

# GET FiT Uganda

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**ESSAY WINNER**

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#### **Acknowledgments**

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Cover photo: Dana Smillie / World Bank

The main objective of the GET FiT Program is to assist African nations in pursuing a climate resilient low-carbon development path resulting in growth, poverty reduction and climate change mitigation. Roll-out of the program started in 2013 in Uganda. The program, which has been jointly developed by the Government of Uganda, the Uganda Electricity Regulatory Authority (ERA) and the German Development Bank, Kreditanstalt für Wiederaufbau (KfW), is designed to leverage private investment into renewable energy generation projects in Uganda. GET FiT is being supported by the Governments of Norway, the United Kingdom, and Germany and the European Union (EU) through the EU Africa Infrastructure Fund, as well as the World Bank through their IDA Partial Risk Guarantee (PRG) instrument.

The Get FiT Program has been labeled a “PPPP (Public-Public-Private-Partnership)” approach, to which Government of Uganda, international development organizations and private developers contribute jointly. The partners rallied behind GET FiT cooperate in a synergetic way to share the costs and risks for the financing and implementation of small-scale renewable energy projects across various generation types. The Get FiT approach leverages private investments in the energy sector and thereby secures energy supply at affordable cost, which generates direct economic benefits for Ugandan citizens. GET FiT is a mechanism contributing to the sustainable development of clean “green” energy and the decentralization of generation capacity with tangible positive outcomes for the Ugandan environment and grid stability.

## **1. Energy supply in Uganda**

Energy supply is one of the key development challenges in Uganda. Due to rapidly increasing demand there is a looming power supply shortage for the Ugandan national power grid. Demand on the national grid is starting to out-strip supply. As a result of power and fuel supply shortages between 2006-2008, Uganda saw its GDP growth reduced from 6-6.5 % to 4.5 % per annum, costing the economy hundreds of millions of dollars. Unless new renewable power sources are brought online, the sector will soon again face load-shedding or become reliant upon expensive thermal generation again.

Furthermore, there are other critical bottlenecks which the Uganda energy sector is facing:

1. Before the Get FiT program started, a patchy enabling environment for investment in small renewables was hindering investments. Despite significant potential, especially in small hydropower and biomass, developers and investors expressed significant frustration in terms of ensuring predictability, consistency and transparency in bringing their projects from concept to profitable investment.
2. Insufficient incentives to encourage investment in small renewables. While ERA had introduced a Renewable Energy Policy (2007) and a multi-generation type REFiT policy for promoting small-scale renewables, the proposed tariff levels are widely viewed by investors as insufficient to unlock investments in the sector. These relatively low tariff levels combined with uncertain and often prolonged development processes have provided inadequate financial incentives especially for early-stage equity investment towards project development.
3. High demands on the Government of Uganda as a counterpart in the timely realization of small renewables. The demands and expectations placed on public authorities in light of private

investment in renewables, especially those that are part of project non-recourse financing, is considerable. There are high demands especially from financial investors in terms of predictable policies and actions, transparency, responsiveness, analytical capabilities, coherent negotiations and ultimately guarantee backup for payments and defaults. Like for most countries in the region, Ugandan authorities are in a constant process to meet these expectations and generally require international expertise to complement their efforts.

4. Promoting renewables while minimizing public/end-user financial burden. The Government of Uganda and ERA are committed to full cost reflectiveness in the energy sector. However, balancing actual costs and the ability of Ugandan consumers to pay for their power is one of the key challenges faced by the sector. With an average of about EURc 15 per kWh, Ugandan consumers are already paying a high price for power, also in comparison with neighboring countries. Supporting investments in renewables have long term financial impact and while there is a clear economic incentive to promote small renewable generation with its relatively short lead times, ERA must take a closely considered and balanced approach to ensure an efficient level of support. The relatively weak enabling environment and perceived risk levels made the achievement of this balance particularly challenging for a regulator.

## **2. Instruments of GET FiT to address these bottlenecks**

The Get FiT program consists of five mutually reinforcing components:

### **I. GET FIT Premium Payment Mechanism (GFPPM)**

Small-scale renewable energy generation projects in an advanced planning status and with a valid development permit by ERA can apply for premium payments through participation in a competitive request for proposals (RfP) and subsequent evaluation process. The premium payments constitute a result-based incentive grant designed to enhance the financial viability of the selected projects and are payable to the project developers in addition to the relevant REFiT tariffs determined by the ERA of Uganda. Premium payments will be structured as payments per kWh to selected private developers, calculated on the basis of expected generation of eligible projects over the lifetime of the 20-year standardized power purchase agreement (PPA) which they are expected to sign with the Uganda Energy Transmission Company Limited (UETCL). The premium payments to be provided per technology are summarized in Table 1-Column 3 below.

**Table 1: Payment Structure**

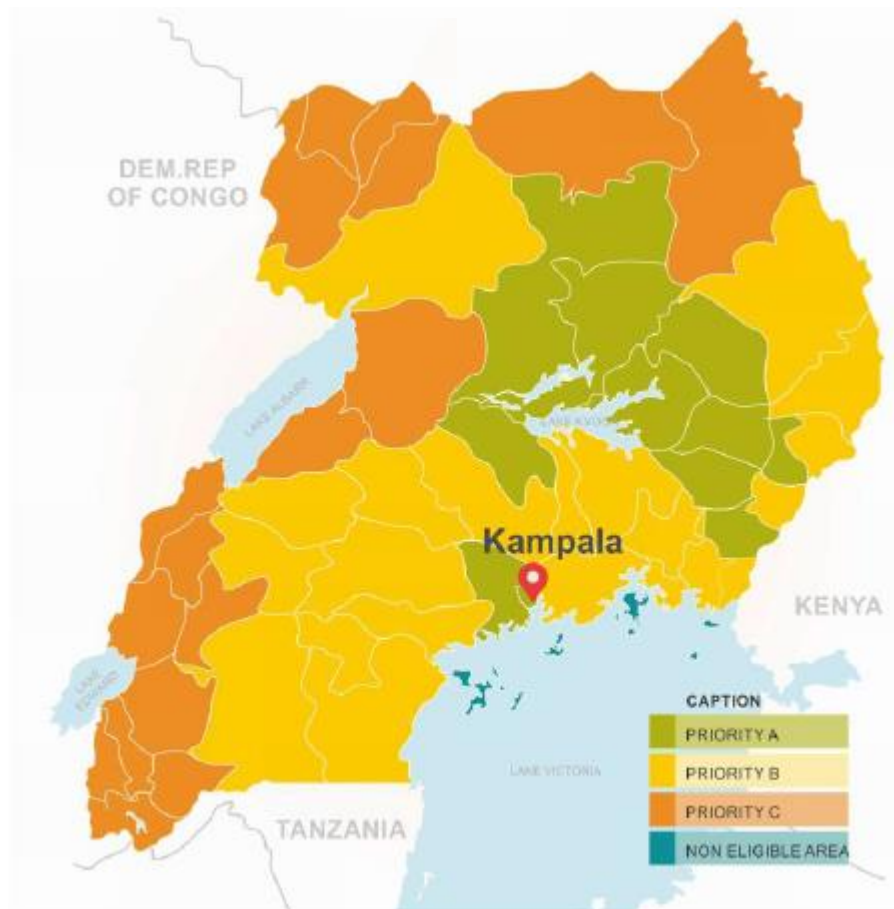
Technology	Current REFIT Tariff (US\$/kWh)	GET FiT Premium (US\$/kWh)	Payment Period (Yrs)	Cummulative Capacity Limits (MW) 2015
Hydro (9 >= 20 MW)	0.085	0.014	20	135
Hydro (1 >= 9MW)	Linear tariff	0.014	20	105
Hydro (500kW >= 1)	0.115	Not Included	20	2.5
Bagasse	0.081	0.005	20	95
Biomass (MSW)	0.103	0.01	20	25
Biogas	0.115	N/A	20	25
Landfill gas	0.089	N/A	20	20
Geothermal	0.077	N/A	20	50
Wind	0.124	N/A	20	100

Actual premium levels per kWh do not vary across individual small-scale renewable energy generation projects in the same technology group. A two-staged disbursement is applied for the feed in tariff (FiT) Premium Payment Mechanism. 50% of the FiT premium will be disbursed upon Commercial Operation Date, thus after successful completion of plant and demonstration of ability to produce. The remainder of FiT premiums (50%) will be disbursed alongside the PPA against energy delivered, but limited to a 5-year period. Support to projects under GET FiT will thus follow a results-based logic.

## II. GET FiT Solar Facility

Technology costs for solar PV have plummeted in recent years, while investors show increasing interest for investment in solar PV in East Africa. The vast potential, the short lead-time and geographic flexibility of solar PV technology lead ERA to approach KfW in 2013 to include a component targeting on-grid solar PV under the GET FiT Solar Facility. The funds for this additional component of the GET FiT Program are provided by the EU. The GET FiT Solar Facility involves a reverse auction approach, whereby ERA has defined a tariff of USDc 11 for the per KWh contribution of UETCL and GET FiT will provide the required top-up / gap payments to the tariffs offered by successful bidders. Thus, the amount (MW) of PV installations supported by the available GET FiT budget is a function of the reverse auction outcome. The facility benefits from the design and administrative set-up of the overall GET FiT Program and is implemented under its umbrella. The first tender resulted in the selection of 4x5MWp installations in Eastern Uganda. Figure 1 illustrates the prioritized geographic areas of the country, as determined by UETCL, Uganda's national distribution company (UMEME) and ERA.

**Figure 1: Priority regions under the GET FiT Solar Facility (based on insolation conditions, demand and grid readiness)**



### **III. Support to Standardization of legal documents.**

Bankable PPAs and Implementation Agreements (IAs) as well as the related Direct Agreements are key for successful structuring of independent power producers, especially when they are project financed. While Uganda already had a standard set of legal documents before GET FiT, developers and their banks were not comfortable with the drafts leading to lengthy negotiations and case by case amendments. With the support of GET FiT an experienced law firm (Trinity International LLP) was contracted in 2012 to support UETCL, Government of Uganda and ERA in the review and standardization of PPA, IA and Direct Agreements for small independent power producers. In a consultative process, developers, their banks and lawyers were able to provide input, ensuring broad acceptance of the revised documents. By standardizing the documentation, transaction costs are reduced for both public and private stakeholders.

### **IV. World Bank Partial Risk Guarantee**

Government of Uganda has requested the World Bank to set up a Partial Risk Guarantee (PRG) for projects benefiting from the REFiT.

The US \$160 million committed for the PRG facility are used for three complimentary risk-mitigating components:

- I. Facilitate the provision of short term liquidity support to the benefit of UETCL's PPA obligations.
- II. Termination compensation for events of governmental/utility default under the PPA / IA.
- III. Commercial debt guarantee.

The PRG is independent from the other GET FiT components: Developers can choose to apply for the PRG if they consider it necessary; there is no obligation for projects supported by the premium payment mechanism to utilize the PRG. Also, projects not benefitting from GFPPM can approach the PRG.

## **V. Technical Assistance for Ugandan Regulator**

The Technical Assistance Facility for ERA includes measures ensuring the long term sustainability of the arrangements for support to renewable energy in Uganda, including enhancement of skills for REFIT tariff modelling, project due diligence expertise, competitive bidding procedures as well as support for wheeling arrangements. The Technical Assistance Facility finances targeted trainings for selected staff members and groups through external as well as on-the-job training.

## **3. Opportunities and effects of Get FiT**

Uganda has one of the most liberalized power sectors in Africa. In 2007, the Government of Uganda introduced the Renewable Energy Policy and a multi-generation type REFIT policy for promoting small-scale renewables. This REFIT policy provided a particularly attractive entry point – and exit strategy – for the GET FiT Program. Specifically, it was widely viewed in the market that the initial REFIT was slightly low to stimulate private investment in renewables in Uganda. Balancing end-user ability to pay and industry requirements, GoU and ERA committed to gradually increase the REFIT to a truly cost reflective level. This introduced a time-bound opportunity for cooperation to ensure fast-tracked promotion of new renewables in the light of the looming generation crisis. There is increasing interest by a diverse range of investors in renewable energy in Eastern Africa.

The 16 projects thus far approved by the Program all have more or less formal commitments for full investment needs – totaling some US \$400 million. The observed interest by local and international developers, Developing Finance Institutions, World Bank, international equity investors and to limited extent commercial banks in the GET FiT Program has been overwhelming, culminating with 17 applications from independent power producers for the first two RfP rounds (for hydro, biomass and bagasse) and 24 Expressions of Interest for the on-grid solar power tender launched by ERA under the GET FiT Solar Facility. Finally, in late January 2015, 18 hydropower applications were received for the third and final RfP round (open to hydro, bagasse and biomass project developers). Given the above and the results-based design of the support, development partners have been highly positive and provided full support - matched by considerable expectations regarding results. The design ensures that donors will provide project-level payment only once results are delivered – increased production of renewable energy, coupled by reduced emissions and socio-economic benefits. The results-based design ensures alignment of incentives for all parties involved.

## **4. Development of Get Fit**

The GET FIT Uganda Program was formally launched in May 2013. The first two rounds of “Request for Proposals” (RfPs) (launched Mar 2013 and Nov 2013) have resulted in 12 approved projects representing 103MW installed capacity. Additionally, four solar PV projects proposed by two different developers were selected in January 2014 by ERA and the GET FiT Investment Committee to benefit from the GET FiT Solar Facility. In March 2014 following to extensive dialogue with the Government of Uganda, ERA and the GET FiT Program, the World Bank has successfully structured and approved their IDA PRG Program for small renewables and GET FiT approved projects in particular. With the portfolio now standing at about 128 MW, this leaves 42 MW for the currently ongoing RfP Round 3 to reach the pre-defined Program target of 170 MW. Four to eight projects are expected to enter the GET FIT portfolio as a result of RfP Round 3, depending on the annual output of approved projects. Thus, the current expectation is that the portfolio will eventually comprise 20 projects - an increase from the original assumption of about 15 projects. This is due to a lower average size (MW) of selected projects than originally expected and an increase of the REFIT for Hydro projects by ERA in June 2013.

Several of these projects are expected to start construction in 2015, while some are set for commissioning in the same period. Solar projects will come on grid in the end of this year. In addition to the significant growth in its expected capacity, the GET FiT portfolio has reached a new level of diversity over the past year. It is now featuring four different technologies (biomass, bagasse, hydro and solar PV) and the projects are located in 5 out of 10 different Ugandan sub-regions.

## **5. Outputs of GET FiT**

In Uganda, GET FIT intends to fast-track a portfolio of about 20 small-scale renewable energy generation projects (hydro, bagasse, biomass and solar/ PV), promoted by private developers and with a total installed capacity of up to 170 MW. This will yield up to approximately 830 GWh of energy production per year, transforming Uganda’s energy mix within a period of 3-5 years, and resulting in:

- emission reductions of roughly 11M tons of CO<sub>2</sub>; over the 20-year lifespan of PPAs;
- an increase in Uganda’s energy production by about 20%, and thus a contribution to tackling an anticipated supply shortage in 2015;
- facilitating (or significantly improving) access to energy for at least 200,000 additional households (approximately 1.2M people), also in rural areas due to strengthening of regional grids;
- leveraging of US \$500 million in private investments for renewable energy generation projects with a limited amount of results-based grant funding

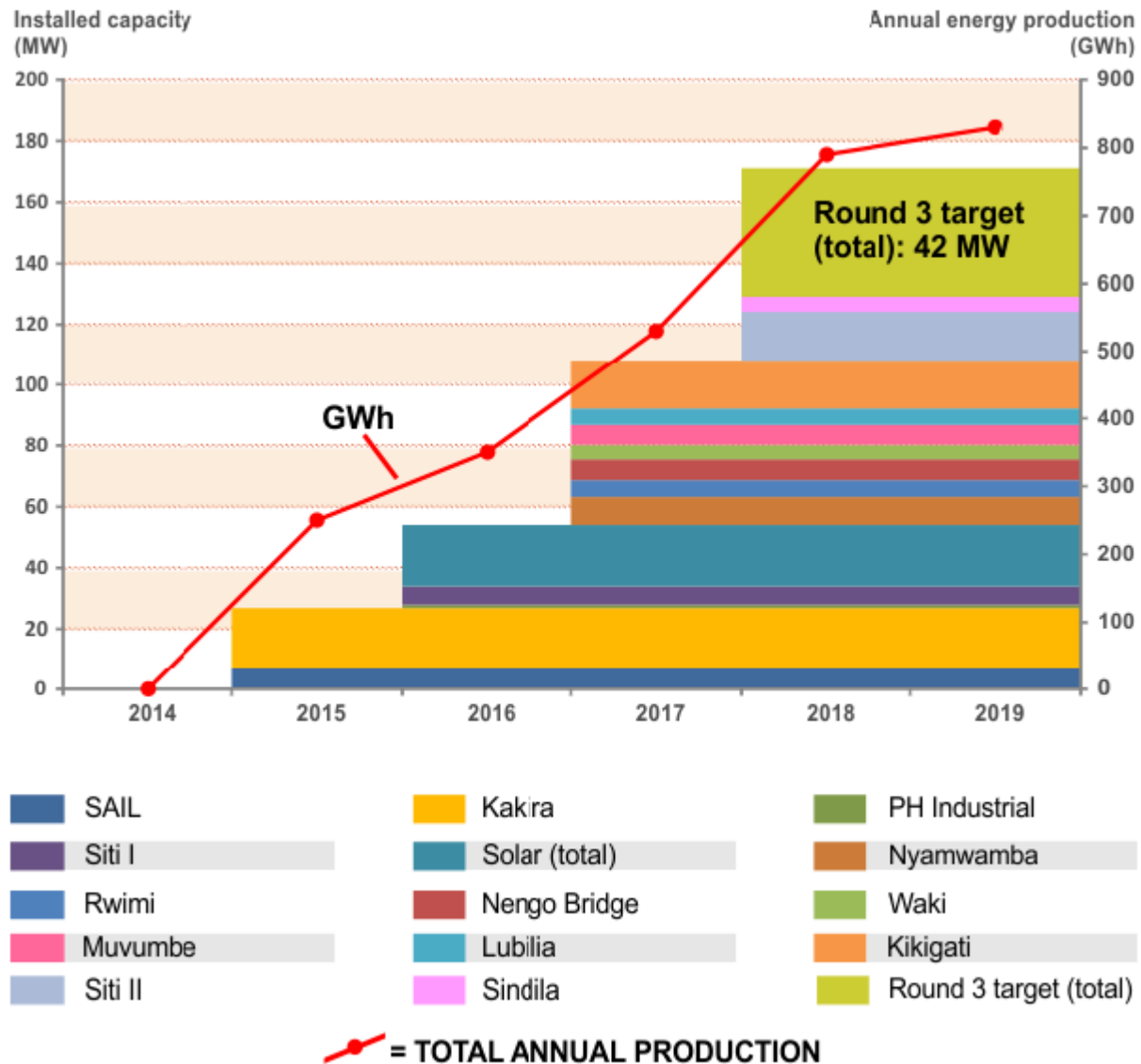
Additionally by realizing these goals, GET FIT will contribute to poverty alleviation. First of all, GET FIT ensures security of electricity supply at affordable cost for Uganda’s industry and consumers with evident economic benefits for producers and citizens. The expected investments facilitated through GET FIT of more than US \$400 million will furthermore create job opportunities with local manufactures or the project sponsors directly. Finally, the remote location of some projects supported by GET FIT has an indirect impact on electrification of communities in Uganda’s poorest regions.



## 6. Time-frames and portfolio implementation

In general, most of the approved projects are expected to reach commercial operation by 2016-2017. Figure 2 illustrates the expected build-up of installed capacity and annual generation from the GET FIT portfolio. These estimates include; i) all approved GET FIT projects, ii) 20 MW of solar and iii) estimates reflecting reasonable expectations from RFP round 3.

**Figure 2: Targets for installed capacity (MW) and average annual energy production (GWh) are projected to be reached by 2018-19, based on current portfolio and expectations for RfP in round 3**



## **7. The Future for the GET FiT Mechanism**

The GET FiT Program and related developments in Uganda have not gone unnoticed: neighboring countries are asking ERA and the Government of Uganda to share their experience and developers and financiers are starting to inquire about similar support schemes in other parts of the continent. GET FiT and KfW have been requested to present the Program in conferences in Europe and Africa in front of public sector stakeholders, private developers, investors, banks and technology providers as well as development institutions. This confirms not only the broad interest, but also the need for targeted support to facilitate private sector investments into the energy sector of emerging countries.

Development partners and KfW are keen to utilize the experience from Uganda and roll out the pilot to other Sub-Saharan African countries. However, all stakeholders are well aware that there is no “one approach fits all” in this regard and that GET FiT might look very different outside of Uganda. In some cases focus could be on creating an enabling regulatory and legal environment, or on guarantees to back up off taker credibility, while others might want to follow Uganda’s example on reverse auctioning or feed-in tariff top up.

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