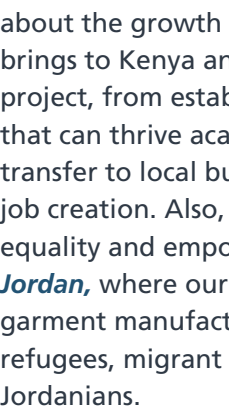




pioneering
infrastructure
changing lives

PIDG Pathfinder



Welcome to the second issue of the PIDG Pathfinder. As I reflect back on 2019, I would like to highlight the hard work and commitment by colleagues, partners and other stakeholders. The Development Impact strategy with its even stronger alignment to both the climate and empowerment and equality agendas is just one example of this.

This is clearly demonstrated in some of our most recent and innovative deals such as, *Acorn affordable student housing* in Kenya which will provide sustainable housing in six accommodation blocks for up to 5,000 students. We were privileged to have the Acorn CEO, Edward Kirathe, visit us in London, to tell us more about the growth prospects that affordable housing brings to Kenya and the transformative benefits of this project, from establishing a strong student community that can thrive academically and socially, to knowledge transfer to local businesses as well as long-term local job creation. Also, significant for its alignment with equality and empowerment, is *Classic Fashion in Jordan*, where our support to the country's leading garment manufacturer has resulted in jobs for Syrian refugees, migrant workers and also local young Jordanians.

In this issue, Lorna McNae of InfraCo Africa shares the background to a powerful video of the *Chiansi irrigation project* which is a great example of the PIDG blended finance model as well as the knowledge transfer necessary for smallholders to access the benefits of irrigation enjoyed by commercial farms.

In our *Talking point*, Prabaljit Sarkar of InfraCo Asia, recounts the challenges and eventual successful completion of the Ninh Thuan solar power plant in Vietnam, one of the country's first utility-scale solar power plants.

In *Sharing knowledge*, Emilio Cattaneo of EAI, reflects on his recent visit to Ghana with a high-level UK government delegation to see the progress of two of our projects, Cenpower and Quantum Terminals.

I was delighted to be invited, along with representatives from across the PIDG group, to visit Togo, West Africa. We met with the President and ministers to learn more about the government's five-year national development plan, which comprises a number of sectors and projects, including agribusiness, irrigation, aquaculture, mini-grids being primed for private investment. As a result of ensuing talks, PIDG is now providing a liquidity extension guarantee to enable local commercial banks in Togo, to finance a natural gas-fired thermal plant and related infrastructure in the port area of Lomé.

Our team has been contributing to our sector interests through trips to the UN General Assembly in New York, the IMF and World Bank meetings in Washington DC, and the Africa Investment Forum in Johannesburg.

We have also hosted interesting events in our international office locations recently. In Nairobi we held a high-level reception for local commercial, project and government partners to PIDG companies prior to our convening the last PIDG Board meeting of 2019 and in October, we celebrated the official opening of the new InfraCo Asia and GuarantCo offices in Singapore's Manulife tower.

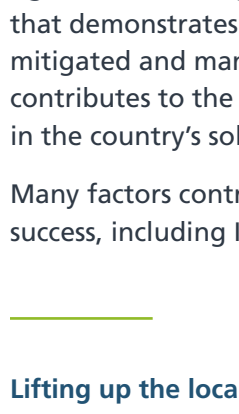
Our successful project partnerships and capital markets innovations continue to reinforce PIDG's reputation as sector leader and is gratifying to see this model endorsed in a recent McKinsey report on unlocking private sector finance.

I would like to send my warm wishes for the holiday season, and for the new year.

Philippe Valahu, CEO

Talking point

Notes from the field: InfraCo Asia's Ninh Thuan Solar Power Project



By Prabaljit Sarkar, Director of Business Development, InfraCo Asia

Prabaljit Sarkar, Director of Business Development at InfraCo Asia, was an instrumental part of the team that developed the recently commissioned 168MWp Ninh Thuan Solar Power project in Vietnam. Here, he shares his perspective on bringing one of the country's first utility-scale solar power plants to life.

Vietnam is a fossil fuel-intensive economy that derives nearly two-thirds of its energy generation from oil

and gas. Increasing demand for electricity has led the country to be a net importer of coal since 2015. What's more, despite tremendous renewable energy potential, renewable power generation has traditionally been low, with under 4% of power generation coming from renewable sources (mainly hydro) as of 2015.

When the Sunseap – InfraCo Asia Joint Venture 168MWp Ninh Thuan Solar Power project achieved financial close in the fourth quarter of 2018, I reflected on how far Vietnam has come – and what it will take to mobilise the \$10 billion investment that's needed each year until 2030 to fulfill the country's energy demand.



Ninh Thuan Solar Power Project

Financing one of the first: What it takes to bring a large utility-scale solar project online in Vietnam

Prior to my time at InfraCo Asia, I spent a significant period in Vietnam working to develop and raise debt finance for a 1,240MW power project in the northeastern part of the country. Coupled with InfraCo Asia's investment, development, and 2018 divestment of the 29.7MW Coc San Hydro Power project in Lao Cai Province, experience told me that financing the Ninh Thuan solar power project would also be an ambitious undertaking given Vietnam's limited access to mainstream financing and high cost of capital due to perceived sovereign risks.

Together with our partner Sunseap International, Singapore's leading renewable energy company, InfraCo Asia managed to overcome Vietnam's significant challenges and go on to create a project that demonstrates how risks can be identified, mitigated and managed in frontier markets and which contributes to the recent crowding-in of private capital in the country's solar photovoltaic (PV) sector.

Many factors contributed to the Ninh Thuan project's success, including InfraCo Asia's work on the financing

of the project. We spent a significant amount of time working with international banks as well as local Vietnamese financial institutions to unpack some of the 'non-bankable' terms in the Power Purchase Agreements (PPAs) so that they would have the comfort level needed to finance on a non-recourse basis. We also offered up innovative credit enhancement solutions aimed at balancing risk for all parties involved.

Ultimately – and alongside the project development work we undertook with Sunseap – these actions instilled confidence in potential lenders, culminating in the provision of limited-recourse project financing by a regional bank which, prior to this project, had not explored the possibility of funding such a large-scale renewable energy project in Vietnam.

On 15 June 2019 – two weeks ahead of schedule – the project was commissioned and has been operating reliably since. Along with being one of the first utility-scale solar power projects in the country, the Ninh Thuan project is also one of only a handful of large-scale solar projects (above 100MW) in Vietnam that was financed with 100% foreign equity investment.

Lifting up the local community

InfraCo Asia projects endeavor to create development impact for the local community. For the Ninh Thuan project, this includes initiatives to ensure that the livelihoods of the people in the surrounding community are protected, through the construction of two rural roads around the project site to facilitate the transport of agricultural livestock and produce for nearby farms.

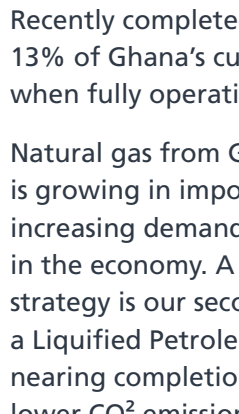
The project also created up to 2,000 short-term jobs during construction, which provided farmers with employment during low harvest season. In operations, the project has also created long-term employment

opportunities for skilled local workers who look after the operation and maintenance of the solar farm, which generates enough clean energy to power up to 192,000 people in Vietnam.

Schools, providers have also donated bicycles to the project, providing the schoolchildren with a more efficient means of transport between school and the rural areas where most students reside.

We at InfraCo Asia look forward to developing more projects like Ninh Thuan – projects that demonstrate a sector's potential in balance with the needs of communities, and in turn encourage greater private sector participation in the markets that need it most.

Working in partnership to grow Zambia's future June 2019



Lorna McNae, Communications Manager, InfraCo Africa

Almost 70% of the food consumed in the world is produced by smallholder and subsistence farmers across Asia and Africa.¹ Yet the effects of climate change on rainfall patterns are making such farming methods increasingly precarious. Without water, crops fail, food supplies dry up, and prospects for economic development suffer.

In 2006, a group of smallholders in Chanyanya, southern Zambia, decided that access to irrigation was essential if they were to safeguard their own food supplies and provide their families with year-round income. They sought support from InfraCo Africa. The company worked with Chanyanya's smallholders to develop an innovative cooperative irrigation scheme, transforming dry earth into fertile market gardens and a profitable commercial farm.

In August of this year, I was privileged to accompany a two-person film crew to capture the experience of those pioneering farmers, their neighbours and a number of the many stakeholders involved in the project since its inception. Our visit occurred at a pivotal point in the project's development with InfraCo Africa's private sector partners preparing to expand the Chanyanya pilot and to begin construction of the much larger Chiansi project.

Amidst the dancing and drumming of the official launch ceremony, the President of Zambia, His Excellency Dr Edgar Chagwa Lungu, remarked

that, "This project could not have come at a more appropriate time with regards to the threat of climate change...it is affecting livelihoods and the productivity of the agricultural sector. The impact of climate change is real and is a cause for decisive action."

This was a view echoed by those we spoke with in the following days. Smallholders blamed climate change for recent droughts and shifting seasons, even the strong winds that buffeted our microphone and camera as we filmed- were occurring a month later than usual.

The film shoot was not without its challenges! Power failed, drone batteries went flat and plans were shifted on an almost hourly basis, but with support from the project team on the ground, we captured some stunning footage and fascinating stories to share; and my overriding sense, when standing among fields of sweet potato leaves with Chanyanya's smallholders and with the community in dry Demu South, Chiansi, was one of self-determination and ambition for the future. There is a strong desire to educate and provide jobs for young people, and on several occasions we heard people say, "With water, anything is possible!"

Mary Robinson, former President of the Republic of Ireland and UN Special Envoy on Climate Change, wrote in her book, *Climate Justice*, "We need to create a "people-first" platform for those on the margins suffering the worst effects of climate change, and to amplify their voices to ensure them a seat at the table in any future climate change negotiations."²

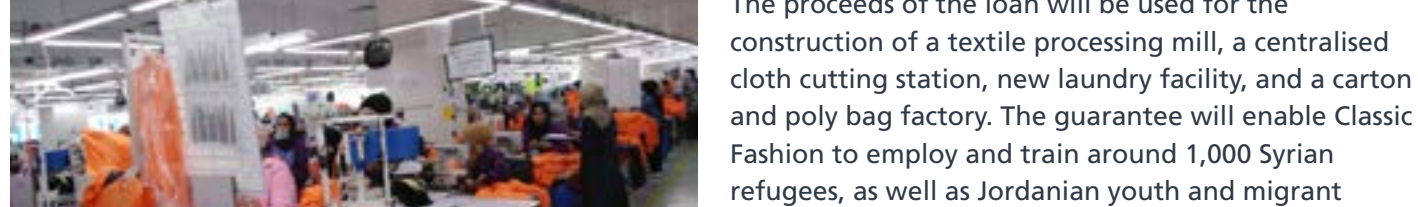
I hope that this film helps to amplify some of those important voices. I also hope that it demonstrates how establishing partnerships between smallholders and commercial farmers, the local chiefdom, government, investors and the private sector can deliver positive development impact.

Relevant links:

¹Karla D. Maass Wolfenson, "Coping with the Food and Agriculture Challenge: Smallholders' Agenda," Natural Resources Management and Environment Department, Food and Agriculture Organisation of the United Nations, prepared April 2013, revised July 2013, www.fao.org/fileadmin/templates/infrastructure_pathways/docs/Coping_with_food_and_agriculture_challenge_Smallholder_s_agenda_Final.pdf.

²Mary Robinson with Caitriona Palmer, *Climate Justice: Hope, Resilience and the Fight for a Sustainable Future*. 2018. Bloomsbury Publishing, London. www.cleanscookingalliance.org

Sharing knowledge



Cenpower

Investor funds well spent in Ghana



Emilio Cattaneo, Executive Director, the Emerging Africa Infrastructure Fund, reports on his recent visit to two projects in Ghana

One of my prime duties is to represent the interests of EAI's stakeholders, which include both our government owners as well as private and development finance lenders to the fund. Occasionally, my role as an ambassador for EAI and to our projects.

Natural gas supported two big infrastructure projects of national strategic importance to Ghana's economic development. The first is Cenpower, located in the Tema industrial zone close to Ghana's capital of Accra, a 350MW Combined Cycle Gas Turbine power station. Recently completed, it is expected to supply around 13% of Ghana's current electricity demand capacity when fully operational.

Natural gas from Ghana's own offshore gas industry is growing in importance as a fuel to help meet the increasing demand for energy to help sustain growth in the economy. A core component of the natural gas strategy is our second project, Quantum Terminals, a Liquefied Petroleum Gas (LPG) storage facility now nearing completion at Tema. LPG has substantially lower CO₂ emissions per kilowatt hour than oil, coal and biomass. EAI has loaned US\$10 million to the Quantum Terminals development. GuarantCo

provided a guarantee for a US\$10m corporate local currency bond to the same project, which was the first Ghanaian corporate bond issue to be listed on the London market.

What struck me most, is the size of these projects, the engineering and technical complexity of them and the quality of the people building and operating them. Both would represent significant industrial infrastructure in any type of economy, even the most advanced. To see such giants in Ghana and to know that they have the capacity to build more sustainable foundations for the competitiveness, stability and success of the Ghanaian economy

is to see investor funds well spent.

The energy market in Ghana faces significant infrastructure, structural and political challenges. The government and energy industry are in talks about how to resolve these matters. But Ghana has succeeded in having one of the highest electrification rates in Africa. In 2016, over 82% of Ghana's population of 30 million had access to electricity. In addition to rising to the structural and financial challenges the energy sector faces, meeting the electricity needs of the 18% of people without electricity, is likely to see diversification into increased solar energy. EAI stands ready to support qualifying developers of solar, as it has other sectors of the energy industry.

The UK delegation included Parliamentary Under Secretary of State at the Department for International Development (DFID), Baroness Sugg, and Conservative Member of Parliament, Adam Afriyie, led by Nick Dyer, the Director General for Economic Development at DFID.

On the circuit

Devex live, London, October 2019

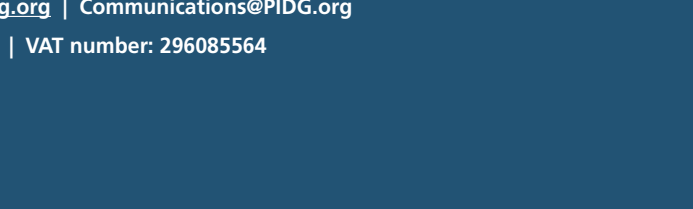
In October, Philippe Valahu, PIDG CEO, spoke at the Devex Live event, on a panel titled:

Mobilising billions to trials: Can we seize opportunities through smart business growth?

He was joined by speakers from Standard Chartered, the World Bank group, DFID, Convergence, and the event was chaired by the Devex journalist Adva Saldinger, Devex.

Africa Investment Forum, Johannesburg, 11-13 November 2019

Jules Samain of GuarantCo presented on a panel at the Africa investment Forum – Johannesburg. Jules offered his views on local currency solutions in a discussion about scaling up risk mitigation around the co-guarantee platform and African infrastructure guarantee mechanism.



KPMG Insights, 'Watering the green shoots'

PIDG has enjoyed coverage in the corporate publication, KPMG Insights where Philippe Valahu, PIDG CEO, Janice Kotut-Sang of GuarantCo and Emilio Cattaneo of EAI contributed their thoughts to a written panel discussion on how Africa's PPP

markets are evolving and local capabilities are rapidly improving, while the infrastructure investment gap continues to grow.

Invest Africa Ltd 'How to tackle Africa's infrastructure challenge'

Emilio Cattaneo for EAI and Gilles Vaes for InfraCo Africa interviewed for the Invest Africa Ltd newsletter on The Private Infrastructure Development Group's

pathfinder role in addressing the gaps in infrastructure investment and provision that results in high development impact.

Why blended finance is the best way to do good with private capital

PIDG Chair, Andrew Bainbridge, gave an interview to the Winter 2019 issue of Spear's wealth management magazine on how PIDG has evolved in nearly two decades.

Project round-up

Classic Fashion, Jordan

GuarantCo has provided a USD 42.5 million guarantee to support Classic Fashion Apparel Industry (Classic Fashion), Jordan's largest garment manufacturer.

The proceeds of the loan will be used for the construction of a textile processing mill, a centralised cloth cutting station, new laundry facility, and a carton and poly bag factory. The guarantee will enable Classic Fashion to employ and train around 1,000 Syrian refugees, as well as Jordanian youth and migrant workers living in Jordan, over the next four years.

First affordable housing project in Kenya for PIDG companies October 2019

PIDG companies, GuarantCo and the Emerging Africa Investment Fund (EAI) have joined forces to support the provision of much needed student accommodation in Nairobi.

Kenya currently faces a chronic shortage of student accommodation as university enrolment in Kenya has grown to around 550,000 students today whilst there are less than 40,000 beds available in the universities, creating a huge deficit. Acorn, the first purpose-built student accommodation (PBSA) provider in Kenya, has stepped in to fill the gap with 6 properties for up to 5,000 students.

GuarantCo Development Impact

GuarantCo have launched their new Development Impact page where you can view online and video stories by the individuals and communities benefitting from our projects.

Energising a community: The Philippines Smart Solar Network project

In September 2019, InfraCo Asia hosted the inauguration of its Philippines Smart Solar Network project on San Isidro, Busuanga, Palawan. The pilot phase saw 62 households on San Isidro successfully energised by a combination of solar microgrids and smart controller technology. Implemented through close partnership with the local people, the pilot project is now bringing affordable and reliable power to the island community and its fishing industry, enabling access to basic appliances such as lights, fans and freezers, and expanding economic opportunity.

GuarantCo with Standard Chartered Bank to provide a US\$ 50 million dual currency guarantee backed loan for K-Electric, Pakistan

GuarantCo is supporting K-Electric (KE), a Pakistani investor-owned electricity supply company, with a local currency and US dollar denominated partial guarantee to finance aerial bundled cable roll-out, smart grid solutions and additional distribution network maintenance. The project will improve the reliability of KE's network and through the roll-out of the insulated cables decrease theft and safety related risks, such as electrocution. This will both directly benefit the citizens of Karachi and enhance KE's capability.

In addition, GuarantCo, through the PIDG Technical Assistance Facility, will co-finance workshops raising awareness about the hazards of illegal electricity infrastructure. This project will also focus on high risk communities through women and children focused awareness sessions; the training will be rolled out by women giving it a female empowerment angle.

Kékéli Efficient Power Project, Togo, West Africa

GuarantCo has provided a XOF 14.2 billion (USD 23.8 million) Liquidity Extension Guarantee (LEG) to enable local commercial banks in Togo, including Orabank, to provide a 14 year tenor loan to Eranove. The LEG will finance the construction of a 65MW natural gas-fired thermal plant and related infrastructure in the port area of Lomé (Kékéli Efficient Power Project), the capital of Togo, providing electricity to nearly 20 percent (1.5 million people) of the population in the country.

This transaction is GuarantCo's first guarantee in Togo and the first LEG to extend the maturity of a transaction with a 7-year tenor for local commercial banks to 14 years. It is also the first infrastructure transaction to be financed mainly in local currency, which in combination with the extended tenor enabled by the LEG, helps to provide a competitive electricity tariff for the local population.