The Africa-EU Energy Partnership Jointly tackling energy challenges





Co-Chairs and Partners



African Union Commission

Austrian Development Cooperation



Federal Ministry for Economic Cooperation and Development



Ministry of Energy and Public Utilities, Republic of Mauritius



The Africa-EU Energy Partnership

While Africa's energy needs are growing substantially, the available resources are more than sufficient to meet the continent's demand. With its vast and untapped natural resources. Africa is an ideal place to develop innovative technologies and renewable energy solutions, while the EU is particularly well-equipped to support capacity development, provide renewable and energyefficient technologies, and help in enhancing regulatory and investment frameworks.

The Africa-EU Energy Partnership (AEEP) constitutes one of eight partnerships under the Joint Africa-EU Strategy (JAES), a long-term framework for cooperation between the two continents, established in 2007 at the Lisbon Africa-EU Summit, Under the framework of the AEEP the two continents share knowhow, connect resources, and work to better coordinate their respective energy policies.



"Within the Joint Africa-EU Strategy, the Energy Partnership is certainly the one which produces the most tangible results and is the most active." Klaus Rudischhauser, Deputy Director-General, European Commission, DEVCO

The overall goal of the AEEP is to improve access to reliable, secure, affordable, cost-effective, climate-friendly and sustainable energy services for both continents, with a special focus on achieving the Millennium Development Goals in Africa. Based on this goal, the AEEP has identified institutional capacity development, increased cooperation with private sector, strengthening research and civil society, as well as the scaling-up of investments and increased policy dialogue as priority areas for action.



In order to reach this goal, the AEEP operates at various levels: supporting policy dialogue both on strategic matters through high level meetings and operational matters through the organisation of committees and joint expert groups; engaging with academia, civil society and the private sector represented in the AEEP's Stakeholder Focal Point Groups and hosting dynamic and targeted initiatives, notably the Africa-EU Renewable Energy Programme (RECP).

The implementation of the AEEP is guided by Joint Expert Groups and African and EU Implementing Teams, coordinated by Co-Chairs from both continents. The AEEP's Co-Chairs are Austria and Germany for the EU, and the African Union Commission and Mauritius on the African side.



"The African Union is committed to further strengthen energy cooperation with Europe. Technology transfer and investment are key

for sustainable energy development in Africa."

Aboubakari Baba Moussa. Director. Infrastructure and Energy Department, African Union Commission; AEEP Co-Chair

Success Story 1 Spain-Morocco Electricity Interconnection

The Africa-EU Energy Partnership is very active across the Mediterranean. The economies of North Africa and their northern neighbours have been developing a significant and complex network of gas pipelines and electricity interconnections.

The Mediterranean Energy Ring interconnected grid network (Medring) is now largely in place and energy is shared and traded both between the North African states and between the two continents.

Morocco and Spain are two of the main players in this trade. The Moroccan state utility, Office National de l'Electricité et de l'Eau (ONEE), and Spain's Red Eléctrica de España (REE) have, for over a decade, had a connection across the Strait of Gibraltar, through which 700 MW can now be traded, with plans to double this to 1,400 MW. As a paper presented by REE executives put it, this link represents "one the maximum exponents of energy cooperation policy". The link includes other North African states: ONEE shares power with its Algerian counterpart Sonelgaz, helping both sides to cope with peak demand. For the expansion of the link to Spain, a high-voltage direct current (HDVC) line is planned parallel to the existing ONEE/REE interconnection. This will allow electricity from Morocco's huge renewables programme to be exported into Europe – a goal of the Desertec Industrial Initiative and other schemes to develop Africa's solar potential in a mutually beneficial way.

The EU's Medring plan for connecting grids around the Mediterranean Sea also envisages building dedicated HVDC submarine power line corridors to connect southern Mediterranean states with the EU-28 by the most direct routes possible. ONEE is also a consumer of Algerian natural gas, piped through the Pedro Duran Farell Gas Pipeline, which ships the feedstock over 1,620 km from Algeria to Spain and Portugal, as part of an impressive 2,200 km pipeline system.



Combating Energy Poverty in Africa Together

The Africa-EU Energy Partnership (AEEP) offers a functioning platform for political cooperation whose guiding principle is to improve the lives of many millions of people by promoting dialogue and providing a framework in which policies and projects can be implemented with high levels of delivery and stakeholder buy-in.



"The partnership has to deliver, translating in getting higher access to energy for the African population." Philippe Niyangabo, Head of Energy

Division, African Union Commission; AEEP Co-Chair

The AEEP is driven by a desire to deliver positive, practical outcomes and was conceived with the conviction that outcomes have to be both tangible and measurable. Therefore, at the First High Level Meeting in 2010 Energy ministers of the EU and Africa agreed on ambitious targets to be reached by the year 2020.



"The political targets of the AEEP fit very well into the targets that are being discussed in the post-2015 process."

Franz Marré, Head of Unit "Water, Energy, Urban Development, Geosciences Sector"; Federal Ministry for Economic Cooperation and Development, Germany; AEEP Co-Chair

At the Second High-Level Meeting of the AEEP, taking place on 12–13 February 2014 in Addis Ababa, African and European political and business leaders meet to take stock of the AEEP's successes and provide an opportunity to further strengthen African and European efforts directed at tackling – hand-in-hand – the continents' remaining energy challenges.

2020 Targets in the framework of the AEEP

Access

to modern and sustainable energy services to at least an additional

100 MILLION AFRICANS

Energy Security

2x

- the capacity of cross-border electricity interconnections
- the use of natural gas
- African gas exports to Europe

Renewable Energy and Energy Efficiency

0,000 MW of new hydropower

5,000 MW of wind power

500 MW of all forms of solar power the capacity of all other renewables

Increase energy **EFFICIENCY** in Africa in all sectors

Success Story 2 Geothermal Risk Mitigation Facility

East Africa's Rift Valley has considerable untapped geothermal resources which have the potential to help meet the region's urgent need for power. However, in the past the high costs and risks of early exploration drilling needed to assess viability. Now, thanks to a facility developed by the European Union and African Union partners, geothermal projects in the region are gaining unprecedented traction. The Geothermal Risk Mitigation Facility (GRMF) was launched in April 2012, backed by an initial €50 m, to stimulate investment and especially public/private partnerships (PPPs). The initiative has been developed jointly by the African Union Commission (AUC) and the German development bank KfW, which is working on behalf of the EU-Africa Infrastructure Trust Fund.

With the help of GRMF funding, project developers will find it easier to secure financing for further field development, given the reduction of risk for potential investors. Seven developers – three in Ethiopia, three in Kenya and one in Rwanda – applied for the GRMF's first licensing round, while the facility is making €30 m available through a second application round which opened on 28 October 2013. With demand for GRMF funding far surpassing initial expectations, the facility is now being expanded to include 11 eligible countries. Furthermore, other projects are already planned.



The GRMF builds on foundations laid down in Kenya, whose rich geothermal resources in and around the Rift Valley have enabled it to spearhead development of the sector within the region. The country currently has installed over 200 MW of geothermal capacity, mainly from three projects on the Olkaria field, but has plans to add around 2.6 GW of capacity by 2021. This progress is commendable and, as has been indicated by some analysts, needs continued external support. The African Development Bank (AfDB) is providing a \$120 m concessional loan and a \$25 m grant from the Climate Investment Funds, being hosted by the AfDB. In addition, the World Bank has pledged around \$150 m to the project. With continued support, Kenya alone could reach 5 GW of capacity by 2031.

Mobilizing Private Investment

Attracting private capital is key in meeting our future energy needs. The private sector has the resources, flexibility and entrepreneurial skills needed to complement the limited delivery capacity of the public sector. The Africa-EU Energy Partnership aims at lifting barriers for private investment, and at developing capacity for Private-Public Partnerships in the energy sector.



"Governments are supposed to formulate political targets, but we need the action on the ground by practitioners."

Wolfgang Moser, Head of Unit VII.5d, Department for Development Cooperation, Federal Ministry for European and International Affairs, Austria; AEEP Co-Chair

The AEEP is also organizing a series of national stakeholder dialogue events in African countries, aiming at increased involvement of private sector players in the countries' energy agenda. Besides establishing business links and public-private partnerships in-country, the AEEP is facilitating the engagement of foreign investors through the provision of market information and market entry points through these events and related publications.

There is however still a need to intensify efforts to facilitate cooperation among African and European private sector investors, especially with regard to attracting European investment in Africa. Reducing institutional bottlenecks, facilitating the flow of information, bringing together partners, and supporting project development will encourage meso-scale investment and further stimulate the African-European cooperation in their energy markets.



"Better cooperation between the public and the private sector will support closing the technology gap – by providing access to

technologies, which are already available in other parts of the world."

Marcus Wiemann, Secretary General, Alliance for Rural Electrification (ARE); AEEP Focal Point, Private Sector – Europe

Through its Africa-EU Renewable Energy Cooperation Programme (RECP), the AEEP helps stimulating the market for renewable energy in Africa, with a special focus on private sector cooperation and the promotion of attractive enabling conditions. The RECP will initiate, from 2014 onwards, a new and structured set of activities aimed at triggering joint business development between African and European private sector. Through the provision of market identification, identification of project opportunities and mobilization of stakeholders, as well as matchmaking and dialogue events, the RECP will stimulate market uptake for renewable energy in Africa. This will be complemented by targeted advisory support on policy and regulatory affairs, and undertaken in close collaboration with cooperation partners in private sector as well as among financing institutions.



Success Story 3 ECOWAS Members Members Agree Regional Renewable Energy Policy



Providing adequate energy services is a challenge across the 15-member Economic Community of West African States (ECOWAS). However the region's abundant renewable energy (RE) potential provides an opportunity to tackle the challenges posed by growing populations and volatile global fuel prices. Conscious of this potential, West African and European organisations, as well as individual member states, have come together to develop the ECOWAS Regional Renewable Energy Programme (EREP).

The EREP process was led by the ECOWAS Centre for Renewable Energy and Energy Efficiency (ECREEE) with close support from the Africa-EU Renewable Energy Cooperation Programme (RECP). ECREEE is a Cape Verde-based institution which operates with the support of a number of EU partners – including Austria, Spain and Germany, alongside the United Nations Industrial Development Organization (UNIDO). EREP, the product of this cooperation, serves the region as a policy platform, providing renewable energy targets and an action plan. The regional policy has been adopted and endorsed by ECOWAS heads of state, and is now being followed up at national level with support by ECREEE to its member states, as well as several initiatives of EU donors. EREP is designed to combat growing energy deficits, disparities in the supply of urban and rural energy services, climate change pressures and the region's unsustainable reliance on wood fuel. It facilitates the development of standards in the region, promotes a regional market for investment and complements existing and planned national policies.

This regional initiative, with European support, is proving successful.

Creating Opportunities for Renewable Energy - the RECP

The European Union is a world leader in renewable energy. Besides concentrating a high level of expertise in the sector, EU member states have been pathfinders for renewable energy policies and promotion schemes. In cooperating with the EU, there is indisputable potential for the African renewable energy sector to develop a valuable industry, create jobs, increase energy access and thus contribute to socio-economic development and poverty eradication.

Through the Africa-EU Renewable Energy Cooperation Programme (RECP) Africa and Europe take joint action to help make Africa a prime destination for renewable energy investments. The RECP mobilises Europe's expertise and innovation in order to build knowledge and capacity and support the growth of a new industrial sector in Africa. In addition, the programme catalyses green growth by creating jobs, establishing markets and industries with local added value in the renewable energy sector.

"The RECP is already active across a broad range of initiatives in Africa, ranging from policy advisory services to organizing specific dialogue events."

Johan Van Den Berg, CEO, South African Wind Association (SAWEA); AEEP Focal Point, Private Sector – Africa

The RECP was launched at the First High-Level Meeting of the Africa-EU Energy Partnership (AEEP) in Vienna in 2010. Ever since, a large number of activities in the areas of energy policy advisory services and project preparation have been initiated and successfully completed. In addition, the programme is now expanding its activities into two similarly important fields: supporting vocational training and higher education in the field of renewable energy and facilitating private sector cooperation. The RECP is currently funded by the European Commission, Germany, Austria, Finland, and the Netherlands.





Success Story 4 Energy Business Dialogue Uganda

Just at a time when Uganda was at the centre of discussions in relation to its involvement in the United Nation's Sustainable Energy for All Initiative, the secretariat of the Africa-EU Energy Partnership organised a stakeholder dialogue event bridging the gaps between non-state actors and public institutions.

Hosted by the Ugandan Ministry of Energy and Mineral Development, the event facilitated discussion on how to better involve private sector players in improving the legal and policy framework for business action, raise awareness of financial mechanisms enabling investment in energy projects and mobilize support to small and medium sized enterprises.

Furthermore, the dialogue event provided participants with a platform to establish business partnerships and direct links with the Ugandan public sector, development partners, academia and civil society. A joint statement was developed by workshop participants, including a set of recommendations for action addressed at Ugandan authorities and development partners, which has been disseminated through the channels of both the AEEP and the Sustainable Energy for All (SE4ALL) Initiative.



Following the event, the Ugandan Ministry of Energy and Mineral Development has assigned a consultant to support a Task Force in the kick-starting of the SE4All implementation process, with a special focus on facilitation of dialogue among the stakeholder groups and coordination of existing initiatives. The event has furthermore resulted in several business partnerships, a strengthened industry association and increased capacity of Ugandan energy practitioners.



"The event was a blessing ... we are already reaping fruits out of the exposure it accorded to our organisation."

Esther Mukooza, Uganda National Renewable Energy Association, Uganda

Promoting Stakeholder Engagement

The Africa-EU Energy Partnership drives the expansion of cooperation beyond governments by facilitating dialogue among and actively involving European and African private sector, civil society, and research institutions.

It provides a platform for stakeholders to contribute to AEEP targets through addressing barriers to increased investment and development assistance, sharing knowledge and technology, and exchanging ideas and experience to help implement actions on the ground. The Forum also puts forward recommendations to decision-makers.



"The best thing the partnership can do is give an equal platform for dialogue. That can help leverage change for poor people in Africa."

Lucy Stevens, Senior Policy and Practice Advisor, Practical Action; AEEP Focal Point, Civil Society – Europe

The First Stakeholder Forum of the AEEP took place in May 2012 in Cape Town, South Africa, hosting over 250 representatives from the different stakeholder groups - tackling issues

ranging from large-scale energy infrastructure to private sector financing for renewable energy. Following the First Stakeholder Forum, country-level dialogue events were held in Uganda, Djibouti, Zambia, Cameroon and Ghana.

The AEEP dialogue events have contributed to the enhancement of national energy policies, for example feeding into the development of the Djiboutian electricity strategy, and also resulted in concrete recommendations at the regional and global level. Through the events, business to business partnerships and foreign investment have been facilitated, and the standing of civil society and industry associations in the national energy sectors have been strengthened.



"Dialogue platforms have proved extremely important... this workshop was capacity building for an effective engagement in the energy sector, based on defined mandates"

Hon. David Ebong, Managing Director, **Clean Energy Partnership Africa**



Success Story 5 Access to Energy in Ghana



In 1990, electricity access rates in Ghana were as low as 15%. Then, in the same year, the National Electrification Scheme was initiated to provide universal access to electricity in Ghana by 2020. The scheme gave priority to the lighting of district capitals (numbering 215). The addition of the Self-Help Electrification Scheme allowed to bring power also to more rural but 'economically viable' areas. Now, after just over two decades, the country's progress towards achieving universal access has made such headway that in July 2013 Energy Minister Armah-Kofi Buah was able to announce that the universal access target would be achieved as early as 2016. By 2016 more than 5,300 communities will be connected to the grid, bringing the access rate to 93%.



"Since 1999, we have moved from 15% to almost 80% in energy access, and it's all been due to effective planning and implementation and

the strong political will to get energy access to every Ghanaian."

Gifty Tettey, Deputy Director Renewable Energy, Ministry of Energy, Ghana

Key factors contributing to this progress were strategic long-term energy planning including clear targets, the availability of external funding and the active role of the central government in the implementation of energy policies. Ghanaian officials and external observers also identify Ghana's vibrant democracy (of the sort the EU is strongly committed to supporting) as a critical contributing factor, as democratic accountability incentivizes politicians to deliver on increased electricity access.

Of course, there have been challenges along the way, but they have been overcome by adopting robust policy responses. Following the suffering of technical and commercial losses and a prolonged power supply crisis since mid-2012, a tariff rise had been adopted – making electricity prices more cost-reflective and renewable energy (RE) more attractive – and a feed-in tariff and RE purchase obligations have been put in place since for larger customers.

One of minister Buah's additional targets is to increase the share of RE to 10% by 2020. A new Renewables Directorate has been set up in the energy ministry and Ghana has received funding from the EU to support RE deployment. Ghana has shown itself to be open to private investment, so reaching the target is by no means impossible.

Progress, achievements and future perspectives -Status Report of the AEEP

The Status Report of the AEEP – Progress, achievements, and future perspectives - has produced up-to-date, accurate metrics that allow a monitoring of the AEEP 2020 Targets (see graphic on page 5). It contributes to the enhancement of knowledge on the major indicators energy access, energy security, renewable energy and energy efficiency on the African continent, and provides a thorough overview of African-EU cooperation in the sector. Furthermore, the report provides a potential starting point for a continent-wide database of African energy generation, transmission and electrification projects, along with other data to track developments in the African energy sectors in general and the AEEP political targets in particular.



"The Partnership needs to make sure that it delivers, that at the end of the day the initiative brings about real, tangible results, where the people actually see improvement in their level of access."

Ishmael Edjekumhene, Director, KITE; AEEP Focal Point, Civil Society – Africa

The report has highlighted major developments with regard to individual political targets to be reached by the year 2020 in the framework of AEEP, in particular for some of the renewable energy indicators. The political target on solar energy to increase the share of all forms of solar energy to 500 MW has seen rapid progress since 2010 and is projected to significantly exceed original expectations. Other target indicators have not seen the same progress and additional efforts may be needed to reach the 2020 targets. The targets on hydropower and other renewables are however only achieved in certain prediction scenarios.

Projections for the achievement of the target on energy access are especially challenging, in large part due to the very limited empirical data on access available across the African continent. However, with its research presented in the Status Report, the AEEP has contributed to the international debate on defining and measuring access. Furthermore, in relation to the target of bringing access to energy to an additional 100 million Africans by 2020, the report shows that regarding the indicators for electricity access and the use of non-solid cooking fuels, the AEEP is on track, with a growth of 17% and 13% respectively between 2000 and 2010. At this growth-rate, the target may be met in 2020. However, with the African population rapidly growing, the share of the population without access to electricity in 2020 is expected to grow substantially.

The AEEP has made great strides in recent years and can be expected to achieve by 2020 a number of the targets agreed by the energy ministers of the EU and Africa in 2010. In order to guide these increased efforts in launching initiatives, programmes, and projects, and to guide policy and decision-making processes, the AEEP continues to provide an excellent framework with high levels of political and stakeholder buy-in.

In addition, it is important to note that population increases mean that the number of Africans still lacking access to energy may still be very high- and even increase- in the time leading to 2020, if further progress is not made.

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