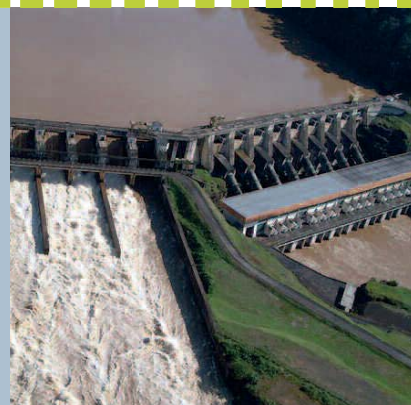


# financing access to sustainable energy



# Financing access to sustainable energy

## Our mission

PROPARCO finances private investment in developing countries that supports growth, sustainable development and the Millennium Development Goals.

Basic infrastructure creation and rehabilitation are prerequisites for development: beyond the target of improving access to energy, they are factors for attracting foreign investment and promoting the emergence of local businesses.

Power infrastructure development is consequently a priority for PROPARCO in South countries.

## Public-private partnerships

Since the mid-1990s, PROPARCO has been supporting the increasingly important role played by private operators in the development of infrastructure managed particularly via public-private partnerships. For example, PROPARCO has financed Morocco's first wind power plant and the first operations to generate and distribute electricity under private concessions in Sub-Saharan Africa.

Between 2007 and 2008, PROPARCO's financing and cofinancing helped:

- Connect 290 000 people to an electricity distribution network
- Generate 250 MW of renewable or recovered energy
- Reduce annual greenhouse gas emissions by 2.4 M teq CO<sub>2</sub>

## OLKARIA III Africa's first private geothermal energy production project

The security margin for production capacity in Kenya's electricity sector is below 10% which means there are risks of shortages. This risk is heightened by the fact that electricity production is highly dependent on rainfall since 57% of production comes from hydropower.

The Olkaria III project aims to help create an accessible and reliable electricity sector. This is essential for the country's future economic development and growth.

Ormat Group has built a 13 MW geothermal power



plant in the Rift Valley, 100km from Nairobi, and has been operating it since 2000. It is the only privately built and operated geothermal power plant in Africa. In 2008, Ormat and Kenya's electricity utility KPLC agreed to raise the capacity of Olkaria III to 48 MW and consequently sought financing from several European financial institutions. PROPARCO allocated a 15 million dollar direct loan to finance this operation. The project will eventually save 150 000 teq CO<sub>2</sub> annually. It complies with World Bank environmental and social standards and is currently being registered under the Clean Development Mechanism (CDM). ■



# Our priority: energy in Africa

PROPARCO's strategic priority remains to contribute to growth and development in Africa, despite the geographical expansion of its activities to emerging countries and, more recently, to all developing countries.

Africa is the continent which has the most crying need for investment in power infrastructure.

AFD Group operations aim to bridge this deficit and are based on 3 cornerstones:

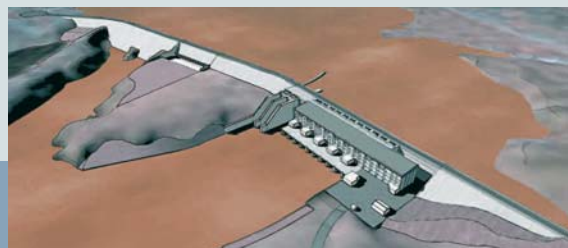
- Agence Française de Développement supports governments and promotes an institutional framework that is conducive to the emergence of sustainable infrastructure and public-private partnerships in the energy sector;
- private equity investments are made prior to projects thanks to the FISEA fund (Investment and Support Fund for Businesses in Africa) which promotes the emergence of promoters and supports them during the development phase of their projects. Indeed, the limited number of sound promoters and limited capital constitute a stumbling block to the development of new projects;
- infrastructure projects are financed and range from electricity generation (gas or fuel-fired thermal power plants, clean energy such as wind power, geothermal power and hydropower) and energy distribution to gas production and transport in Africa.

PROPARCO is supported by a network of 29 local agencies and enjoys extensive wide-ranging experience. It is one of the most committed European Development Finance Institutions (EDFIs) in Africa which accounts for 62% of its investments in foreign countries, including 48% in Sub-Saharan Africa.

## BUJAGALI Scaling up electricity generation in Uganda

In December 2007, PROPARCO and AFD signed a USD73M loan agreement to finance the construction of the Bujagali dam (250 MW hydropower plant) in Uganda. The project is vital to bridging Uganda's huge energy deficit and is expected to generate almost half of the energy produced in the country when it is commissioned at the end of 2011. With only 9% of the population connected to an electricity network, Uganda is one of the world's most lagging countries in terms of access to electricity.

PROPARCO/AFD Group designed a long-term loan package (Senior and Subordinated loan with respective maturities of 16 and 20 years) in order to reduce the tariff charged to the final consumer, coupled with a USD13M concessional loan with an interest rate subsidy earmarked for additional measures to improve the environmental and social management plan for the dam: densification of drinking water points, rural electrification, reforestation of the banks of the Nile upstream from the dam and promotion of ecotourism. Bujagali is a run-of-the-river dam and consequently has limited environmental and social impacts. Over a 50-year period it will emit roughly 300 times less CO<sub>2</sub> than an equivalent thermal power plant. The project will therefore save 1.5 million tonnes of CO<sub>2</sub> every year ■



## AES SONEL Rehabilitating the electricity distribution network in Cameroon

In December 2006, PROPARCO signed a €30M loan agreement with AES SONEL, Cameroon's electricity utility which was privatised in 2001. The loan is part of a €260M facility, one of the biggest ever raised by a privatised electricity company in Sub-Saharan Africa. AES SONEL will implement an ambitious €380M investment programme over 3 years. It will mainly be based on rehabilitating, renewing and expanding electricity transmission and distribution networks and the existing hydropower plants. Almost a million people are eventually expected to be connected or benefit from a better service ■



# Promoting clean and renewable energies

Financing low-carbon projects is core to PROPARCO's strategy. This includes financing both renewable energy projects (wind, geothermal, mini-hydro power...) and projects for energy efficiency, biofuels, biomass and biogas development... AFD Group has also developed an in-house tool to measure the carbon footprint of the projects it finances: the Bilan Carbone © (Carbon Balance) which helps it in its strategic decision-making.

There are two targets for operations: the main objective in developing and least developed countries is to achieve energy independence and ensure the long-term economic viability of projects. Operations in emerging countries are based on a global process to combat climate change.

## MUMIAS Kenya's first private cogeneration project

Kenya's sugar market is to be opened to imports from COMESA countries (Common Market for Eastern and Southern Africa) and import quotas will be phased out as early as in 2010. Mumias Sugar Company (MSC), Kenya's biggest sugar producer, is consequently implementing a program to review its production policy and diversify its activities, in particular via the implementation of a bagasse cogeneration project. MSC has now become almost entirely energy independent thanks to the construction of a bagasse-based cogeneration plant in 2000. Since May 2005 it has been selling a production surplus of roughly 2 MW of electricity to the national electric utility, KPLC, and aims to pursue this activity by building a new plant. It will subsequently be able to sell almost 25 MW to KPLC and develop bagasse surpluses that are currently unused. PROPARCO is financing the whole project via a USD35M senior loan with AFD subparticipation.

The project will directly raise Kenya's energy capacity thanks to renewable energy development. CO<sub>2</sub> emissions will consequently be reduced in line with the Millennium Development Goals and planters' incomes will increase since MSC is planning to reallocate 10% of the value of electricity sales to them ■



## TBEC biogas development in Thailand

Thailand is the world's biggest producer of cassava and its derivative products. The residual sludge from the agro-industrial processing of the cassava is generally discharged into the open air and is a source of methane emissions.

In 2005, PROPARCO provided 113 million baht (equivalent to €1.35M) of financing for a project to develop the biogas emitted by this residual sludge for three firms that process cassava.



The biogas is collected and used to generate electricity, two thirds of which are consumed by the cassava processing companies. The rest is sold to the national power company EGAT. It is estimated that the project will save 131 208 t<sub>eq</sub> CO<sub>2</sub> of greenhouse gas (GHG) emissions every year. Savings are made by both capturing methane and by replacing heavy fuel which was the fuel previously used for captive electricity consumption. In addition to this impact of reducing GHGs, the project has considerable local environmental impacts, particularly by reducing the risk of polluting aquifers and by reducing olfactory nuisances in the areas

neighbouring the agro-industrial sites. The projects have already traded voluntary carbon credits and are currently awaiting Clean Development Mechanism certification ■

# A wide range of resources

## A team and a network

PROPARCO has a dedicated team for infrastructure projects with wide-ranging skills and experience. PROPARCO is represented by eight offices worldwide and benefits from the support of AFD Group's sixty agencies.

## Products tailored to energy project financing

PROPARCO has developed a wide range of products and can provide global solutions to both investors and borrowers:

- medium and long-term loans (ranging between €10M and €100M with 5 to 15/20 year maturities);
- loan/bond guarantees in local currency;
- equity or quasi equity investments (€2M to €10M per operation over 5 to 7 years), including during the development phase for projects in Africa via the FISEA fund.

## PROPARCO at the centre of a network of partners

PROPARCO works in partnership with other Development Finance Institutions (particularly in the European framework of EDFIs), export credit agencies and commercial banks.

PROPARCO has also built privileged partnerships with Germany's DEG, the Netherlands' FMO, the European Investment Bank and the African Development Bank (ADB).

### YINGLI Manufacturing solar panels in China

The solar panel manufacturing sector is currently booming and, according to experts, global demand should continue to grow significantly during the period 2006-2015. By supporting the development strategy of one of the global leaders in photovoltaic module manufacturing, PROPARCO aims to promote a vast deployment of renewable solar energy and ensure the increasing demand for solar panels is met.

Yingli Solar decided to pursue its expansion strategy by launching the construction of a new integrated production line for 200 MW modules. The total investment cost amounts to USD200M. PROPARCO, FMO and DEG are participating in the financing, each via a USD25M senior loan.

In terms of impacts, this project will reduce annual emissions by 130 000 teq CO<sub>2</sub> and by 3 530 000 teq CO<sub>2</sub> net over a 30-year period (corresponding to the average life span of the solar panels). The figure takes into account the energy consumed to build these panels. An independent audit was conducted in order to ensure the project complied with the highest international environmental and social standards and its conclusions were included in the action plan signed between PROPARCO and the company ■



PROPARCO is a Development Finance Institution jointly held by Agence Française de Développement (AFD) and public and private shareholders from the North and South. Its mission is to catalyse private investment in emerging and developing countries in order to support growth, sustainable development and reach the Millennium Development Goals (MDGs). It was created thirty years ago on the conviction that the private sector is a key player in development and tripled its capital in 2008. PROPARCO finances operations that are economically viable, socially equitable, environmentally sustainable and financially profitable. Its sectoral strategy is tailored to each country's level of development and focuses on the productive sector, financial systems, infrastructure and private equity investment. PROPARCO invests in a geographical area ranging from major emerging countries to the poorest countries, particularly in Africa, and has high-level requirements in terms of Social and Environmental Responsibility. PROPARCO has a wide range of financial products to meet the specific needs of private investors in developing countries (loans, equity, guarantees and financial engineering). In 2008, PROPARCO allocated €800M via over fifty projects in over thirty countries.



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