

**A global partnership to support renewable energy  
feed-in tariffs and other incentives to accelerate  
the energy transformation, protect the climate,  
and provide clean energy to all people**

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The world is on track for catastrophic warming of between 3.5 and 5 degrees C by the end of the century. There is wide agreement among scientists that unless urgent action is taken in the next few years to cut global emissions the opportunity to limit warming to below 1.5°C or even 2°C, will be missed. Scaling up ambition between now and 2020 is therefore an urgent priority. This requires, among other things, a major transformation of the world's energy systems to renewable energy.

At the same time we live in a world in which one fifth of the population lacks access to electricity and other basic services. In Sub-Saharan Africa more than 600 million people have to cope without electricity (only 31% of the population has electricity access).<sup>1</sup> The transition to renewable energy must address these needs by providing decentralised, community-based energy solutions that prioritise access, affordability and people participating in energy-related decisions.

Addressing this twin challenge – curbing climate change while providing energy access to the poor – is among the greatest challenges of our era. Recent developments at the UNFCCC negotiations, including leadership from vulnerable African and small island states, provide new opportunities to address this challenge through concrete, practical approaches.

These initiatives provide the opportunity to reduce global emissions by 2020, help avoid the potential for catastrophic climate change, while shifting the world rapidly onto a clean energy pathway that supports development, scales up renewable energy, ensures access that is affordable and community controlled, provides employment and decent work, and enables those in poverty to improve their lives.

## Access to energy and electricity

Access to electricity is intimately connected to well-being and genuine human development. The essentials for good living all require some form of energy – to procure food and water, provide public services such as health and education, transportation, communication, local enterprises, culture and entertainment. This all adds up, and it is reasonable to expect that, as a rule of thumb, all citizens on planet earth will need access to at least a modest amount of energy, say 50-100 kWh/day, to live a good life (granted this energy is efficiently used and thus provides enough services; the more efficiently this energy is used, the lower this absolute need).

For those who today consume very little energy (less than 50kWh/day), the correlation between their per-capita energy use and human development indicators, such as the Human Development Index (HDI), is striking – even a small increase in access is correlated to substantial gains in their well-being. Achieving access to energy is therefore an imperative, and sits at the top of the development agenda of developing countries. The large majority of our citizens need access to more energy. Yet, there are few areas in the world with as striking levels of inequity as in the area of energy, both between and within countries. Consider that an average US citizen consumes about 50 times more energy than a Bangladeshi every day, or that in terms of electricity use a Swede consumes close to 200 times more than a Tanzanian.<sup>2</sup> While there is a striking correlation between energy access and well-being for those consuming little, there is virtually no correlation between energy consumption and well-being for those consuming a lot (see figure 1). An average US citizen consumes

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<sup>1</sup> International Energy Agency (IEA). 2011b. *Energy for All: Financing Energy Access for the Poor. Special Early Report on the World Energy Outlook 2011*. Available at: [http://www.iea.org/papers/2011/weo2011\\_energy\\_for\\_all.pdf](http://www.iea.org/papers/2011/weo2011_energy_for_all.pdf)

<sup>2</sup> International Energy Agency. 2013. *World Energy Outlook*.

three times the energy of a Swede, but is hardly better off in terms of human well-being and HDI.<sup>3</sup>

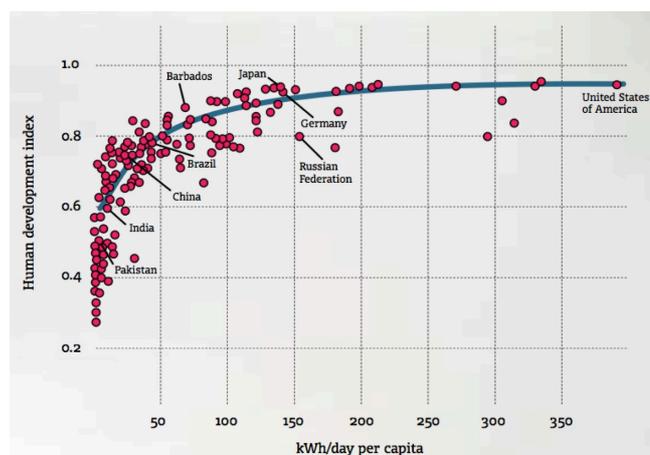


Figure 1.

To address this paradox, and to become sustainable, the world needs to ensure the majority of the global population significantly increases their access to clean energy (and are enabled to use this energy in the most efficient and meaningful way) – which is the focus of this article. Equally important, is that the rich parts of the world need to radically reduce their energy use in absolute terms, and then transition the remaining energy use into fully renewable, sustainable alternatives. As we look ahead towards a decarbonised world in less than 50 years time, we must envision a convergence of energy use that allows all the world’s citizens to live good lives.

This necessitates a fundamental rethinking of current development models everywhere – in both developed and developing countries – and a more robust critique of the currently one-sided focus on Western wasteful high-consuming lifestyles, excessive material consumption, escalating global trade and non-sustainable economic growth as the norm or, more problematically, as an objective for development. The decarbonisation of the industrialised, rich, developed countries is a colossal undertaking, riddled with political inertia, and a long overdue moral obligation. Radical emissions reductions must take place *within* the rich countries beginning now – there is no atmospheric space or time to further delay this transformation by offsetting emissions reductions to our countries in the South. Developing countries, in turn, cannot and must not take this model of mal-development as the model for their futures. Visionary approaches are needed in both developed and developing countries if we are to secure a safe future for all.

While the rich countries rectify their centuries-long investments in fossil fuel-based economies, African and many other developing countries are keen to do the right thing from the beginning, leapfrogging to sustainable, renewable energy and to development models that ensure the well-being of our citizens. We need resilient energy systems that will last and benefit us over time and that reduce our current vulnerability and dependence on volatile fossil fuels. For the African countries with fossil fuel extraction, some of these assets may improve these countries’ energy resilience as they transition, but do not in themselves constitute sustainable models in the longer perspective.

Only a fraction of our energy systems and future infrastructure have yet been built. We are at early cross-roads where we have the option to choose non-carbon emitting,

<sup>3</sup> UNDP, 2013. *Human Development Report 2013*.

renewable energy alternatives that directly benefit our populations, and, as a direct effect over the decades ahead, avoid colossal amounts of future emissions compared to a fossil fuel-based trajectory.

The choice may appear straightforward, but the question is what do these renewable energy trajectories look like, and how can they be achieved?

## Decentralised, distributed community-oriented renewable energy for electricity access

While the world clearly needs to transition to renewable energy, there are many different approaches to renewable energy, and not all alternatives are good or appropriate in an African context. We need to engage in a visionary, creative, inspiring process across the continent to envision what kinds of energy systems we want, and what a better, more equitable and fulfilling energy future looks like. As the continent is both culturally and ecologically diverse, there also needs to be diversity of solutions and approaches. There cannot be uniform blueprints with one-size fits all solutions.

While it is clear that there is need for a degree of large-scale, grid-connected renewable energy instalments to serve larger industry and large urban areas, it is also strikingly clear that the renewable energy future of the continent must also be based on a diversity of modern, decentralised, distributed energy systems that directly serve people where they live, and where communities and local societies are part of and have control of their energy. Currently, only 14% of sub-Saharan African rural populations have access to electricity.<sup>4</sup> A large part of the populations live in areas that are remote and difficult to access. The traditional energy model centred around national grids fed by large point sources of electricity generation controlled by large utilities and private companies will not reach the people most in need in the foreseeable future, and would be prohibitively expensive. In the absence of an alternative vision, this is the approach many donors and multinational companies may promote, but the drawbacks are quickly evident.

Another vision starts with the needs of people where they live. It focuses on empowering communities, prioritizing access, encouraging local participation and decision-making, and making more effective use of limited resources. There are many variants of this approach and solutions need to be developed in cooperation with the people affected. Some initial parameters can nevertheless be sketched out. For example, by enabling construction of smaller, local renewable energy instalments, local energy systems can serve local communities directly through stand-alone mini-grids.

These types of approaches entail much more than just providing minimum lighting and very basic access through too modest household-centred approaches. Through local mini-grids all community members should be granted access to energy with 24/7 availability and enough to enable at least basic services for cooking, productive work, entertainment and communication, to be gradually scaled up over time. These energy instalments can be provided by a wide range of actors – from community cooperatives to local, social entrepreneurs to local governments depending on the particular socio-economic contexts.

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<sup>4</sup> World Bank. 2008. *Declining rural poverty has been a key factor in aggregate poverty reduction. Focus A.* Available at: [http://siteresources.worldbank.org/INTWDR2008/Resources/2795087-1192112387976/WDR08\\_03\\_Focus\\_A.pdf](http://siteresources.worldbank.org/INTWDR2008/Resources/2795087-1192112387976/WDR08_03_Focus_A.pdf)

This is a vision of a national system combining a national grid along with a mosaic of flourishing locally based energy development across the continent that enables public services and stimulates local economic development and job creation. Over time mini-grids may connect with each other, and in some cases attach to the national grids (but not necessarily so). In the future, energy production will be massively scaled up, but distributed through a new, emerging energy model with a large number of actors and entities as both producers and consumers rather than being controlled by a few centralised sources.

This way, Africa and other developing countries may quickly, over a few decades, tackle the current global energy crisis of at least 1.3 billion people without electricity and likely double facing acute energy poverty source. By foregoing excessive new investments in fossil fuel based energy systems, developing countries will take leadership through practical action, and act much beyond their share of the responsibility to tackle the climate crisis, which is largely caused by others. While we want to contribute as much as possible to the decarbonisation of the world, it is also in our best self-interest to minimise our countries' vulnerability to fluctuating oil prices, over-dependence on energy imports from outside, and unsound economic investments from future unburnable fossil fuels.

## The case for partnership and cooperation between developing and developed countries

But how can this all be enabled? How can Africa and developing countries on other continents pursue such an energy future that simultaneously meets the needs of their people while avoiding adverse impacts through renewable energy? What is required to make this a possible, practical alternative beginning already now?

The answer is clear. There needs to be an unprecedented level of international cooperation between developed and developing countries, as well as between countries in the South. There is no way developing countries will be able to carry the financial burden of investing in such a renewable energy future by themselves; neither, frankly, do we have the main responsibility to do so. On the contrary, this is exactly what the developed countries have already agreed to under the Convention through the principles of common but differentiated responsibility and commitments to cover incremental costs.

As a first step, informal partnerships need to be formed to set the course of action, explore alternatives and point to what in subsequent steps need to be formalised and likely incorporated into international agreements. This is also what the Africa group has called for in a recent submission to UNFCCC and its 'Workstream 2' on pre-2020 ambition.<sup>5</sup> In this submission we call for a global partnership around renewable energy for development. Such a partnership can provide a platform to pursue in-depth discussions, evaluation of different policy tools and approaches, and help identify barriers, needs and means for capacity building, technology access and financing of particularly promising approaches.

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<sup>5</sup> UNFCCC, 2014. *Submission by the Republic of Sudan on behalf of the African Group on ADP Workstream 2: Establishment of a global partnership to accelerate the Energy Transformation required for a well below 2° Celsius World by supporting renewable energy feed-in tariffs and other incentives.* [http://unfccc.int/files/bodies/application/pdf/adp\\_ws2\\_africangroup.pdf](http://unfccc.int/files/bodies/application/pdf/adp_ws2_africangroup.pdf)

One such approach – also highlighted in the submission – that we would like to draw attention to in this article is the idea of international support for ‘renewable energy feed-in tariffs’ in developing countries.

## Renewable energy feed-in tariffs

While there exists a range of policy tools and mechanisms to promote renewable energy (which should all be considered and explored), renewable energy feed-in tariffs (REFiTs) seem to stand out as particularly effective and practical. There are numerous examples of already existing schemes in both developed and developing countries, and many different actors have highlighted the approach.<sup>6</sup> As of 2012, 65 countries worldwide had implemented some form of REFiT, driving 64% of global wind installations and 87% of global photovoltaic installed capacity.<sup>7</sup> The 2012 IPCC special report on renewable energy furthermore declared that

In summary, a number of historical studies, including those carried out for the European Commission, have concluded that well-designed and well-implemented FITs are the most efficient (defined as comparison of total support received and generation cost) and effective (ability to deliver increase in the share of RE [renewable energy] electricity consumed) support policies for promoting RE electricity<sup>8</sup>

The IPCC special report furthermore concluded that:

[Renewable energy feed-in tariffs] tend to favour ease of entry, local ownership and control of renewable energy systems...and thus can result in wider public support for renewable energy... Such ease of entry has also proved a powerful means for unleashing capital towards the deployment of renewable energy projects.<sup>9</sup>

REFiTs are essentially time-bound subsidies that guarantee investors (communities, cooperatives, local businesses, national utilities) that the gap between investment costs and returns from sales (at affordable prices) are covered, thereby providing safe investment opportunities. Through such time-bound programmes, markets are shaped to make investments in renewable energy the preferred and cheapest choice, thereby drastically improving the economies of scale and rapidly reducing the costs of renewable energy technologies everywhere. Through these measures, much larger sums of public and private investments are leveraged. After the 15-20 year period of REFiTs, the investment reality will be deliberately and drastically changed, with renewable energy the default choice and less or no further need for the feed-in tariff.

Feed-in tariffs for developing countries may differ from the highly successful examples from industrialised countries (such as Germany) in that the focus is on the guaranteed subsidy and access through affordability. While in industrialised countries the costs for the feed-in tariffs have been passed on to all consumers, for developing countries the key issue is affordability for those who need the energy the most. This

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<sup>6</sup> See for example Menadonça, M et al. 2010. *Powering the Green Economy: The Feed-in Tariff Handbook*. London: Earthscan and UNEP, 2012. *Feed-in Tariffs as a policy instrument for promoting renewable energies and green economies in developing countries*.

<sup>7</sup> Heinrich-Böll Foundation, Friends of the Earth EWNI and World Futures Council. 2013. *Powering Africa through Feed-in Tariffs: Advancing Renewable Energy to meet the Continent's Electricity Needs*.

<sup>8</sup> IPCC, 2012. *Renewable Energy Sources and Climate Change Mitigation Special Report of the Intergovernmental Panel on Climate Change*, Cambridge: Cambridge University Press.

<sup>9</sup> Ibid.

means the bulk of the funding needed to cover the gap between actual investment costs and sales prices at affordable levels (which can be differentiated depending on consumption) need to be publicly provided. And while a large share of the feed-in tariffs in Northern countries have been directed to households who have a legal right to ‘feed in’ excess electricity from their own, household-based solar and wind instalments to the national grid, the focus in an African context would rather be slightly larger instalments that can serve communities, for example, through establishment of local mini-grids.

The attraction of the feed-in tariff concept is that it can be adapted to local circumstances and can be designed to work for both off-grid and on-grid renewable energy investments. There is currently tremendous amounts of learning and fine-tuning of the different approaches (and considerable scope for South-South exchange of experiences and best practices). In fact, there are already numerous examples of well working REFITS in both African and other developing countries, with a range of ownership structures – from community-based models to private sector and utility based ones and combinations thereof. Critically important for successful implementation is considerable attention to capacity building and the many ‘soft’ variables that entail further costs but are key for long-term sustainability.

## Building on existing experiences in Africa and elsewhere

There is already a wealth of real experiences and scope for mutual learning an exchange to refine the detailed setup of feed-in tariffs schemes. A study from 2013 – ‘Powering Africa through Feed-in Tariffs: Advancing renewable energy to meet the continent’s electricity needs’<sup>10</sup> – documents for example the experiences from feed-in tariffs in 13 African countries<sup>11</sup> and demonstrates convincingly how renewable energy feed-in tariffs can be well tuned and accommodated for African and developing country contexts, both for on- and off-grid solutions. These examples span countries with almost universal electricity access such as Algeria to Tanzania with less than 3% rural electrification.

By carefully evaluating existing schemes and experiences, and their different designs in terms of for example tariff setting, what technologies and plant sizes are eligible, how tariffs are differentiated to accommodate prioritised types of renewable energy and to ensure energy access, as well as what are eligible ownership structures, upfront financing mechanism and proportion off-grid versus on-grid support, it is possible to further refine best practices and designs particularly suited for specific countries. In addition to enhanced exchange and interaction between these African cases, there is tremendous scope for drawing on relevant experiences from developing countries on other continents such as India, Sri Lanka and the Philippines.

While a wealth of concrete examples exists, most of these are small in scale and complement investments in traditional, largely fossil-based energy production only marginally. No developing country has yet been able to set up a national feed-in tariff scheme that enables most of the energy investments in the country to be oriented towards renewable energy. And no wonder – in all the cases of feed-in tariffs in developing countries financial constraints have been a key hurdle and bottleneck. The

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<sup>10</sup> Heinrich-Böll Foundation, Friends of the Earth EWNI and World Futures Council. 2013. *Powering Africa through Feed-in Tariffs: Advancing Renewable Energy to meet the Continent’s Electricity Needs*.

<sup>11</sup> Algeria, Botswana, Egypt, Ethiopia, Ghana, Kenya, Mauritius, Namibia, Nigeria, Rwanda, South Africa, Tanzania, Uganda,

state can simply not be expected to have the financial means to finance feed-in tariffs to such extent.

## The case for international financing

In order to enable national renewable energy feed-in tariff systems to have real and substantial impacts in developing countries, significant international financing is a prerequisite.

The intention behind the recent Africa group submission is to set the stage for a visionary, ambitious and transformative global public investment initiative that effectively allows all developing countries to choose a renewable energy future, starting as soon as possible and well ahead of 2020. This time-bound major undertaking could be likened with a ‘Marshall plan’ for climate and development, or an ‘Apollo project’, albeit with much more meaning. It requires unprecedented cooperation between developing and developed countries, but would happen on developing countries’ own terms. This is about choosing our own future and shaping our own destiny, with developed countries repaying their climate debts and fulfilling their long overdue obligations. However, the idea speaks to genuine cooperation and shared interests.<sup>12</sup>

As well as serving as an example of appropriate climate financing in line with the principles and provisions of the Convention, the programme would create a win-win situation where developed countries would, by financing energy access and mitigation in developing countries, also drive down costs for their own transition to renewable energy. Because renewable energy technologies (in particular solar and wind energy) have great potential for significant cost reductions through economies of scale and further technological development, front-loaded early public investments will aggressively cut their costs globally, which in the end benefits everyone. By meeting their obligations under the Convention, Annex I countries would through financing of renewable energy in non-Annex I countries make their own formidable transition to renewable energy cheaper.

In order to keep within the limited global emissions budget, developed countries who are presently largely fossil-fuel based may need to decommission much of their current energy systems before the lifetime of these fossil fuel instalments come to end. Much cheaper renewable energy technologies will then be of massive economic benefit. Contrary to the present discourse with the idea of a gradual scaling up of climate finance, the proposed approach would speak to early, front-loaded efforts as a more effective model. As technology costs decrease over time, the public finance needed for the feed-in tariffs will also decrease over time. Ten years from now only a fraction of subsidies are needed to cover the gap between investment costs and sales prices for a given instalment. Twenty years from now, there may hardly be any need for feed-in tariffs as renewable energy has been made cheaper than fossil alternatives, and at cost levels affordable to the majority. We are thus imagining an ambitious, time-bound programme with an end, to take us over the threshold to an alternative, decarbonised future.

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<sup>12</sup> Variations of this idea have been put forward by various actors: See for example UN-DESA (2009), *World Economic and Social Survey 2009: Promoting Development, Saving the Planet*. [http://www.un.org/en/development/desa/policy/wess/wess\\_archive/2009wess.pdf](http://www.un.org/en/development/desa/policy/wess/wess_archive/2009wess.pdf); Banuri, T and N Hallstrom (2012). ‘A global programme to tackle energy access and climate change’ in *What Next Volume III: Climate, Development and Equity*. [www.whatnext.org/resources/Publications/Volume-III/Single-articles/wnv3\\_banuri\\_hallstrom\\_144.pdf](http://www.whatnext.org/resources/Publications/Volume-III/Single-articles/wnv3_banuri_hallstrom_144.pdf); and UNEP, 2012. *Feed-in Tariffs as a policy instrument for promoting renewable energies and green economies in developing countries*.

## How can this financing be done?

Schematically, it is all quite simple. Again, the precise approach will need to be tailored to national and local circumstances but for illustrative purposes we can identify some broad parameters and steps. Each developing country that is interested in establishing nationally appropriate renewable energy feed-in tariff systems, or in scaling up existing ones, would identify or establish a national institution or agency to take the lead. Through international cooperation and design support (e.g. from the relevant UNFCCC mechanisms) these institutions would be further strengthened to serve as a hub that encourages and engages with other institutions and actors at the national level. This would include the many mini grid and other renewable energy projects in the country. It would also channel the needed support (the feed-in tariffs).

As the national hub for these activities, the institution or agency, in turn, is connected to sources of international public finance through the Green Climate Fund and other sources and, to varying degrees, (depending on the economic situation of the country) other domestic sources of finance. Through these institutions national priorities involving multiple stakeholders are identified and agreed upon. As current experiences from existing feed-in tariff schemes overwhelmingly show, it is of utmost importance to ensure participatory, multi-stakeholder processes involving communities, civil society and local business are in place in order to design systems that are well-functioning and sustainable.

It would seem to make sense to explore the Green Climate Fund as a major source of such international financing. The idea speaks to financial needs at considerable scale and gives concrete meaning to what the GCF could facilitate on the mitigation side. It also seems that the GCF, as it is currently defined and being set up, could be conducive to such a role. For example, the GCF has adopted clearly defined principles in its governing instrument to be transformative and promote a 'paradigm shift', thus going much beyond individual projects.<sup>13</sup> The support to national feed-in tariff schemes with economy and country-wide outreach are exactly that. There are also clearly defined principles of direct access and country ownership, again very much in line with the fact that developing countries are already pursuing these kinds of efforts from their own interest and priorities. Furthermore, the GCF is explicitly highlighting the importance of social, economic, environmental and gender co-benefits and integrated sustainable development approaches, which fit very well with in particular promotion of decentralised, community-oriented minigrid-solutions that directly serve local populations.

As the GCF begins to operationalise and fine-tune its work, it would seem to make sense to explore how it could be made conducive to fund developing country feed-in tariff schemes at scale, once the idea has matured and the political will exists. The concrete needs for funding a full-fledged scheme – likely between USD 100-200 billion per year – to enable all willing/interested developing countries to join would likely change the nature of conversation around the GCF and what levels of capitalisation are needed and reasonable.<sup>14</sup> This figure clearly shows that the ballpark

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<sup>13</sup> Green Climate Fund. 2012. *Governing Instrument for the Green Climate Fund*. [http://gcfund.net/fileadmin/00\\_customer/documents/pdf/GCF-governing\\_instrument-120521-block-LY.pdf](http://gcfund.net/fileadmin/00_customer/documents/pdf/GCF-governing_instrument-120521-block-LY.pdf)

<sup>14</sup> Annual financing needs vary over time, as each year's cost requirement is a result of continuous new entries of investments (until a pre-defined stop-date 15-20 years ahead), and with a continuously decreasing feed-in tariff level as technology costs decrease every year. Total yearly costs will have a peak in the middle of the timeline, with sharply decreasing yearly costs towards the end. See for example UN DESA, 2009. *Technical note on A global Green New Deal for Climate, Energy and Development*, and UN DESA, 2010. *Working paper 95 Estimating the Amount of a Global Feed-in Tariff for Renewable Energy* for early cost estimates. More detailed studies need to

figure of USD 100 billion/year for both private and public funds is way too small (and additionally adaptation will require even more resources). While some may initially react to the sum as big, one can easily argue that it is very reasonable (to further put things into perspective it may be useful to remind ourselves of the demand of finance in the order of 1.5% of industrialized country GDP – roughly USD 600 billion/yr put forth by many developing countries – and the 5% demanded by Africa in Copenhagen).

This kind of investment may be what it takes for developing countries to forgo development that would lead to significant increases in GHG emissions, and simultaneously reduce the costs for the renewable energy transformation in the developed countries. The figure can be compared to the level of yearly bonuses for bank executives or ice-cream consumption in the world, not to talk about current fossil fuel subsidies<sup>15</sup> and military expenditures. Considering the development co-benefits and the more or less infinite costs of catastrophic climate change, this kind of concerted effort to help bend the curve in time may even seem like a bargain. Efforts can also begin more modestly, with a number of developing countries formulating initial requests, and with a corresponding scaling up over time.

## Additional benefits

In addition to the obvious benefits of avoided emissions and enhanced energy access, feed-in tariff schemes have a number of features that add to their attractiveness.

They are, for example, in their very nature output-based and results-oriented in that the feed-in tariff subsidy is only paid after the clean, affordable electricity has been delivered, which is always quantified and metered. Thus, a Northern tax-payer will basically know how much mitigation/avoided emissions and increased energy access he or she has enabled through their climate finance contributions to the undertaking. In a way, the whole set-up includes MRV by its very design, which would likely make it more palatable for Annex I governments.

Perhaps most importantly, the approach drastically changes the nature of conversation and interaction between North and South. While fully in line with principles of country ownership and direct access, the initiative would require mutually agreed principles and frameworks, i.e. a cooperative spirit to solve common problems. This is likely what is needed the most to turn the current UNFCCC negotiations from their presently low levels of trust to a situation where countries can truly cooperate to take the strong action that is needed to handle the climate crisis. By jointly embarking on such bold, joint endeavours, action will speak louder than words and help set a course change for the way we deal with the climate predicament within the multilateral sphere.

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be undertaken to estimate detailed costs, taking into account revised estimates of technology cost reductions over time, countries' ability to contribute through own means and other relevant variables.

<sup>15</sup> The international Energy Agency (IEA) estimates that governments spent USD 544 billion in pre-tax fossil fuel subsidies in 2012, an increase of USD 135 billion in only two years. Renewable energy fuel pre-tax subsidies amounted to USD 101 billion in 2012. Adding tax subsidies for fossil fuels (including VAT exemptions, health care costs from air pollution and costs related to climate change based on IMF data, the International Renewable Energy Agency (IRENA) concludes that the world paid a total of USD 1900 billion in fuel subsidies in 2011, almost exclusively for fossil fuels, and exceeding 50% of the supply costs of coal, natural gas and crude oil. (IRENA. 2014. *REmap2030*). For developing countries, consumer-oriented fossil fuel subsidies can of course only be removed when affordable renewable energy alternatives are set in place.

## Risks

Yet, there are of course considerable risks involved, and careful attention must be set from the very beginning to ensure the intended benefits. These kinds of ‘safeguards’ cannot be added in the very end, but must be part of the conversation from the very outset. This includes, for example, how to ensure that only locally and environmentally sound and appropriate renewable energy technologies are promoted and that local communities and a broad range of stakeholders are involved and take ownership and responsibility from the very beginning<sup>16</sup>. Likewise, it would be important to ensure that the endeavour truly benefits local economics, job creation and domestic industries, and that over time our countries gain the capacity and know-how to produce our own renewable energy technologies and infrastructure. Such important considerations must be promoted right from the start.

It is also critically important to ensure, given the magnitude of the crisis and the enormous challenges to keep the world within the carbon budget, that the rich countries do not count the developing country avoided emissions that would be made possible by the schemes as substitutes or offsets for their own emissions. Radical emissions reductions must take place *within* the developed countries while *simultaneously* developing countries are enabled to forgo future emissions.

## Ways forward

We cannot expect Parties to in one single step come together and overnight agree on an approach of this boldness and magnitude. There will necessarily need to be some middle steps that set the ground and build momentum. How, then, should we proceed?

The recent African submission<sup>17</sup> argues that

‘[b]y creating a Platform to support systemic exploration of REFiT’s and other appropriate incentives, a paradigm shift towards renewable energy can be more readily conceptualized and successfully implemented. Ultimately, the Green Climate Fund could play a pivotal role of providing and catalysing funds (both contributing to upfront capital financing and associated needs for capacity building/planning, as well as funds to cover the tariffs and other incentives). The Platform should furthermore and over time promote and facilitate domestic capacity to manufacture and develop renewable energy technologies in developing countries, thereby stimulating economic development, decreased dependency and local job creation. This platform would also need to ensure access to nationally appropriate renewable energy technologies and capacity building, including sharing of best practices, following a country driven approach and in the context of sustainable development.’

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<sup>16</sup> See for example Hallstrom and Sabido, 2012. ‘Reclaiming power – an energy model for people and the planet’ in *What Next Volume III: Climate, Development and Equity*. [www.whatnext.org/resources/Publications/Volume-III/Single-articles/wnv3\\_sabido\\_hallstrom\\_144.pdf](http://www.whatnext.org/resources/Publications/Volume-III/Single-articles/wnv3_sabido_hallstrom_144.pdf)

<sup>17</sup> UNFCCC, 2014. *Submission by the Republic of Sudan on behalf of the African Group on ADP Workstream 2: Establishment of a global partnership to accelerate the Energy Transformation required for a well below 2° Celsius World by supporting renewable energy feed-in tariffs and other incentives*. [http://unfccc.int/files/bodies/application/pdf/adp\\_ws2\\_africangroup.pdf](http://unfccc.int/files/bodies/application/pdf/adp_ws2_africangroup.pdf)

In more concrete, immediate terms we would suggest that

1. All Parties in their deliberations on how a decarbonisation of the world should take place over the coming decades take into account the necessity to simultaneously provide adequate energy and electricity access to all citizens of the world through integrated, bold solutions, recognising the need for a convergence of per capita energy use over time.
2. Sincere, ambitious and concrete discussions of appropriate support mechanisms for people and community-centred renewable energy investments in line with the arguments in this article are pursued in a variety of fora, including the already established 'Technical Expert Meeting' (TEM) process within UNFCCC. These conversations should encourage and help inform ongoing work and negotiations within
  - ▶ UNFCCC climate finance discussions
  - ▶ The operationalisation of the Green Climate Fund
  - ▶ The UNFCCC technology mechanisms
  - ▶ and necessary and appropriate capacity building, including South-South exchange.
3. The Ban Ki-Moon Climate Summit in September 2014 highlights the importance of an international support mechanism for, in particular, decentralised community oriented renewable energy.
4. A number of developing and developed countries take leadership as fore-runners and step forward by setting up a demonstration scheme and Partnership (also involving civil society and other stakeholders) for international support of national renewable energy feed-in tariffs, involving substantial funding commitments. Such an initiative would provide valuable insights as to how a future, global programme could be set up, and would provide much needed boost for the climate negotiations generally.

Imagine one or several countries in the North committing to enabling one or several developing countries to forgo fossil fuels and embark on a renewable energy trajectory of their own choice that also enables electricity access to those in need. What an inspiring example for others to follow!

The African countries are ready to take leadership with other forthcoming developing countries and progressive Annex 1 countries eager to turn the current negative trends in the negotiations and set the ground for genuine cooperation and trust-building. Through partnerships for renewable energy investments in developing countries a new, concrete mode of operation can be established that reinforces the Convention and its core principles of Common But Differentiated Responsibility, while benefitting both developing and developed countries.