



Responding to Africa's energy needs

Sustainable energy is a priority for the EIB in Africa, where 57% of the population remains without access to electricity, which in turn hinders the continent's economic development and prevents it from reaching its potential. As it is, the energy sector is characterised by inefficiency, and below-cost pricing limits necessary investment. There is enormous unexploited potential for renewable energy, however, and almost a quarter of EIB operations in sub-Saharan Africa and over a third in North Africa have supported this sector. We offer finance and technical assistance for power generation and transmission projects with a focus on renewable energy and regional integration, all of which develop the African economy.

Access to sustainable and modern energy services is a prerequisite for meeting basic human needs and for economic and social development across Africa. Amongst the 17 UN Sustainable Development Goals, this is number 7. Energy has long been a central focus of the EIB's operations in both North and sub-Saharan Africa, with over EUR 4bn invested in the last five years.

Africa has abundant renewable energy sources, such as hydropower, wind and solar. The EIB supports projects that help to exploit these natural resources responsibly, to provide clean affordable energy. This can be done through renewable energy and energy efficiency initiatives, or through generation and transmission projects, which provide regional benefits and stimulate economic growth.

The EIB also supports high-efficiency natural gas power plants and other environmentally sound projects in the gas sector, as part of our efforts to meet growing energy demands in a sustainable way.





Climate action informs everything the EIB does, and on the occasion of COP 21 in Paris in late 2015, the EIB pledged to increase its share in investments outside the EU from 25% to 35%. To meet this challenge, we are putting together a strong pipeline in climate change mitigation and adaptation projects. Over the past three years, 23% of our lending on the African continent has gone to climate action.

A holistic approach to energy

Electricity generation has to be greatly expanded to meet current needs and growing demand on the continent. In line with its commitment to climate action and the need to ensure affordability, the EIB supports the development of cost-effective **renewable resources**, including solar, wind and hydropower.

In North Africa, renewable energy currently accounts for a very small share of total energy provision. However, the Bank has developed a range of new tools to support the development of this sector, including in particular the MSP-PPI.

Sub-Saharan Africa has enormous potential in this area. Around 90% of the continent's economically feasible hydropower potential (equal to a tenth of the world's total) remains unexploited. The Bank focuses on large regional and national generation and transmission projects that tap into these abundant resources to stimulate economic development.

Investments in **energy networks** and their upgrades are required, both to support the integration of renewable sources and to ensure the quality, efficiency and security of supplies. The EIB supports energy projects that promote **regional integration**, not least because regional cooperation on energy can alleviate the 'small market problem' facing many countries.

Investments in **energy efficiency**, including domestic, industrial and public usage, help to increase energy availability and reduce energy bills. This in turn promotes wider access, economic competitiveness and growth. Resource efficiency considerations are incorporated into all EIB projects in African countries, not only those in the energy sector.

Tailored financial instruments

The EU-Africa Infrastructure Trust Fund (ITF) provides grant funding to regional infrastructure projects in sub-Saharan Africa in support of the Programme for Infrastructure Development in Africa (PIDA).

The ITF has been equipped with a specific funding window dedicated to activities that contribute towards the UN's **Sustainable Energy for All (SE4All)** objectives. Under this window, the EIB manages, for example, a EUR 25m capital contribution invested as equity in the 300 MW Lake Turkana Wind Farm project in Kenya.

The Bank is also developing a set of **innovative financing instruments**, including for smaller renewable energy and energy efficiency projects.

Supporting EU development cooperation

As the bank of the EU, the EIB works to support the implementation of EU development policies. It contributes to the EU response to the UN Sustainable Energy for All (SE4All) initiative, as well as to the EU Agenda for Change and the Joint Africa-EU Strategy.

In Africa, the EIB works under its External Lending Mandate (North Africa and Republic of South Africa), the Cotonou Agreement (sub-Saharan Africa), and its climate change mandate.

In sub-Saharan Africa, the EIB finances and advises on projects under the Investment Facility revolving fund, as well as from its own resources. It also blends loans with grant funding for technical assistance, including from the EU-Africa Infrastructure Trust Fund.

The Facility for Euro-Mediterranean Investment and Partnership (FEMIP) groups together all of the Bank's services for the North Africa region. Alongside lending operations, FEMIP provides technical assistance and advisory services, notably through the FEMIP Trust Fund. The European Commission's Neighbourhood Investment Facility (NIF) is an important additional source of resources for blending with EIB financing.

The main focus areas of the EIB in South Africa continue to be based on the Joint EU Country Strategy Paper for South Africa. In particular, the Bank will remain focused on priority investments in social and economic infrastructure (including power, water and municipal infrastructure), on private sector support and on climate action-related projects.





These include technical assistance and risk sharing with local banks (Africa Sustainable Energy Facility), advisory and performance-based credits (Renewable Energy Performance Platform) and technical assistance to mobilise credit enhancement (Africa Energy Guarantee Fund). The EIB will also continue its advisory role for the Global Energy Efficiency and Renewable Energy Fund (GEEREF), which leverages private equity investment in small energy efficiency and renewable energy projects.

For the North Africa region, the Bank launched CAMENA in 2014 – a window within the FEMIP Trust Fund in support of climate action. With a GBP 15m initial contribution from the UK Department for International Development (DFID), CAMENA will provide advisory services to catalyse the emergence of new climate investment projects, thus helping to meet increasing demand in the region for a greener approach to growth and development.

The **FEMIP Sustainable Energy Facility** aims at providing credit lines to local financial intermediaries (FIs) in Jordan and Morocco to finance energy efficiency and small renewable energy investments in the industrial, SME, agribusiness, commercial services and residential sectors. Meanwhile, work is underway to develop a facility which combines financing with targeted technical assistance, based on a study supported by the FEMIP Trust Fund and inspired by the highly successful European Local Energy Assistance (ELENA) programme.

Since 2007, the **Energy Sustainability and Security of Supply Facility (ESF)** has enabled the Bank to contribute more effectively to the implementation of key EU policies in the sector. In Africa, the EIB has signed three projects under the ESF for a total amount of over EUR 15m.

Boosting Mediterranean solar power through technical assistance

The EIB has led the establishment of the Mediterranean Solar Plan Renewable Energy and Energy Efficiency Project Preparation Initiative (MSP-PPI). Our support is based on experience gained over 30 years in the region. This initiative, funded by a grant of EUR 5m from the European Union under the NIF, is designed to support the preparation of energy efficiency and renewable projects, accelerating the implementation of up to 20 related projects in the Mediterranean partner countries.



Formal connections in West Africa

West Africa can claim abundant potential for renewable energy generation, but as yet the region's distribution networks cannot keep pace with this. Things will change over the coming years as the interconnection of power grids in the area is about to start a new chapter. The EIB is supporting OMVG (Organisation pour la mise en valeur du fleuve Gambie) with global loans of EUR 65m to Guinea and EUR 20m to Senegal. This investment will support the construction of a 925-km high-voltage transmission network.

A core component of the West African Power Pool, the new infrastructure will connect the power grids of the four member countries of OMVG, a quartet completed by Gambia and Guinea-Bissau. By reinforcing

and extending power distribution networks, more people in these countries will have access to electricity, which is critically important for economic development. It will also cut the dependence on diesel-burning generators, which are not only expensive to run, but also hazardous to the environment and of capricious reliability.

The EIB is eager to support clean and secure energy initiatives in West Africa. Last year, the Bank invested in a rehabilitation programme for hydropower facilities and local electricity distribution networks in Guinea. The country's potential is estimated at an output of 6 000 MW. Only 2% of this is currently tapped. Guinea will become a major producer of electricity, and the systems will be put in place so that it, and its neighbours, can all benefit.



The largest wind farm in sub-Saharan Africa

Construction has begun in earnest on the Lake Turkana wind farm, the largest power plant of its type in sub-Saharan Africa. The 365-turbine, 310 MW facility is being built in what is effectively a barren and natural wind tunnel. The EIB has invested EUR 200m in it, which has been blended with a EUR 25m financial instrument from the EU-AITF. At a total cost of over EUR 600m, it is the largest PPP project in Kenyan history. With its output, it will increase Kenya's installed generation capacity by 20%.

The wind farm brings additional benefits. Lake Turkana will be connected to the country's road network, making transport of goods more efficient. New parts of the country will be brought onto the power grid thanks to a 420-km transmission line. Other regions will benefit from a stable power supply, eliminating the need for costly, unreliable and polluting diesel generators. When fully operational, Lake Turkana wind power will displace 16m tonnes in CO₂ emissions in two decades.

The project will create around 2 800 direct jobs in its lifetime, but the opportunities brought about by what is provided – clean, stable electricity at 60% of the unit cost of its thermally generated equivalent – will see small businesses in Kenya create many thousands more.

Harnessing Morocco's huge solar resources

Ouarzazate is located in the south-west of Morocco, about 525 km south of Rabat. The town is home to a new solar power complex and first large-scale project under the Mediterranean Solar Plan.

The EIB has invested over EUR 500m in this ambitious and clean power scheme, which will use parabolic-trough concentrated solar power (CSP) technology. Mirrors will concentrate a large area of sunlight, which will then be converted into heat to drive a turbine connected to an electrical power generator.

The Bank believes in this project, and has put forward several tranches of funding, as well as providing its technical expertise in renewable energy to improve Ouarzazate's bankability and help with the preparatory studies,

in particular those related to procurement and environment. The project also benefits from blended funding from the European Commission's Neighbourhood Investment Facility.

The plant will generate up to 160 MW of electricity per year, with three hours of energy storage at full load, avoiding CO₂ emissions of over 150 000 tonnes per year. Overall, the complex should hold a capacity of up to 580 MW, which would be enough to power a city of over one million inhabitants.

Once it is fully developed, the Ouarzazate solar complex will be one of the largest in the world. It will bring renewable energy and energy security to Morocco, as well as creating jobs: 4 400 during construction, 210 permanent, and the vast majority for local people. In the future, part of the output may be exported to the EU.