GLOBALLY FUNDED FEED-IN TARIFFS

A co-benefit development agenda of energy access through renewable energy

A world of energy poor

Energy poverty is one of the biggest development challenges the world is facing today. We still have 1.3 billion people without access to electricity and 97 per cent of them live in Africa and Asia. Out of 2.64 billion people who rely on traditional biomass for cooking, 82 per cent reside in these two continents.

If we look at these two continents little closer, we find that 75 per cent of these energy poor are in 14 countries. These countries are paying huge developmental costs for this energy poverty – education, health and economic development is getting stymied (refer table below).

S. No	Countries	Population without electricity (millions)	Electrification rate (%)	HDI Index in 2012
1	India	288.8	75.0	0.554
2	Bangladesh	95.7	41.0	0.515
3	Indonesia	81.6	64.5	0.629
4	Nigeria	76.4	50.6	0.471
5	Ethiopia	68.7	17.0	0.396
6	Pakistan	63.8	62.4	0.515
7	DR Congo	58.7	11.1	0.304
8	Myanmar	43.5	13.0	0.498
9	Tanzania	37.7	13.9	0.476
10	Kenya	33.4	16.1	0.519
11	Uganda	28.1	9.0	0.456
12	Sudan	27.1	35.9	0.414
13	Afghanistan	23.8	15.5	0.374
14	Mozambique	20.2	11.7	0.327

Energy Access and Climate change

The energy supply sector is the largest contributor to global greenhouse gas (GHG) emissions. In 2010, this sector was responsible for approximately 35 per cent of total anthropogenic GHG emissions. In the absence of mitigation policies, energy – related CO_2 emissions are expected to continue to increase by 80 –130 per cent by 2050 compared to emissions in 2010. One of the reasons for this increase would be to provide electricity and clean cooking fuels to the energy poor of the developing countries.

However, the challenge of providing electricity access to 1.3 billion people and clean cooking fuel to 2.6 billion energy poor also offers a huge opportunity to directly leapfrog a sizeable proportion of the world's population from dirty fossil fuel to clean energy by adopting renewable energy based solutions. What is required is a sustainable business model and policy frameworks to make this a reality.

However, Renewable energy based solutions, especially decentralized distributed generation systems, are costly propositions today. Poor people of the world will not be able to pay for the energy if the cost of generation from such systems is not compensated by some means.

The Feed-in tariff (FiT) mechanism is by far the most effective mechanism to compensate the cost of generation up to the level of grid parity (cost of grid power is generally defined as the cost of generation from the cheapest source of energy; in many countries, coal based thermal power stations are the cheapest source of electricity). According to the 'Renewables 2014: Global Status Report', 98 countries so far have some form

of FiT mechanisms. Sixty four per cent of wind and 87 per cent of solar PV systems have been commissioned based on FiT mechanisms worldwide till 2012.

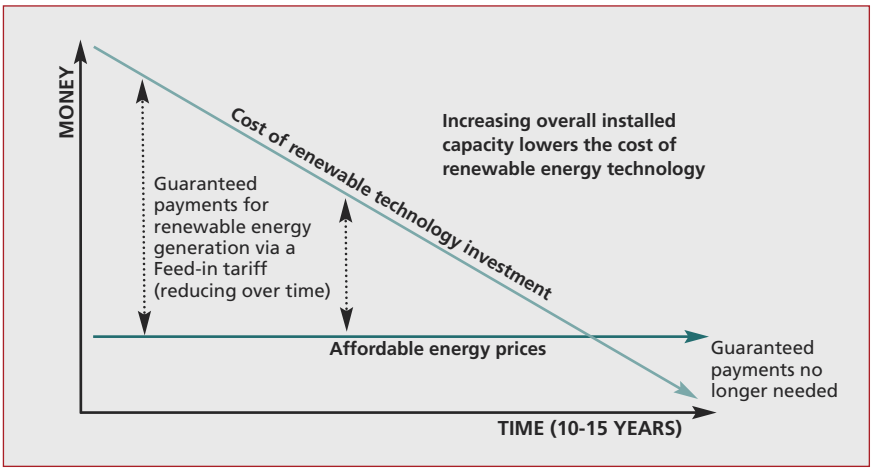
FiTs encourage investments in renewable energy generation by guaranteeing to pay the difference between cost of generation and the amount paid by the consumer for the electricity produced. The FiT mechanism makes such projects bankable and encourages local entrepreneurs and communities to proactively participate in such projects.

Globally Funded Feed-in Tariffs

The UN Department for Economic and Social Affairs (UN-DESA) has estimated a total public investment need of US$100 billion a year for the next 10-15 years to make renewable energy cheaper and the preferred option for power generation globally. Therefore, a global FiT mechanism that supports developing nations to provide energy access through renewable energy would potentially transform the entire energy sector globally. In one stroke we can solve the challenges related to energy poverty, reduction in the price of renewable energy and emission reductions from energy supply.

Such a mechanism would be flexible and time-bound. Countries would have the flexibility to decide solutions as well technologies.

The FiT support would be provided till the time the cost of renewable energy achieves grid-parity. It is projected that the cost of electricity supply from renewable energy would reduce over time due to technology improvement and economy of scale. Therefore, the required FiT will reduce gradually over time and would not be required once the cost of supply from renewable sources becomes cheaper compared to the conventional sources.



The Green Climate Fund (GCF) should have a window for a global mechanism to provide funds to national FiTs in developing countries to enable energy access through renewable energy. Countries could submit their proposal for funding through NAMAs and link their national FiT mechanisms to the global financing scheme.

Benefits of globally funded feed-in tariffs (G-FiT)

- G-FiT helps in large scale deployment of renewable energy since financing is the most critical issue. This would reduce the price of renewable energy over time.
- G-FiT will help provide energy access to 1.3 billion people across the world and also would contribute in climate change mitigation
- G-FiT will help developing countries improve genuine human development and contribute to poverty eradication.
- G-FiT is a performance based incentive. Therefore, it is a measurable and transparent mechanism.
- G-FiT will ensure a collaborative approach from both developed and developing countries. It is an excellent opportunity for South-South as well as North-South capacity building, technical cooperation and exchange of experiences
- This can very well be the biggest development and climate mitigation co-benefit opportunity for the world.