



FITs

Pushing Renewable Energy

By LeAnne Graves, Associate Editor

Feed-in tariffs could provide the push for companies to take further strides toward renewable energy, but the question remains as to whether it is a viable option for countries in Africa.

Feed-in tariffs (FITs) offer incentives to companies implementing renewable energy. FITs put a legal obligation on utility companies to purchase electricity from renewable energy producers at a premium rate, usually over a specific period of time. FITs help overcome numerous obstacles such as fluctuating costs, legal and regulatory issues, and market performance.

The World Future Council (WFC) said in its report on FITs that it “sees the global economic crisis as an opportunity to speed up the switch to renewable energy through the adoption of FIT laws worldwide, where there is a grid connection.”

FIT Catalysts

FITs have been implemented in over 40 countries, states, and provinces throughout the world, and have helped to accelerate the move from carbon energy to renewable energy. The WFC established a FIT project that selected a number of countries for early adoption of the legislation. The first countries were Australia, India, the US, and the UK, which the organization sought to serve as a model for other countries.

Germany decided to take part in the tariff strategy with the Renewable Energy Sources Act (Erneuerbare-Energien-Gesetz, EEG) which became effective on April 1, 2000. 12% of total German electricity consumption was supplied by renewable energy sources in 2006 resulting in the reduction of over 100 million tons in carbon dioxide emissions. In addition, the implementation offered employment to more than 230,000 people with an overall turnover of around €23 billion. Electricity production in correlation to the EEG reduces the wholesale price for electricity by €5 billion.

The EEG’s goal of renewable energy comprising 12.5% of Germany’s total energy mix by 2010 was reached even earlier – by mid-2007. The latest goal is to increase its renewable energy sector to 27% of total electricity consumption by 2020.

Residents in Gainesville, Florida became the customers of the first utility in the US to benefit from a FIT law in March. On February 5, the Gainesville City Commission gave unanimous approval to adopt a solar photovoltaic FIT. If successful, Gainesville will be a catalyst for other US cities to adopt the legislation to promote renewable energy use.

In addition, Australia instituted the Australian Renewable Energy (Electricity) Amendment bill last year that introduced FITs to the country with the UK following. The UK’s adoption of the November 2008 Energy Bill came as a result of an expert’s report on the potential benefits of a FIT law for small scale renewable energy producers and the building of a large coalition of stakeholders.

The WFC will now concentrate its efforts to build upon work in Central and Eastern Europe and South Africa; and launch new initiatives in Brazil, Chile, and Mexico.

Important Factors for a Successful FIT

For any piece of legislation to work, there must be proper tools implemented and most importantly, tailored to an individual country’s needs. The WFC has noted three steps that are vital for FIT legislation:

Evaluating domestic conditions regarding renewable energy resources, political environment, geographical conditions, and technological preconditions

- It is important for a country to determine reasonable and appropriate rates of renewable energy increases in terms of capacity and diversification by assessing the state of the national electricity and the level of connection countrywide.
- Utilize other FIT-implemented countries as a guide.
- Educate the public on the incentive because it is vital to have the public’s support in order to ensure the success.

Locate partners in order to expedite the political process

- Potential partners should be independent from the conventional energy industry, and must be prepared to argue against the energy industry if necessary.
- Ensure that parliament and government are ready for the system, and are not influenced by the traditional energy industry.

Start small, improve with time

- There should be a monitoring process within the regulation in order to verify if the goals and targets are being met.
- Tariff rates should also be observed and adjusted in order to control expansion rates and guarantee correct payments for each technology as it matures.

FITs in Africa

FITs are currently only present in two African nations: Kenya and South Africa. However, that is subject to change with time.

A year after the introduction of FITs, several investors have expressed interest in generating power from renewable energy sources in Kenya. FITs for wind power, biomass, and small hydropower generation were introduced in March 2008 by the Kenya Ministry of Energy. For biomass and hydro-power the incentive scheme varies on a firm or non-firm basis. The amount of the tariff generally depends on technology specific generation costs. It affects individual wind power plants with capacities below 50 MW. A cap restriction is set to the first 150 MW capacity of wind power. Prices are guaranteed for 15 years from the date of first commissioning. The policy will be subject to reviews every three years.

While the FIT allows power producers to sell, it also obligates the distributors to buy on a priority basis all electricity generated from renewable energy sources at a pre-determined fixed tariff for a given period of time. As per the policy, the tariffs range between \$0.07 kilowatt hour (kWh) and \$0.09 kWh depending on the plant capacity and source of the electricity – wind, small hydro, or biomass.

Currently, about 60% of the country's electricity supply is produced from rain-dependent dams, 30% from costly fossil-fuel generators, and a paltry 10% from reliable but capital-intensive geothermal.


Kenyans currently consume up to 1,050 MW of electricity during peak hours against the country's effective generation capacity of 1,185 MW, and demand grows at the rate of 8% annually.

In South Africa, the National Energy Regulator of South Africa (NERSA) reported that it will announce its decision on renewable feed-in tariffs (Refit) at the end of March, instead of its initially planned announcement scheduled for March 9. The proposal initially followed NERSA's study in mid-2007 and practical applications were tested in 2008 including a pilot residential grid connected hybrid system with a battery back-up for emergencies.

The energy regulator delayed its recommendation on the size of subsidies by three weeks because of growing feedback from interested groups. NERSA said it needed more time to assess and consolidate the inputs and comments with 21 presentations being made during the Refit public hearings held on February 5 with 145 stakeholders in attendance.

After NERSA completes its review on a suitable FIT, an election sub-committee will need to approve the process, timeliness, and paper; then it would be available for public input. Currently, the proposed tariff schedule showed a contribution of between 50c/kWh and 80c/kWh for all renewable energy generated like wind, small hydro, landfill gas, or concentrating solar power.

The country is injecting R343 billion over five years targeting the generation of 10,000 GWh of electricity through renewable energy projects by 2013.

A well-designed and implemented FIT scheme can also support installations of different sizes and technologies, promote innovation, boost economies, promote stability and public support, and create fair market participation conditions for energy providers. Most importantly, FITs could provide a way to increase energy diversification while implementing more renewable, sustainable energy not just in Africa, but around the globe. 



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