

# Financing emerging solar: A-listers speak up

**Solar finance** | Development and private capital is fuelling a solar boom across the Earth's four corners, from India to South Africa and Mexico. Five finance heavyweights walk José Rojo through their learnings so far and their future plans to tap into an industry they see as key to a better world

## The International Finance Corporation

In 2019's world, the bond between long-time bedfellows development money and solar appears stronger than ever. This source of finance is, BNEF analysts recently said, the ally emerging markets need as they navigate the renewable transition set out under the Paris Agreement of 2015.

Luckily for PV, the appetite for such an alliance seems solid in the development ranks; with US\$1.9 billion of its own capital invested to date in some 5GW of PV, the International Finance Corporation (IFC), part of the World Bank Group, is no exception.

"We're active in solar PV and we'll continue to be. When you see PV procured at cost-competitive tariffs you realise it makes sense commercially as well as environmentally," Nuru Lama, the global solar investment lead at the corporation, tells *PV Tech Power*. The IFC, he explains, can typically provide up to 25% of project costs; as a lead arranger, it can invest alongside fellow development players, commercial banks and funds under its management.

What does the IFC like to see in the solar projects it backs? The key considerations are solar irradiation, project site, transmission arrangements, environmental and social issues and the quality of the sponsor and the contractors for EPC and O&M, Lama says. According to him, the corporation favours projects allowing it to "move the needle" at large scale. IFC's role, Lama explains, is to work alongside the World Bank to build institutional capacity at the country level so that the chief challenge – favourable policies and bankable concession documents – is dealt with and investors feel confident to come on board.

The conversation takes place just a month after the IFC invested US\$75



Credit: B Vogt

million to anchor a US\$300 million green bond tranche, raised by developer AC Energy to fund PV projects in Vietnam. "What we've seen [with bonds] is it allows to tap into a different, green-minded investor base," Lama says. "It can sometimes be more efficient than project finance, which is more negotiated, hands-on and document-heavy."

In its February report, BNEF called for a slight readjusting within development finance: as renewable energies reach maturity, analysts said, funds should shift to battery storage and the other less-developed technologies that mitigate intermittency. The IFC is moving in that very direction. "We're looking at storage as standalone or combined with solar or wind," Lama says. "You see a lot of activity in the US; we're confident emerging markets will follow."

With solar more broadly, the IFC's travels are already taking it to new geographies. "Through our early-stage engagement, including Scaling Solar, we have been working to create solar PV markets in countries like Argentina, Egypt,

**Egypt's Benban solar park is among the emerging-market projects financed by the IFC**

Senegal and Uzbekistan," Lama explains. "We'll continue to work in Africa, Middle East and South Asia but we're also finding opportunities in more developed markets in Latin America."

## Actis

Bringing the private investor perspective is Actis, an emerging markets private equity house that is building or running 10GW in energy assets, 3.5GW of it solar PV. Barry Lynch, a partner for energy and infrastructure, explains the equity investor favours large-scale ventures – 50-350MW is the sweet spot – it likes to own on a majority, ideally full basis.

As Actis has expanded, its PV portfolio has diversified across Latin America, India and Africa. The investor has signed long-term PPAs with commercial players in Mexico, Chile and India but typically works more often through state off-takers or auctions. Many of the national tender schemes the firm encounters are competitive but India's is particularly noteworthy, Lynch says. "What we like is their auctions are regular and give us line of sight," he



Credit: Asian Development Bank

explains. "Shorter timeframes mean when we get into an auction and win it, we know we're going to be executing the project within a certain period."

The firm's own investors, including public pension plans (38%), sovereign wealth funds (15%) and private pensions (14%), are very "happy and comfortable" with solar plays, Lynch says. For the investor base, environmental and social factors – a make-or-break factor across emerging markets, as top finance names recently warned – are front of mind. "We put a lot of focus on how land is acquired, its uses before the project, involving local communities through investment strategies and ensuring we use efficient cleaning methodologies where there's water scarcity," Lynch explains.

Looking ahead, Actis is contemplating forays across Southeast Asia, a region it has deployed capital into in the past. Lynch says opportunities could be considered in Malaysia – "we're beginning to see solar moving there," he notes – and Thailand, which he argues has proven its potential to deliver wind and solar developments at scale. Vietnam is "getting there," Lynch adds. "There hasn't been a huge amount done there," he says. "It's a good example of a country where there's a lot of debate as to whether PPAs being signed meet international bankability standards. That would be the next step, and bring in a lot more international investment."

### The Green Climate Fund

A newer arrival to the green finance scene, the Green Climate Fund (GCF), has already

### Thailand is among the recipients of recent ADB investment in solar projects

had time to work up a strong appetite for solar PV.

The technology reaped the lion's share of the latest US\$440 million funding round by the organisation, set up under the UN's auspices in 2010 to help the developing world mitigate and adapt to global warming. Four of the nine new projects rubberstamped during the GCF board meeting of February 2019 came with the shared mission of bolstering African solar.

Speaking from the GCF headquarters at Incheon (Korea), several of the fund's leading renewable experts walk *PV Tech Power* through its investment *modus operandi*. The institution's co-investment model sees it partner with governments and development banks, backing projects through a concessional mix of loans, grants, equity and guarantees.

Deployment takes place through public and private programmes. Pierre Telep, a senior renewables specialist who helps run the former, says the GCF likes large-scale, transformative projects but is keen not to distort the market nor displace other funding sources. Rajeev Mahajan, a senior project finance specialist on the private side, says additionality is key. "When we consider funding proposals our key question is: are we addressing any barriers in that market?" he says.

The new African ventures are a practical case study on the GCF's current PV thinking. There is support for 400MW of utility-scale solar in Nigeria; electrification through solar in rural Mali; and mobilisation of private finance towards

West African PV. In South Africa, a fourth scheme is seeking to build 330MW of renewables that do not rely on troubled state utility Eskom, working with municipal off-takers instead. "What we want is to open fresh revenue sources, develop a market that doesn't involve sovereign support," Mahajan explains.

Through years of financing renewables, Telep adds, the fund has learned that the enthusiasm of private players sometimes comes with a "lack of knowledge" on exactly how to partner with the GCF's "unique" model. With mini-grids or rural projects, expectations around returns can be another deterrent, he says, adding: "This perception sometimes by developers that projects will not be commercially viable has been one of the key barriers."

Where will GCF's next set its sights? Tony Clamp, deputy director of the private facility programme, says the fund's replenishment this autumn will make 2019 a "big year". The institution's geographic remit will remain broad but highlights will include Indian rooftop PV, which the GCF wants to support now that utility-scale nears maturity in the country. Energy storage is also becoming part of the menu. "We know it will play a very important role so we're thinking of being much more active in the future," says Telep.

### The Asian Development Bank

The Asian Development Bank (ADB) has become a ubiquitous name in the solar finance landscape. Within the past couple of years alone, the financier has invested in support of PV in Kazakhstan, green bond-financed plants in Thailand, wind-solar in Nepal, solar-wind-storage in Mongolia, solar irrigation in Bangladesh and large-scale facilities in Indonesia.

Since 2010, the institution has committed US\$3.2 billion to 48 PV-related projects representing over 2GW in aggregate capacity, according to Yongping Zhai, the head of the Energy Sector Group at ADB's Sustainable Development and Climate Change Department. The bank, he explains, typically provides loans – sovereign-guaranteed or otherwise – but may also use credit lines, equity, guarantees and grants depending on project circumstances.

Pure PV aside, the ADB sees grid reinforcements as "crucial" and has backed transmission and distribution projects with a smart-energy or storage component, Zhai explains. He adds, however,



that policy intermittency can often be a bigger concern for investors than the technology's own technical intermittency. To mitigate risks on this front, Zhai says, the ADB works to help governments build a framework able to provide the certainty developers and investors need.

Asked to lay out the ADB's next steps, Zhai speaks of the same redeployment seen with other development players. Plummeting PV costs and maturing markets mean commercial banks are gradually taking care of projects, freeing the ADB to focus on more "innovative" technologies and business models. "Our lending volume may not grow substantially ... but we will focus on solar energy storage, solar-based micro-grids, floating PV, solar pumps and PV charging for electric vehicles, among others," Zhai says.

### The Climate Bonds Initiative

Sean Kidney, CEO of the Climate Bonds Initiative (CBI), is keen to promote an emerging addition to the typical ingredients – auctions, subsidies, PPAs, loans and grants – of the solar finance diet.

Green bonds, a trillions-worth market in the midst of explosive growth, is

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a funding avenue PV developers are increasingly turning to. According to CBI figures, this segment saw US\$100 billion channeled to solar-related projects between 2013 and 2019. Countries of issue included developed states – led by France, Australia, the Netherlands and Germany – but also China, India, Thailand, Morocco, Nigeria and Colombia. Elsewhere, Kidney says, there is investor appetite for green bonds but not always products to satisfy it. At varying degrees, Philippines, Vietnam, Taiwan and Hong Kong are all making strides, he adds.

Kidney acknowledges that green bonds

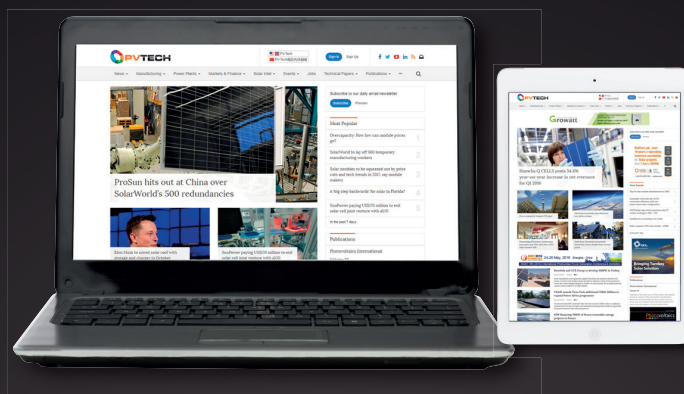
are mostly a recourse for larger players. "You've got legal fees of US\$250,000, and underwriter fees if you go public," he says. Investors, he adds, like to see big issuances – around US\$300 million is "ideal" – raised to finance large-scale pipelines. For those PV developers able to pull it off, the benefits lie on the refinancing side. "You're not likely to get away with bonds for project finance," says Kidney. "However, once your projects are up, with a PPA and contracts in place, you issue a bond against them to curb capital costs, put liquidity back in and boost long-term returns."

Given the potential, why is green bond uptake still modest in the PV ranks? "Latency, probably," is Kidney's take. "People just don't move that fast – they look up and see a hill they've never climbed before." Those braving the ascent may find the benefits are not just financial; as Kidney puts it, green bond PV players become part of a "bigger story" than themselves. "We know solar is critically important," he argues. "If you're in the space, understand that you're not just a solar or wind player, you're a green player, and think and act accordingly." ■



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