

OPERATING AT THE FRONTIER: GEOGRAPHIES



PIDG is leading the way. To date, PIDG has committed \$1.7 billion to projects in Fragile and Conflict-Affected States.



PIDG is focused on delivering high development impact in the poorest and most fragile countries. Through its work, PIDG strives to promote social and economic growth and to meet its commitments to the UN Sustainable Development Goals.

Fragile and Conflict-Affected States (FCAS) are generally defined by political instability, weak governance and institutional capacity, economic and social insecurity, and greater susceptibility to the effects of climate change. PIDG adopts a strategic approach in FCAS states, striving to deliver sustained economic progress and improve the daily lives of many thousands of people.

Modern energy is an enabler. It illuminates classrooms so that children have access to regular and sustained learning. It replaces dirty charcoal with efficient electric stoves so that villagers can prepare food safely. It connects businesses with their customers, narrowing the digital divide and facilitating economic growth. To energise an entire country, high levels of investment are needed – and many of the countries in which PIDG operates struggle to attract the funding required.

MALI

Although a United Nations-led ceasefire in Mali has been in effect since 2015, it remains a fragile state, where investment in critical infrastructure has been severely restricted. As a result, only 27% of Mali's population has access to electricity – and with Mali's population growing at an average rate of 2.9% per annum, basic services remain under increasing strain.

Mali has limited power generation capacity which comes mainly from hydro and thermal power plants and temporary generators, and what is available domestically

is supplemented by energy imports from neighbouring countries. Demand for energy in Mali has risen by 10% annually in the past five years, outstripping supply, and the country's population is projected to double by 2035.

PIDG has provided vital support for the parallel development of both the renewable energy infrastructure and the development of more traditional energy sources required to create enough baseload power for the successful operation of renewable facilities in the country.

PAKISTAN

Pakistan has a population of 200 million, which is projected to grow by 30% in the next ten years.

29.5% of the population is below the national poverty line, with half of the rural population in the country lacking access to electricity. Imports of fossil fuels are rising while domestic production of oil and gas is slowing down.

These factors, coupled with inadequate investments in power sector infrastructure, will likely have a negative impact on the social and economic development of the country.

From 2006 to 2016, the country's electrification rate increased from 54% to 73%, however a gap in demand and supply remains. Pakistan's situation has escalated into an energy crisis, whereby demand for power outstrips supply, and frequent power cuts can last up to 18 hours per day. The impact on business and industry is equivalent to a loss of around 2% to 3% of annual GDP.

By harnessing the potential of its renewable energy resources, Pakistan could improve fuel security and power supply for its population, as well as cut carbon emissions and reduce spending on expensive fossil fuel imports.



THE FUTURE IS BRIGHT

The successful completion of Albatros Energy is paving the way for clean energy across Mali, including PIDG's second project in the country, the Akuo Kita solar plant, which reached financial close in October 2018. Mali's first utility-scale solar initiative will provide renewable power for over 700,000 people.

In October 2015, the Government of Mali signed a concession agreement with French independent power producer Akuo Energy, giving the company rights to build, own, operate and transfer a 50MW solar plant at Kita, 150km west of the capital, Bamako. Power will be sold to the government utility, Electricité du Mali SA, under a 28-year power purchase agreement.

Akuo Kita Solar will deliver much-needed energy to Mali's national grid, increasing the country's installed generation capacity by up to 12%. The project will create over 300 construction jobs and, post-construction, the operations of the plant will be performed by 30 local employees.

As joint Mandated Lead Arranger (MLA) for the €78m project, EAIF arranged the senior debt facility for a total of €54 million over 15 years. The project marked EAIF's first MLA role in a French-speaking African country – and once again, PIDG companies worked closely together to maximise impact. EAIF's share of the debt package is €18m and it provided an additional €8m mezzanine facility over 20 years.

The local banks in Mali did not have the risk appetite to provide payment guarantees on behalf of the scheme to improve its financial viability. GuarantCo therefore

provided an innovative Debt Service Reserve Account guarantee facility for \$2.8m to help mobilise debt financing and to support Akuo Energy in achieving financial close.

The Akuo Kita Solar Project demonstrates the importance of credit enhancement in improving the viability of infrastructure programmes, setting a precedent for similar renewable energy schemes in Mali. The ability of PIDG companies to combine a range of financial instruments to provide a creative overall solution was a key factor in the development of the venture.

Akuo Kita Solar will be one of the largest solar plants in west Africa and marks Akuo Energy's first African project to reach construction, bringing vital expertise and finance to the region and demonstrating the value of solar power in Mali's energy mix.

PIDG continues to support the development of renewable energy projects in fragile economies, encouraging economic growth and helping to provide greater confidence for investors.

Its ability to address investment challenges in an innovative way, playing a pathfinding role and opening up new markets, is part of what makes PIDG so unique.

GENERATING NATURAL POWER

Pakistan's mountain glaciers and rivers could serve as an abundant, renewable resource for hydropower projects, especially in the Khyber Pakhtunkhwa (KPK) Province, formerly the North-West Frontier Province, which has a population of nearly 36 million people and shares a border with Afghanistan.

InfraCo Asia signed a Joint Investment and Development Agreement (JIDA) with Markhor Energy – a renewable energy investor and developer in Pakistan – for a portfolio of four hydropower projects totalling 100MW in output, in Pakistan's KPK Province.

It is hoped that the success of the KPK projects will accelerate investment in small hydropower plants in the country. Growth in hydropower will help to diversify Pakistan's energy mix and reduce electricity tariffs. Currently nearly a third of Pakistan's total oil demand is met by imports, which leads to spikes in off-take prices due to fluctuations in the international market. By developing its hydropower capability, Pakistan can drive down its fuel import bill and lower carbon emissions.

Environmental considerations, population growth, and changes in fuel prices mean energy independence is paramount for Pakistan's sustainable future development. Pakistan has hydropower potential of 41,700MW, and 24,000MW of this potential is in the KPK Province. All small hydropower projects currently in operation are in the public sector and to date the private sector has stayed out of the projects in the KPK Province that are currently in operation. While private sector investors have expressed interest in small-to-medium size projects (less than 100MW), development has been slow due to the high risk profile. InfraCo Asia's involvement in the Swat KPK Hydro Portfolio Projects builds on its successful end-to-end participation in the development of the Metro and Gul Ahmed Wind Power projects. After investing in, developing, and bringing the Metro and Gul Ahmed Wind Power projects into operation in 2016, InfraCo Asia divested its shareholding in both projects to Daelim Energy

in 2017. Together the Metro and Gul Ahmed projects contribute 100MW in renewable energy generation capacity to Pakistan's grid. These projects not only help address the country's power deficit, but also reduce its exposure to the high cost and insecurity of fuel imports, while lowering carbon emissions.

Similar to the 'demonstration effect' provided by the successful development and exit of the Metro and Gul Ahmed Wind Power Projects, PIDG believes that the Swat KPK Hydro Portfolio Projects will provide further evidence of PIDG's success in operating at the frontier in fragile countries. In tapping into the vast potential for hydropower development in the region, PIDG aims to act as a catalyst for other private sector investors.

EXPANDING RURAL TELECOMS ACCESS AND IMPROVING LITERACY

GuarantCo developed an innovative structure to provide a 8 billion Pakistani Rupee (\$9.2m) local currency guarantee to credit enhance the issuance of a new local currency sukuk (a bond-like Islamic financing instrument). As the first transaction of its kind, this guarantee improved Pakistan Mobile Communications Limited (PMCL) local credit rating to AAA, attracting Islamic investors. PIDG also supported the legal and regulatory work required to adapt sukuk rules to allow for a third party guarantee.

GuarantCo and TAF, in partnership with Institute of Social and Policy Sciences and PMCL, successfully supported the 'SMS-Based Adult Female Literacy Programme' which enabled over 4,000 adult females to read the newspaper, write in Urdu, perform everyday calculations and gain necessary life skills.