

ENERGY ACCESS STRATEGY

An addendum to the WWF Global Climate and Energy Initiative Strategy

December 2012



The purpose of the Energy Access Strategy is to explain how WWF will work towards 2015 to have focus country governments agree to targets and measures to end energy poverty by 2030.

ENERGY ACCESS GOAL

The Energy Access strategy contributes to the overarching WWF Climate and Energy Initiative (GCEI) vision and goals; more specifically to the Renewable energy at scale strategic objective which states that *by 2015, 10 focus countries have agreed to national renewable energy targets for 2030 in line with WWF's 100% renewable vision, including a target for ending energy poverty by 2030 in developing countries.*

ENERGY ACCESS OBJECTIVE

By 2015 at least 5 key developing countries have developed policy frameworks, and initiated ambitious & measurable action towards ending energy poverty by 2030. Key countries so far include Madagascar, Uganda, South Africa, India, Indonesia, and Nepal. They host a major share of the global poor without access as well as offices in those countries willing to addressing the issue though at different speed.

Background

WWF has recently intensified its work on energy access, lifting its efforts from the field level to the national and international policy level. Due to our presence and growing experience in energy access issues in developing countries we are now in a good position to work with governments in targeted countries to prepare the right context for full and sustainable energy access by 2030. We also continue engaging in international processes such as the UN's Sustainable Energy for All (SE4All) initiative; and the Energy+ initiative, and we build bridges between these international policy advocacy approach and action at the national level. Given WWF's already existing vast experiences in renewable energy and increasingly also access to energy, and our strong base of national representation, grounded in a powerful international network, we believe that we have a vital and unique role to play in moving the world to a more sustainable path of development.

This strategy is the result of cooperative work in the WWF network and strengthens already existing access to energy/renewable energy strategies in the target countries or regions, such as WWF's Eastern and South Africa Program Office (ESARPO) energy strategy.

The essence of the WWF strategy is to demonstrate viable, sustainable energy access solutions for energy-poor people in developing countries, promote replication and scaling-up to foster enabling conditions and national commitments to energy access and renewable energy / low carbon strategies.

WWF has as target to contribute to eradicating energy poverty by 2030 globally. It will support the establishment by 2015 of credible and implementable national targets for 2030 and will priorities five to six countries in Southern Asia and Sub-Saharan Africa, specifically: Nepal, India, Indonesia, Uganda, Madagascar and South Africa. Other WWF offices are encouraged to join.

The strategy will be coordinated from a unit hosted by WWF-India, supervised by WWF's Global Climate and Energy Initiative (GCEI). It will primarily deliver on WWF renewable energy goals in the GCEI strategy but also contribute to other GCEI goals and to the many general and site specific WWF conservation goals, in particular reduced deforestation and degradation of natural resources, gender equality and improved livelihoods for the poor and climate change abatement.

WWF programmes and National Offices will participate in the program and take responsibility for selected activities, tasks, capacity needs and funding. WWF will also rely extensively on partnerships with small local to top government stakeholders, local business to international financing institutions and expert civil society organizations (CSOs).

Context

Based on latest analysis by the IEA (World Energy Outlook 2012), the number of people w/o access to electricity or clean cooking facilities has decreased by about 50 and 40 million, respectively, by mid-2012 compared to the year before. But still, about 1.3 billion people have only erratic or no access to electricity and 2.6 billion people mostly in impoverished regions of South Asia and Sub-Saharan Africa meet the majority of their energy needs with biomass (charcoal, fuel wood, agricultural waste and dung) for cooking and heating or coal (China). Traditional biomass use in developing countries accounts for approximately 10% of all global energy use and is responsible for about half of all tree logging. Reliance on cooking and heating in-door with solid fuels and inefficient boilers causes almost 2 million premature deaths by those inhaling the smoke in the often very small huts, mostly women and children. Based on IEA scenario of 'Present Policies' the number of people relying on traditional but highly inefficient use of biomass is expected to even rise slightly by 2030 unless additional action is being taken by governments. This has severe implications since access to clean, safe, reliable and affordable energy is fundamental for achieving poverty eradication and sustainable development. But solutions are there already in many places and only need to be implemented elsewhere. Simple but energy-efficient and smoke-free woodstoves and biogas digesters can reduce the need for firewood by more than 50%. Off-grid solar and wind with batteries are already today cheaper in many rural regions than reliance on Diesel generators.

WWF strongly rejects concerns that bringing basic energy services to the billions that presently have not this privilege will unduly magnify the climate change problem as fully unfounded. First, the climate pollution is caused mainly by the wealthier of this world. The 1% to 3% of the richest people in the world cause about 50% of global CO₂ emissions (Hadley Centre, UK). Second, providing basic energy services for decent livelihoods for the poor is likely and most cost-effectively based on renewable energy anyway and the IEA estimates that this may grow global CO₂ emissions by about 0.6% by 2030.

Despite important efforts at national and international level, poor people's access to modern energy services has not improved much in the least developed countries. The situation has improved mainly in emerging economies, but even there many of the poor still lack access. Why?

There are at least five categories of failures which are all interconnected. Those include lack of 1) political will by governments; 2) access to finance; 3) policy and regulation; 4) access to and dissemination of regionally and culturally appropriate technologies; 5) communication and awareness on opportunities. These multiple failures contribute to the problems observed:

- Access to energy and electricity services has not been a priority. Developing country governments often prioritise electricity supply to large businesses and big cities from large centralised power plants.
- Overcoming unsustainable biomass use for cooking is often not considered a primary governmental intervention necessity because this practice seems to be culturally accepted and clean alternatives in a couple of poor countries are deemed to be costly.
- Access to energy without support mechanisms is still not interesting commercially, with notable exceptions. Governments have some funds available for access, but this does not make a significant contribution at country level.
- The awareness about existing technologies and their direct and indirect benefits to people and economies is still limited among rural consumers as well as public actors and the business community
- Capacity and knowledge gaps as well as governance failures undermine clean and alternative energy initiatives. Fossil fuel supply and big, often national utilities are at the centre of governmental energy strategies.

- Financing access to energy is not easy. There is a big gap between the financial institutions and banks on one side, and poor recipients on the other side.
- Renewable energy technologies are still considered as more risky and there is limited competence and interest in the financial sector to embrace clean technologies and hedge against perceived risks of longer-than-usual return on investments.
- Despite substantive structural differences, the build-up of energy supply systems in poor countries has been approached in a similar way to industrialised countries where, however, energy poverty is no issue generally but where the overall system is highly polluting and inefficient.

Some current opportunities, however, make us think that the situation can change:

- Overall, providing basic and reliable energy services to the more than 3 billion in developing countries that have not this privilege, will cost the world investments of about \$US 50 billion annually until 2030. That sounds a lot, but isn't in reality. It is less than 10% of all fossil fuel subsidies and about one quarter of the annual profits (2011) of the largest six oil and gas companies.
- Though Rio + 20 did not agree on a universal and binding target to end energy poverty in developing countries by 2030, this is likely to re-surface in the UN process for defining Sustainable Development Goals (SDG). International financing initiatives like Energy + are keen to support access to sustainable energy.
- Fossil and unsustainable energy is based on increasingly expensive, dirty, risky and overall environmentally controversial resources. Sustainable energy is based on essentially free, ever-lasting renewable resources that are cleaner, less controversial and more suitable for distributed use in rural and some urban areas with unreliable grids. Renewable energy costs are quickly decreasing and provide better opportunities than fossil fuels for sustainable development on all fronts. This competitive advantage is sooner or later bound to bite.

Theory of Change

The industrialised world needs an energy revolution. That has been WWF's consistent message and has been fleshed out in The Energy Report by WWF. The developing world also needs an, albeit different, energy revolution. Despite decade-long support, the current status quo of pure utility expansion and grid extension is not delivering results. Large amounts of government funds are lost in oil and other fossil energy subsidies. Electricity only reaches the wealthier, or is sold to the poor at a very high cost. Forests are cut for firewood and charcoal production... In many countries, electric utilities are inefficient and often biased towards large scale grid connection and those who have capacity to pay while literally leaving others in the dark.

To combat climate change, ensure social development and provide demand-driven highly-efficient energy services we need a shift to an energy system with appropriate renewable energy solutions that empower people, in other words a priority to reliable and affordable access to energy and renewable energy services.

This does not mean that grid expansion should not happen, but it should be part of a broader portfolio of solutions adapted to local circumstances. There is now an opportunity for leapfrogging and avoiding mistakes from the past. And there is a variety of inspiring examples that have worked in various places to make the business case. Those need to be multiplied. This change can take place provided that:

- Markets need to work for creating a level-playing field for clean renewables, governments need to correct design flaws of the energy supply system and correct embedded failures such as fossil fuel subsidies while providing the poor with affordable and reliable energy.
- New models of equitable, universal and clean energy services to the poor are well communicated to the policy makers, companies, international community and the final beneficiaries, and foremost the people.
- There should be a **shared vision of the future energy** sector in developing countries and how this can be developed in harmony with sustainable development and overall poverty eradication.

This leads to institutional and strategy changes. **One of the major steps is for governments to agree on targets and measures domestically to eradicate energy poverty by 2030.** Another one is to leverage donor **funds directly to such initiatives** that provide effective results. Such funding will increase based on the effective results delivered by the new strategies.

A third important step is to support entrepreneurial companies which see the new potentials that such a change offers and invest in those solutions.

WWF interest and role

Energy access will be at the heart of WWF's environmental agenda in poor countries. The universal access to energy agenda plays strongly to both the "people" and "nature" sides of WWF's mission, especially if the focus is laid on its contribution to social and environmental improvements. Access to clean, reliable and affordable energy can result in a range of improvements which will directly contribute to WWF achieving its overall biodiversity and footprint objectives:

- **Clean energy solutions at scale:** The very large number of people currently lacking satisfactory energy access means that the energy solutions that will ultimately be available to them will have global significance. Providing more than 3 billion poor people with sustainable energy solutions will not only improve these people's lives and reduce the environmental impacts of their energy use, but massively increase the push to set the world on a sustainable energy course. In particular, in countries where a large part of the population lack satisfactory energy access, large scale sustainable solutions for these people could be the decisive factor for ensuring a national sustainable energy strategy. This strongly contributes to the GCEI vision and goals.
 - *Vision - A safe and sustainable future for people, places and species, in an equitable low-carbon society that is resilient to climate change.*
 - *Goals - By 2050, equitable low-carbon, climate-resilient development is the basis of global societies and economies; by 2015, there is a significant shift to climate resilient, low carbon development.*
- **Reduced environmental impacts:** Although the specific direct or indirect GHG emissions of the energy use of people who have only a basic or erratic energy supply are negligible, the impact of Black Carbon, an aerosol resulting from incomplete combustion of biomass and contributing to rapid ice melt, on the atmosphere is probably large. Overcoming dependence on inefficient biomass cooking facilities therefore directly benefits climate change mitigation. Further, the impacts on local nature and biodiversity of these forced energy choices are often significant and unsustainable such as for local wood resources and soil fertility via degradation, deforestation and nutrient exports. The FAO suggests that about half of all logged wood worldwide is used for traditional and inefficient bioenergy use in developing countries. Providing people with

sustainable and satisfactory energy solutions is an efficient way of overcoming negative impacts of energy consumption on nature and climate. This contributes to WWF's Global programme framework biodiversity and footprint goals.

- *2020 Biodiversity Goals: Biodiversity is protected and well managed in the world's most outstanding natural places; Populations of the most ecologically, economically and culturally important species are restored and thriving in the wild.*
 - *2020 Footprint Goal: Humanity's global footprint falls below its 2000 level and continues its downward trend, specifically in the areas of: Energy/carbon footprint; Commodities (crops, meat, fish and wood) footprint; Water footprint.*
- **People's ability to plan and act sustainably:** Satisfactory clean energy access improves people's opportunities to plan, choose, organize and make informed, long term decisions to improve their own situation. Reliable electricity and light not only for homes but also for schools, hospitals, businesses will allow to work, study, learn, to cool food and medicine and to entertain. It is about dignity and decent livelihoods. It will enable entrepreneurship and income generation. This includes the types of decisions that are needed to reduce negative environmental impact. People who are unchained from unsustainable energy solutions become able to choose and contribute to sustainable solutions and are better equipped to overcome changes in their environment, including climate change. This indirectly supports the above mentioned goals.
- **Overcoming gender inequality:** In many cases, women and children suffer most from energy poverty. They are those who spend many hours for collecting firewood and hence are deprived from more productive use of their time, such as learning and education or having a regular job. In addition cooking women are most exposed to toxic in-door pollution caused by smoke from inefficient biomass boilers. Highly-efficient biomass use will substantively reduce these impacts.

WWF will actively promote the energy sector transformation. It will contribute to the following 4 pillars in order to change the current energy sector status quo:

1. Policy

Promote national and local policies that articulate a pathway for eradicating energy poverty by 2030 Develop and/or support new energy visions and strategies in various countries and regions, in order to kick start a debate on which energy development to pursue.

Catalyse political commitments for national targets to achieve universal access to clean energy by 2030.

2. Models

Scaling-up of existing and developing new partnerships as appropriate to identify and create as well as propagate financially viable, environmentally and socially sound models and enterprises for energy access.

3. Institutions & Capacity

Strengthen capacity of local and national institutions (both public and private) and enterprises to deliver sustained energy access for the poor.

4. Finance

Mobilize and influence funders and financial institutions to both develop new innovative support schemes and business models as well as enable replication of successful energy access initiatives and efforts from other regions and countries.

WWF has a unique role to play in this clean energy transformation. The organisation is one of the only global players able to intervene at all levels, from international policy and finance discussions to local engagement with communities in several regions. It has a strong convening power that can contribute to innovative partnerships and solutions. It provides a unique perspective on the energy topic, coming from a resource management, development, climate and biodiversity angle. These issues are crucial for LDCs, that often suffer the most from climate change, see their natural resources disappear at a fast pace and do understand the importance of biodiversity for their

economies. WWF will seek technical and strategic cooperation with groups with the necessary technical, social and cultural capacity for complementing WWFs skills. For instance, WWF's recent partnership agreement with Barefoot College in Ajmer, India will provide guidance to grassroots solutions to implement sustainable energy access for the poor in coordination with our NOs/POs particularly in Africa.

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	<p>Why we are here To stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature.</p> <hr/> <p>www.wwf.eu</p>
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