

Reclaiming power – An energy model for people and the planet

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The following article explores the idea of a bold, front-loaded public investment programme designed to tackle at once the challenges of energy access and climate change. It argues that the concept of 'globally funded feed-in tariffs', which in the last few years has been increasingly endorsed by several major institutions and organisations, represents a highly promising approach. The idea was firmly put on the agenda in 2009 with the publication of the seminal report 'Promoting Development – Saving the Planet' by the UN Department for Economic and Social Affairs (UN-DESA, 2009; see also the previous article in this volume). Other actors, among them Greenpeace International (2010), the World Future Council (2009), Swedish Society for Nature Conservation (2010), World Resources Institute (2011) and Deutsche Bank (2010), have also promoted different versions of the idea.

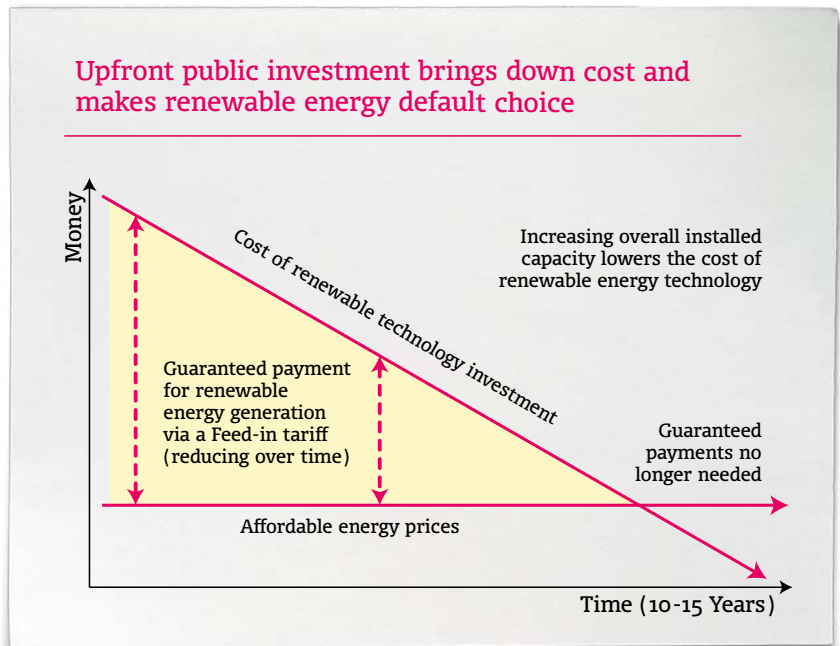
Globally funded feed-in tariffs have the potential to be a genuinely transformative solution to avert a catastrophic climate future by way of stimulating investments in renewable energy towards a 'bottom-up energy revolution' rooted in local initiatives. However, while feed-in tariffs are considered the most effective tool for increasing the uptake of renewable energy technology, they are inherently flexible and entrusts their potential to deliver a socially progressive energy transformation depends on policy-makers and the pressures they face, and is in no way guaranteed. It is therefore imperative that when a programme of globally funded feed-in tariffs is designed, democratic and participatory principles are embedded at the local, national and international level, with a particular emphasis on local control and ownership of sustainable and locally appropriate renewable technologies. The dominance by multinational corporations and inclusion of socially and environmentally harmful energy sources such as large-scale biofuels, biochar and hydropower schemes would undermine the credibility of the scheme in the eyes of the energy poor it professes to help, while also failing to deliver on the goals of tackling energy access and climate change.

As a contribution to the discussion and growing political momentum around globally funded feed-in tariffs, Friends of the Earth England, Wales and Northern Ireland released a report at COP 17 in Durban 2011 with the title 'Reclaiming power: an energy model for people and the planet' (FOE EWNI, 2011). The report sketches out how a model of globally funded feed-in tariffs can be set up in a way that prioritises the requirements of energy access, decentralisation and appropriate technologies. It also suggests a trajectory of how a model of globally funded feed-in tariffs can be scaled up from national or regional to global, beginning with a small pilot scheme which can eventually be incorporated into a UN framework. The following article draws on this report and summarises the key features of the model it proposes.¹

¹ The full report can be accessed at http://www.foe.co.uk/resource/briefings/gfits_briefing.pdf and <http://www.whatnext.org/resources/Publications/FOE---Reclaiming-Power.pdf>

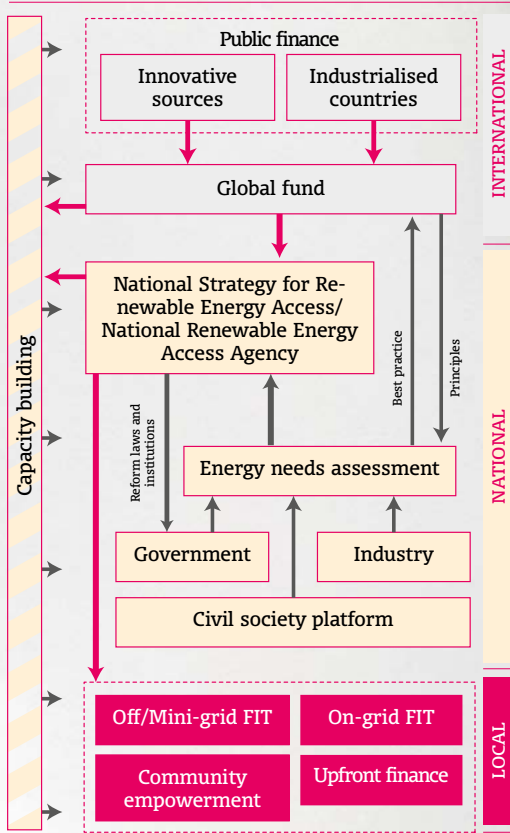
A model for energy access built on globally funded feed-in tariffs

A bold public investment programme over 10–15 years linking a global fund to on- and off-grid renewable energy feed-in tariff plans within countries in the global South could drive the transition to renewable energy. Direct access to upfront capital through a national agency would enable local community organisations in rural and urban areas to generate and distribute their own clean, affordable, decentralised energy, paying back the cost of the appropriate renewable technology through guaranteed payments for generation. Capacity-building and grassroots empowerment at the local, national and international level would ensure energy access remained a core component of the scheme, while promoting community-centred models of governance such as cooperatives.



The feed-in tariffs provide the investor in renewable energy (a community cooperative, municipality or company) guaranteed prices for the energy they produce, covering the difference between production costs and the lower, affordable price for consumers.

Elements of a model built on globally funded feed-in tariffs²



International

Finance: New and additional upfront public finance from industrial countries (including ‘innovative’ sources of finance such as financial transaction taxes and use of IMF special drawing rights) in line with the principles of ‘common but differentiated responsibilities’ (CBDR).

Fund: Establishment of a global fund (a new fund which could eventually become a special window of the Green Climate Fund) that ensures stable, guaranteed flows of financing for national feed-in tariff programmes, including upfront financing for technology investments.

Principles: Participation for developing countries is voluntary. However, globally agreed principles will provide the parameters for the national energy needs assessment and the resulting strategy to ensure key goals and priorities are met – for example, prioritising off-grid energy access, ensuring environmental safeguards and social integrity of projects and technology, and guaranteeing democratic participation.

Governance: Similar to the UNFCCC Adaptation Fund, the multi-stakeholder fund board would have equitable and balanced regional representation, but also include civil society and technical members.

2 For more details on the proposed model, see the annex ‘Digging deeper: Potential features of a model build on globally funded feed-in tariffs’ in the original FoE report: http://www.foe.co.uk/resource/briefings/gfits_briefing.pdf

3 Inclusion of all key stakeholders (government, industry and civil society) is crucial. The Forestry Law Enforcement, Governance and Trade (FLEGT) Action Plan that tackled illegal logging provides one interesting experience to draw on (FERN, 2011). This process created a national network of shared civil society platforms in Cameroon, Congo and Ghana. Through grassroots capacity-building, knowledge-sharing and advocacy among local NGOs, civil society voices were represented at the national level. This process increased buy-in, legitimacy and also scrutiny of all parties, leading to greater transparency.

National

Energy needs assessment: A multi-stakeholder process³ would be carried out, bringing government, industry and civil society together as equals to agree national energy and energy access priorities and the necessary laws and institutions to fulfil them.

Payments for generation: Payments should be long-term and stable, so communities and local businesses can invest in their futures securely. However, the rate for the feed-in tariff subsidy should reduce over time, reflecting falling technology costs and risk. Such a mechanism exists in the German feed-in tariff scheme and ensures renewable generation targets are met but without the government overpaying. It also provides greater certainty to international donors on predicted expenditure and prevents unexpected tariff changes. Rates should be set according to technology and local conditions with higher rates to encourage off-grid or mini-grids and recognition of different needs and ability to pay.

Institutions: Considerable efforts will need to be devoted to build capacity and nationally appropriate institutions that draw on the combined experience of other similar efforts globally.

Local

Finance: payments for on-, off- and mini-grid feed-in tariffs for the renewable energy that has been installed as a result of the scheme. Payment only upon delivery of the energy, creating greater transparency and accountability. Upfront concessional finance through grants and soft loans to local communities and small businesses for clean technology, including clean cooking stoves.

Models of governance and ownership: Different kinds of investment, ownership and management – private, public, social or a combination – will need to be explored in each country to determine what is locally appropriate. Local ownership should be given preference to prevent land-grabbing and the widespread expansion of existing or new energy monopolies. It will also encourage generation of energy as close to where it will be used as possible, reducing transmission losses and not burdening creaking grids. Cooperatives should be encouraged.⁴

Capacity-building and local participation: Local-level capacity-building is essential and has the benefit of bringing down medium-term project costs at a far greater rate than technological change (UNDP, 2011). Grass-roots empowerment and participation should ensure local communities' energy priorities are reflected in the energy needs assessment, rather than assuming what those priorities are. For example, in many cases household electricity will come after other communal needs such as a solar-powered water pump for irrigation and clean drinking water (IIED, 2011). It will also enable communities to be active participants, generating their own energy. Community empowerment involves training and knowledge-sharing, legal advice, advocacy and technical support.

4 The International Energy Agency concludes that cooperatives are the most effective way to spread decentralised mini-grids (IEA, 2011a), and studies by the EC Joint Research Centre show electricity co-operatives have lower energy costs, higher levels of local participation (key for project sustainability) and a more sustainable supply of energy. Positive examples in Bangladesh and Nepal point to their effectiveness both at increasing rural electrification and stimulating micro enterprises through their local development focus and access to finance.

Benefits of the proposed model

Within 15 years, this mechanism could transform the way we think about and produce energy, catalyse development, accelerate the renewables industry globally and keep fossil fuels in the ground. All countries could benefit.

Benefits for the South/developing countries

- » Avoiding the worst impacts of climate change through mitigation.
- » Tackling poverty through increased access to clean, affordable energy and protection from fossil-fuel price shocks.
- » Avoiding 2 million deaths from indoor air pollution as clean cooking fuels and electricity replace dirty, inefficient fuels like coal, paraffin and firewood (WHO, 2011).
- » Avoiding resource conflicts.
- » Greater resilience and adaptation to climate change through access to energy, improved living standards and reduced reliance on climate-vulnerable ecosystems (Johnson and Lambe, 2009).
- » Job creation and industry from locally adapting, manufacturing, installing, operating and maintaining labour-intensive renewable technology; stimulation of local enterprises through access to energy and local finance, which could reverse rural-urban migration.
- » Breaking the monopoly of the current fossil-fuel intensive power providers by decentralising energy generation and access.
- » Democratising energy and strengthening local governance by supporting structures of self-organisation to voice and address local concerns including and beyond energy.

Benefits for the North /developed countries

- » Global mitigation of climate change by moving away from fossil fuels.
- » Own transition cheaper and easier through lowering global cost of renewables and avoiding rising costs of fossil fuels.
- » Lower adaptation costs at home and in climate finance to developing countries.
- » Avoiding resource conflicts.
- » Upfront public climate finance becomes an investment by saving money in the medium term in domestic and international mitigation and adaptation.



- » Greater climate finance accountability as the FIT is only paid on generation of energy.
- » Encouraging green jobs and industry by kick-starting domestic green transformations.
- » Rebuilding trust within the international system as rich, industrialised countries demonstrate leadership, cooperation and respect for UNFCCC principles.

Success of cooperatives in the US and Brazil

United States: Most of rural America was electrified through locally-owned cooperatives – and at break-neck speed.

- » In 1936, nine out of 10 rural homes were without electricity.
- » Franklin D. Roosevelt created the Rural Electrification Agency, a federal lending programme that kick-started most locally owned rural electric cooperatives.
- » By 1953 more than 90 per cent of US farms had electricity, despite the distraction of the Second World War.
- » Today more than 900 rural electric cooperatives bring electricity to 42 million members and continue to outperform all alternative management models.

Rio Grande do Sul, Brazil: Local cooperatives help small-scale farmers achieve energy and food sovereignty in the face of environmentally and socially damaging agribusiness.

- » COOPERCANA (Cane Growers' Cooperative) promotes micro-distilleries that produce ethanol for local vehicles, but only secondary to food production.
- » CRERAL (Rural Electrical Cooperative) has 6,230 associates, providing electricity to its members through micro-hydro and an ethanol micro-distillery; sugar cane is limited to 1 hectare per member, with sugar-cane fibre used for feed-stock and fertiliser.
- » COOPERBIO (a small-scale farmers' movement cooperative) produces ethanol in conjunction with milk, allowing its members to profit from small-scale cultivation.

Danger of false solutions

A model built on globally funded feed-in tariffs has major potential but needs the right features to tackle climate change and energy access effectively.

- » The wrong technology deployed on the wrong scale could cause social and environmental damage. It is therefore essential that a system and its accompanying procedures are designed to guarantee the assessment and scrutiny of technologies in a reliable and thorough manner, with the participation of civil society and affected groups. Governments must ensure that promoted technologies do not lead to undesired, negative effects for people and the environment (that is, no large-scale hydro, biochar, biofuels, or nuclear energy scheme should be eligible for feed-in tariffs). It is particularly important to analyse how different technologies impact on the poorest and most vulnerable groups in society.
- » The wrong focus on centralised grids. Excessive focus on large-scale, centralised generating capacity would fail to deliver energy access, not deliver the efficiencies of local generation, exclude many potentially positive and empowering technologies and reinforce existing energy monopolies within countries.
- » The wrong goal of only tackling energy access or climate change. Building centralised coal-fired power stations in the name of energy access will neither provide access nor tackle climate change by moving beyond fossil fuels. Equally, just focusing on climate change could see large-scale centralised renewables projects that rely on grid transmission and do not tackle access. Clear policy links must be made between climate change and energy access if a global system of feed-in tariffs is going to deliver the necessary transformation.
- » The wrong funding sources via carbon markets would remove stability, starve feed-in tariffs and communities of funds and undermine genuine climate benefits. There is a need for real, dis-bursable public money. Double counting of aid and carbon credits do not provide means to finance the feed-in tariffs.
- » The wrong investors in the form of multinational corporations, creating new monopolies and benefiting from public subsidies at the expense of local and national entities – both public and private. Clear regulations are needed to ensure a diversity of investors, and in particular decentralised, bottom-up initiatives.
- » The wrong trustee in the form of the World Bank, whose links to fossil fuels, Northern governments and carbon markets will inhibit

a collaborative environment. Nor should funding pass through financial intermediaries (such as private equity funds), which introduce new layers of investment risk, reduce accountability and bypass environmental and social lending criteria (FoE-US, 2011).

‘[A] transition to renewable energies might well be carried out on the backs of communities who live in territories that are rich in renewable energy sources, and workers who produce the necessary infrastructure. This is already leading to new forms of exclusion, dispossession, violence, and exploitation, or at best the draining of these resources for use elsewhere. The current expansion of the world-market is an attack on rural communities throughout the world. Whereas fossil fuels and nuclear energy resources are found in a small number of locations, renewable energy resources are broadly spread throughout much of the planet, giving increased strategic importance to large parts of the rural world. This means that the quest for renewable energy could result in a new and perhaps unprecedented landgrab by companies and investors, which would create the potential for even more extreme patterns of displacement and appropriation of land than other forms of energy have done.

This is already occurring with alarming rapidity and brutality due to the rapid global expansion of agrofuels produced for trade in the world-market (rather than for local community-controlled consumption). To a lesser extent, it is also occurring in relation to wind. In particular, the dependency of urban areas (where large quantities of energy are consumed) on rural ones (who produce it) is becoming an increasing point of conflict. Therefore renewable energies, in addition to offering emancipating possibilities for constructing autonomous and decentralized energy systems, also represent a new threat for rural communities (especially indigenous and Afro-descendent), making them increasingly vulnerable to loss of control of their territories and even displacement.’

Kolya Abramsky, in Sparking a Worldwide Energy Revolution (2010: 644)

Ways forward

Support for a global scheme requires evidence of success. Establishing a bilateral or small multilateral pilot initiative between forward-looking countries in the North and South could embed the right principles and mechanisms, while advocacy and multi-stakeholder engagement alongside the pilot would ensure a participative process in the eventual design of the fund and how it operates. Once global support is secured a few years down the line, the scheme should be scaled up and incorporated within a UN framework.

Beginning now

The window to tackle the threat of catastrophic climate change is closing, while the political momentum for universal access to energy is growing, making this the key moment for a programme of action built on globally funded feed-in tariffs. But any such programme would need to ensure a comprehensive and coherent approach to maximise and amplify benefits across both objectives. Conversely, a lack of cohesion could further entrench current trends such as fracking for shale gas or deep-sea Arctic drilling, resulting in severe environmental and social costs. Current policy approaches and initiatives are failing to address climate change and energy access adequately and lack the framework for the critical, transformative action that is needed.

‘[S]truggles over territory, labor, and ownership, are all becoming central in shaping the global expansion of the renewable energy sector. A transition, predominantly based on the collective and democratic harnessing of renewable energies, has the potential to result in a significant decentralization of energy production and equalization of access. Communities and individuals could assume greater control over their territories, resources, and lives enabling an emancipatory social change that is based on the construction of autonomous relations of production, exchange, and livelihood. This is especially so for rural communities, which, in theory at least, are ideally located to benefit from renewable energies and to lead the way, since they are richest in natural resources such as wind, sun, biomass, rivers, seas, animal wastes, etc. And this can happen astonishingly fast if communities are given the appropriate tools.’

Kolya Abramsky (2010:644)

Transformation requires tackling those economic and political forces with a vested interest in reproducing the current ineffective energy model. We have sufficient technology and knowledge to make the transition, but are not acting. For example, studies from Mozambique show that renewable resources could easily satisfy the energy needs of the country, including the 80 per cent of the population without access to clean, affordable sources. Yet, national energy policy is still based on an expansion of fossil fuels and large-scale hydroelectric power (Hankins, 2009). Similar examples are common throughout the global South. We need political leadership to break our fossil fuel dependency and transform the way we think about and use energy, allowing the world to develop cleanly and sustainably. A model of globally funded feed-in tariffs could well represent the most effective way of achieving this. Delaying the transformation carries huge financial costs. According to the IEA, each year that passes without embarking on an ambitious and necessary path of emissions reductions adds another US\$500 billion to the bill, more than double the total investment in green technology in 2011 (REN21, 2011). The human

and environmental costs of missing the opportunity to steer the world towards 100% renewables and energy access would be immeasurable. No more sleep walking towards the precipice, no more endangering the future of our planet and all those that inhabit it – human or otherwise; we have the opportunity to create a far better, far more sustainable and far more equitable future. But it must start now.

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