



Africa Renewable Energy Initiative (AREI)

Using potential for renewable energies

The challenge

In Africa, more than 600 million people currently live without electricity. Total installed power capacity in sub-Saharan Africa is roughly the same as in Great Britain. In 2014, the average annual power consumption per capita in Africa was equal to the consumption in Germany in just one month. The demand for energy in sub-Saharan Africa went up by about 45 per cent between 2000 and 2012 and in North Africa even by 80 per cent.

Africa has tremendous, largely untapped potential for using renewable energies: solar, wind, hydro power, biofuels and geothermal energy. The costs of using renewables have fallen dramatically. According to the International Renewable Energy Agency (IRENA), modern renewable energies could meet up to half of Africa's energy demand by 2030. However, this requires a transformation of the energy sector. Unless Africa manages to switch to low-emissions technologies, it will enter a high-emissions development trajectory.

An African energy transition

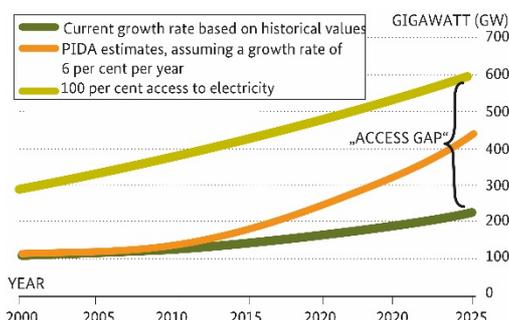
The Africa Renewable Energy Initiative (AREI) is aimed at massively increasing the use of energy from renewable sources, thereby also increasing access to energy. The African-led initiative is set to achieve an extra 10 gigawatts in renewable energy capacity by 2020. This is equivalent to the capacity of ten large coal-fired power stations. It is envisaged to increase the installed capacity to 300 gigawatts by 2030. This would be an important contribution towards implementing the Paris

climate agreement and achieving the goals of the 2030 Agenda for Sustainable Development.

The AREI, which was initiated by Africa, shows very clearly that African countries want to make a change and promote sustainable development through climate-friendly energy. The AREI covers all African countries and includes all forms of renewable energies. Decentralised systems and regional approaches are to be one of the focus areas of the AREI.

German Development Minister Gerd Müller emphasises: "Due to its huge demand for energy, Africa is facing major challenges. However, we should also see this as an opportunity to invest in green energy. Africa can be the first continent to generate all its energy from renewable sources."

The AREI is an African-led initiative. Under Germany's presidency, the G7 announced its support for the initiative for the first time at its 2015 Elmau summit. During the 2015 climate negotiations in Paris, the G7 member states, the European Commission, Sweden and the Netherlands reaffirmed their support. They made a commitment to provide a total of 10 billion US dollars through bilateral and multilateral initiatives in the period from 2015 to 2020 for the expansion of renewable energies. German Development Minister Gerd Müller announced that Germany would contribute three billion euros for the same timeframe. The contribution is to be made through bilateral channels.



Access to energy by 2030:

The lines represent three trends: (i) light green line: required energy generation capacity for 100 per cent access at 2,000 W/household; (ii) orange line: target of the Programme for Infrastructure Development in Africa (PIDA) of the African Union Commission, approximately 6 per cent annual growth in additional generation capacity, (iii) dark green line: current and historical growth in generation capacity (2.5-3 per cent per year). Even if the ambitious PIDA target of a 6 per cent increase in generation capacity were to be reached, the access gap would not be closed until 2038.

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At the 2016 climate talks in Marrakesh, donors once again confirmed their support for the AREI and stated that they were making good progress on meeting their Paris commitments. In January 2017, the constituent Board meeting of the AREI took place – an important step on the way to making the initiative fully functional. Now, the next step will be to finally determine the organisational and technical structure of the initiative and agree on the order in which the envisaged projects are to be implemented.

The impact of Germany's activities

The Federal Ministry for Economic Cooperation and Development (BMZ) and the Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB) are supporting the AREI through their existing cooperation mechanisms. As stated in the Marshall Plan with Africa, energy supply, as a key sector for development, has a vital role to play in the cooperation with the countries of Africa. The BMZ focuses on six African countries in its support for energy projects: Morocco, Egypt, Nigeria, Senegal, Uganda and South Africa. In 2016 alone, the German government committed 1.2 billion euros for AREI-relevant projects in the areas of renewable energies, energy efficiency and energy transmission and distribution in Africa. Roughly, 50 per cent of these projects are solar energy projects.

AREI is making an impact. In 2016, commitments had already reached half the target amount of 10 billion dollars. With a total of 1.2 billion euros, Germany was the largest bilateral donor.

Projects funded by Germany contribute to achieving the goals of the Africa Renewable Energy Initiative in many ways.

For the transformation of the energy sector to be successful, an enabling environment must be created. The **Egyptian-German Joint Committee on Renewable Energy, Energy Efficiency and Environmental Protection** offers national actors a forum in which to exchange ideas even on areas outside their expertise, for example on macro-conditions or the integration of renewable energies into the grid. In its development cooperation, Germany is supporting the implementation of the Committee's resolutions. With German support, the Egyptian

regulatory body has, for instance, introduced feed-in tariffs for wind energy – a measure that will facilitate a significant expansion in wind power.

Many renewable energy projects do not reach financial close, as banks demand such high cash collaterals from investors. The Regional Liquidity Support Facility is an innovative approach that can reduce such risk and financial burden. The facility offers collaterals for short-term delays in payment. The BMZ is contributing up to 32.9 million euros to the financing of this facility through Germany's KfW Development Bank. The African Trade Insurance Agency (ATI), based in Nairobi, takes a share of the risk.

For around twenty years, Germany has been supporting **Kenya** in tapping its potential for the use of geothermal energy. Germany is promoting the use of private power generators and supporting test drilling. In 2016, the BMZ pledged to make available 100 million euros for the second phase of the development activities for the **Bogoria-Silali Block geothermal field**.



A female student checking solar panels on the roof of a vocational training institute for solar technicians © Thomas Imo/photothek.net

Morocco has set itself ambitious targets. By 2020, power generation from renewable energy sources is to reach at least 42 per cent. **The Noor power plant in Ouarzazate is currently the world's largest solar power plant.** Upon completion of the final construction phase, Germany will have contributed 829 million euros in funding through KfW. With this power plant, Morocco will not only improve power supply in the country but also send out an important signal for protecting the world's climate: sustainable development is possible and well worthwhile – from both an ecological and economic point of view.