

KENYA

OPTIMIZING EXISTING HYDROPOWER PLANTS & DEVELOPING PUMPED STORAGE HYDROPOWER



**AFRICA
RENEWABLE
ENERGY
SCALE UP**



DATES

2018-2019



AMOUNT

194 k€



REQUESTED FROM

KenGen



STATUS

Finalized

Expanding Kenyan power mix flexibility and increasing electricity generation are key needs in Kenya. A pre-feasibility study was conducted through ARE Scale Up facility in order to investigate the potential of hydropower for contributing fulfilling these needs



BACKGROUND

Kenya Electricity Generating Company PLC (KenGen) is a public liability company in charge of developing, managing and operating power generation plants in the country. They are the leading electric power producer in Kenya.

Close to 80% of the energy generated by KenGen already comes from renewable sources, namely geothermal, wind and hydraulic energies. To meet the increasing demand for electricity, KenGen's power strategy focuses on further developing clean technologies. In that purpose, they applied for a technical assistance in order to investigate the opportunity and possibility of:

- Optimizing existing large hydropower plants in the short term ;
- Developing a pumped storage hydropower project in Kenya in the long term.



TECHNICAL ASSISTANCE

The technical assistance, financed through ARE Scale Up facility, encompassed the following main activities:

- Assess the opportunity for optimizing existing large hydropower plants already operated by KenGen ;
- Assess the feasibility of developing hydropower pumped storage ;
- Carry out a pre-feasibility study for three potential pumped storage sites ;
- Support KenGen in developing expertise on pumped storage technology.

Final report available on request



FURTHER STEPS / OUTCOMES

The study conclusions enabled to demonstrate the importance of pumped storage technology for Kenyan development. They also allowed to identify suitable sites for implementing these infrastructures and

their relevance for the electricity sector. However, further studies are now required for setting up a more precise benchmark of other storage technologies types, as well as their potential integration in the master plan.



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A facility to develop innovative projects in renewable energy and boost electrification on the African continent.

The AFD Group, with the support of the European Union, has set up the "African Renewable Energy Scale-Up facility" (ARE Scale Up facility) to boost private sector investment in on-grid and off-grid renewable energy production in Africa.

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