

AREA Conference at the Rockefeller Foundation Bellagio Conference Center

Access to Sustainable Renewable Energy in Africa as Prerequisite for the MDGs

Introduction

Energy is one of the key stones for social and economic development and affects all major aspects concerned such as environment, gender equality, food security, climate change, health, education, and poverty alleviation. This is why access to affordable, sustainable modern energy services - electricity as well as thermal applications - is a major determinant for progress in achieving poverty reduction and the attainment of the millennium development goals (MDGs) in Africa.

It is estimated that only half of the urban population in sub-Saharan Africa has access to energy services, with a ratio as low as 8% in rural areas. 80 percent of the African population relies primarily on traditional biomass, such as fuel wood to fulfill their daily energy needs. A large percentage of household incomes is spent on energy – wood, charcoal, diesel, kerosene and batteries – for electricity and cooking. Fuels that are burned in poorly ventilated or enclosed spaces lead to indoor air pollution and cause often deadly respiratory diseases. Also, women invest a substantial amount of productive time in collection and transportation of wood.

Renewable energies can contribute to a large number of political objectives, such as poverty eradication, a sustainable use of resources, the protection of both human health and the ecosystem. This is particularly true for small to medium scale renewable energy systems that provide affordable energy to livelihoods currently defined by energy poverty, and help in creating employment by powering enterprises for both rural and urban populations. Keeping in mind the unlimited renewable energy availability, there is a huge opportunity in directing investments into clean, efficient, renewable energy for the growth of a green economy in Africa. African countries now have the opportunity of leap-frogging fossil fuel based energy production by utilizing the advanced renewable energy knowledge and technologies available.

Africa's energy challenges require a radical scaling-up of access which calls for an improved enabling environment, effective policy and regulatory frameworks, enhanced management capacities and financial services. Frameworks which have proven successful in other countries of the global South should be adapted and implemented in Africa.

The African Renewable Energy Alliance (AREA)

In 2009, the World Future Council has initiated the African Renewable Energy Alliance (AREA), a global platform for policy makers, business, civil society and academia to exchange information and consult about policies, technologies and financial mechanisms for the accelerated uptake of renewable energies in Africa. In the quest for sustainable solutions at regional, national and international level, AREA plays a catalytic role in promoting knowledge transfer and international cooperation.

Conference “Access to Sustainable Renewable Energy in Africa as Prerequisite for the MDGs”

As 2012 marks the UN International Year of Sustainable Energy for All, the African Renewable Energy Alliance (AREA) will focus on identifying and promoting the necessary frameworks and instruments for the scaling up of access to renewable energy for all African citizens to improve their livelihoods and to protect the environment. Universal access to sustainable energy means the provision of access to clean and affordable energy with low greenhouse gas emissions for electricity, cooking, lighting, heating and cooling as well as processing.

The conference “Access to Sustainable Renewable Energy in Africa as Prerequisite for the MDGs” will serve as a high level platform for discussion and the development of implementation models. Participants of the conference – policy makers, stakeholders from business, civil society, academia and multilateral organizations – are invited to network, catalyze ideas and share information in a focused manner. Since all participants are experts in their respective fields, there will be no classroom-style talk, but a strong emphasis is put on collaborative work. The meeting aims to concentrate on the evaluation and dissemination of proven models for access to renewable energy, with brief introductions and inputs serving as the basis for collaboration to resolve operational issues, barriers and challenges as well as elaboration of sustainable solutions on various levels of implementation.

The workshop will consist of consultation around four areas of renewable energy promotion that propose innovative solutions. Models introduced for thorough discussion and evaluation will be micro-financed off-grid systems, mini-grids in connection with telecommunication infrastructure, financing mechanisms for thermal applications and scaling up access by switching from fossil to renewable. The institutional, financial, technology research & development and human resource frameworks will be highlighted, evaluated and taken further.

1. Bangladesh’s renewable energy microfinance and capacity building schemes for off-grid areas.

These integrated approaches not only focus on the technical and capacity-building sides of renewable energy but on women welfare, income generation, child education, capacity building of local entrepreneurs and after sales service. Their innovative financial schemes involving the community at grass root level have helped rural people to procure renewable energy systems for their livelihood activities and income generation. Bangladesh has proven that renewable energy applications can be scaled up massively and rapidly to provide an affordable and climate-friendly energy option for the rural poor.

Discussion: practicability of solar home systems; microfinance options, advantages and barriers; capacity building programs; manufacturing challenges; import tax barriers on renewable energy technology; implementation prerequisites and obstructions.

2. Sustainable & efficient cooking solutions using improved cookstoves and biogas – CDM and microfinance as an enabler

Many good examples exist all over the continent. One is the CDM financed improved wood stove programme of the Development Association for Renewable Energies (DARE).

The DARE stove reduces indoor air pollution and emissions by 80%. DARE aims to disseminate up to 45.000 stoves, and this CDM project is expected to prevent the emission of around 300.000 t of CO₂ until 2018. Besides saving greenhouse gases, one major objective is to bring wood consumption down to a sustainable level.

Discussion: Investment barriers, technological barriers and barriers due to prevailing practice; monitoring; data gathering; CDM and micro-finance; appliances for processing, cooling, heating

3. Rural electrification with mini-grid solutions: examining the Rockefeller Foundation Smart Power for Environmentally-sound Economic Development (SPEED) programme in India for adaptation in Africa.

The Rockefeller Foundation is exploring whether the power needs of the massive and rapidly-growing infrastructure of cell phone towers in India - many of which are far from the electricity grid and powered by expensive diesel fuel - can be harnessed as an anchor demand and source of revenue to help provide clean energy services and universal electrification in poor communities.

Discussion: Private and public stakeholders; ownership issues; technologies; finance; operation and maintenance; capacity building; equitable growth and participation; smart grids

4. Access to affordable energy by switching from fossil fuel to renewable energy production as demonstrated by the Cape Verde Islands

The Cape Verde Islands are defined by energy poverty since electricity is unaffordable to most due to an extremely high cost of importation of diesel for electricity production. The Cape Verdean government introduced a set of measures to achieve a ratio of 50 % renewable energy production in ten years (wind and solar PV). The aim is to become independent of fossil fuel imports, to enable affordable access to electricity to their citizens and to become a knowledge hub for West Africa.

Discussion: Private and public investments; government loans; data gathering; planning and implementation; feasibility of replication; technologies; grid requirements; tariff setting

Objectives of the conference

With this conference AREA aims to stimulate a South-South exchange, to develop respective models for implementation in Africa and to connect potential funders with these projects. On the basis of the four examples given and in consideration of all relevant issues, this conference aims to develop widely replicable mechanisms for the deployment of sustainable and affordable energy access opportunities in Africa. As an outcome of the conference, AREA seeks to build strong cooperations across borders that put these models into practise nationally as well as internationally.