>
<td>Alarm Group Sugar &amp; Allied</td>
<td>Bagasse</td>
<td>11.9</td>
</tr>
<tr>
<td>Kakaka</td>
<td>Hydro</td>
<td>9</td>
</tr>
<tr>
<td>Lubilia</td>
<td>Hydro</td>
<td>4</td>
</tr>
<tr>
<td>PH Industrial Farms</td>
<td>Biomass</td>
<td>1.5</td>
</tr>
<tr>
<td>Muvembe SHP</td>
<td>Hydro</td>
<td>6.5</td>
</tr>
<tr>
<td>Solar PV</td>
<td>Solar PV</td>
<td>50.0</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td></td>
<td><strong>95.5</strong></td>
</tr>
</tbody>
</table>
A policy on interconnection criteria has been developed.

The feasibility for interconnection is the responsibility of project developers.

Funding and implementation of power evacuation lines below 5KM is the responsibility of project developers.

Government is responsible for funding and implementation of deep interconnection (i.e. above 5 KM).
The standardised PPA and IA have been finalised.

Expected to reduce transaction costs.

Guaranteed off take.

Contracts are for 20 years.

Tariffs are in US Dollars and subject to escalation for inflation.

The off taker takes the risk of the network outage.
Concluding Remarks

GETFiT program through leveraging private capital is helping Uganda to unlock its renewable energy potential.

The success derives from Government’s commitment to mitigate the perceived risks by lenders and project sponsors and commitment to adjust tariffs to cost reflective levels.
Thank You!

Electricity Regulatory Authority