

Emerging market briefing

Ben Willis look at the latest developments in some of the most promising emerging PV markets worldwide. This issue features Ukraine, Zambia and Ethiopia

Zambia looks to fulfil solar potential

On paper, Zambia is sub-Saharan Africa's most promising solar market-in-waiting. The southern African nation has become the de facto test-bed for Scaling Solar, the flagship PV support programme of the International Finance Corporation, part of the World Bank group.

Scaling Solar is an initiative designed to help governments, initially in Africa, quickly procure large-scale solar projects using private finance. So far, it has made a notable impact on the pipeline of utility solar projects lining up in the region, without, as yet, any megawatts actually being installed.

In Zambia, an initial round of Scaling Solar tendering in 2016 resulted in contracts being awarded to two projects of 47.5MW and 28MW, both at record low prices for the region.

This year, those projects edged nearer to hitting the ground. In February Neoen, the French developer spearheading the larger of the two projects, hired Indian EPC firm Sterling & Wilson as its EPC contractor, having reached financial close on it at the end of 2017. Local media recently reported that the project is due for completion this September.

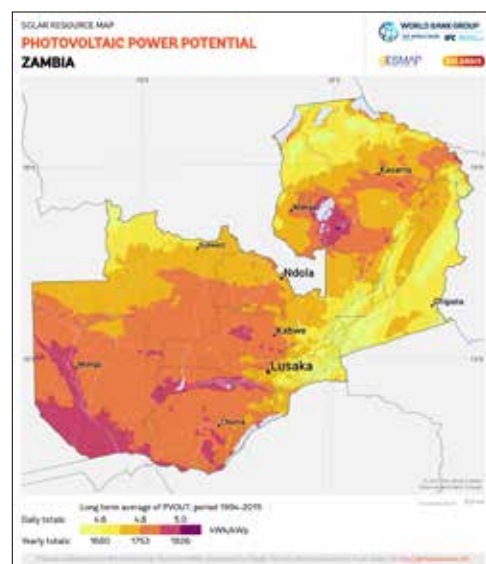
Italian developer Enel's project, Ngonye, has been slower to get to the spade-ready stage, with the company still in the process of lining up finance for the plant. In June this year it announced a financing deal totalling US\$34 million with the IFC, Canadian government and European Investment Bank.

Meanwhile, a second procurement round under the Zambian Scaling Solar programme is moving ahead. This will be worth a larger 500MW, with the first 200MW of this already out to tender.

Separately, the Zambian government in association with German development bank KfW earlier this year launched the pre-qualification process for a 100MW tender under its 'GET FIT' programme. In December 2017,

GET FIT Zambia became the official implementation programme for the Zambian Renewable Energy Feed-in Tariff (REFIT) Strategy, which was formally launched by the Ministry of Energy in October 2017. The GET FIT model has been applied successfully in Uganda, delivering around 170MW of projects.

Proposals for some 41 projects from 24 individual developers were submitted in response to the Zambia programme. A shortlist of bidders was revealed in June, featuring some of the big international names such as Scatec Solar, Enel Green Power, EDF Energies Nouvelles and Engie Afrique. The process will now move to a 'request for proposals' phase, with shortlisted companies invited to submit proposals for up to two projects of <20MW each. From this, at least five projects will be selected for implementation.



Zambia looks set to see its first utility solar projects reach completion

Credit: Solargis

Ethiopia eyes solar to plug energy gap

Another country benefiting from the Scaling Solar programme is Ethiopia. The East African nation has been associated with a number of large solar project proposals over the years but has little by way of installed capacity to show for the hype. Hydro currently serves around 70% of Ethiopia's needs, but the country still has a generation shortfall of around 500MW, according to the IFC.

Solar looks set to play a key role in plugging that gap, and a several large projects from serious players are now in the works.

Two of these will come from the 250MW first round of Ethiopia's Scaling Solar programme. This took its first big step forward earlier this year when the state-run utility Ethiopian Electric Power (EEP) announced a list of pre-qualified bidders to submit formal proposals for the two 125MWAC projects planned under the venture. The winning projects will be chosen largely on the basis of the lowest proposed tariff.

The 12 shortlisted developers are: Access Power/Total Eren Consortium, Acciona/Swincorp Consortium, Actis/Mulilo Consortium, Acwa Power, Al-Nowais/Aldwych/Alten Consortium, EDF/Masdar Consortium, Enel Green Power, FRV/Globeleq/Belayab Consortium, KoSPCo/KEPCO Consortium, Mitsui, Nareva/Adani Consortium and Scatec Solar.

Overall, the IFC is advising Ethiopia on the development of up to 500MW of

solar, suggesting a second Scaling Solar procurement round is likely.

Separate to this, EEP is running a tender for another 100MWAC utility solar plant and earlier this year selected a consortium including Italy's Enel Green Power and Ethiopian infrastructure company Orchid Business Group to take the project forward.

The firms, which will invest around US\$120 million in the project, will develop, build and operate the PV capacity in Metehara, in the Oromia region, nearly 200 kilometres east of Addis Ababa.

Multiconsult, the firm responsible for the environmental and social impact assessment for the Metahara PV power plant, has said that it will be spread across 250 hectares of undeveloped land beside the main road between Addis Ababa and neighbouring Djibouti.

EEP invited proposals in May 2016, before five firms were shortlisted for the technical and financial proposal stage. These included Fotowatio Renewable Ventures (FRV), Meridiam-Solairedirect Consortium, Enel Green Power, The Building Energy Consortium, and CCE Oasis Technology Corporation.

The Metehara plant is expected to enter into operation in 2019 in order to generate roughly 280GWh of electricity per year. The solar park has a 20-year power purchase agreement (PPA) with EEP for all of the energy generated.

Ukraine's second coming

Ukraine could be more accurately described as a 're-emerging' than an 'emerging' solar market. Until political turmoil engulfed the country in late 2013, Ukraine was one of Eastern Europe's most promising new solar markets, with a generous feed-in tariff driving a healthy development pipeline and some significant projects reaching completion. Then crisis struck – president Viktor Yanukovich was ousted, unrest enveloped the country and Russia annexed the Crimea region, home to many of the country's largest operation PV power plants.

The succession of crises all but brought the country's PV industry grinding to a halt. One developer, Activ Solar, was particularly badly hit, ultimately losing the multiple hundreds of megawatts it had built in the Crimea and later filing for insolvency. But recent months have seen the green shoots of recovery, with a string of announcements suggesting that Ukraine is on the up again.

The torch-bearer has been Norway's Scatec Solar, a specialist in developing projects in new or emerging markets. In July the company announced a partnership with local firm Rengy Development to build three projects in Ukraine totalling 47MW.

These came hot on the heels of two other Ukraine projects the company announced earlier in the year of 33 and 50MW. These will be built in the country's Cherkassy region and have qualified for financial support from the European Bank of Reconstruction and Development. All five projects Scatec Solar is developing in Ukraine fall under the country's feed-in tariff, and CEO

Raymond Carlsen said the company was looking to build a sizeable portfolio in the Eastern European nation.

Aside from Scatec's efforts, Ukraine continues to see activity on a number of other fronts. Earlier this year, Chinese PV manufacturer Seraphim Solar revealed that it had won a deal to supply modules to what it billed as Ukraine's largest PV project to date, a 246MW plant being developed by Ukrainian energy group, DTEK. The project will be built in Dnepropetrovsk, central Ukraine. Meanwhile, a steady trickle of project announcements have come out of Ukraine this year, including a 19MW project by Danish developer Better Energy and Nordic finance corporation NEFCO.

However, on one of the more eye-catching project stories of the past couple of years there appears to have been little further progress. In 2016, GCL System Integration, a subsidiary of the eponymous Chinese polysilicon giant, announced plans to build a vast 1GW project on land inside the exclusion zone around the erstwhile Chernobyl nuclear power station, the site of the notorious 1986 disaster. Despite a flurry of headlines at the time, there has been little evidence since of further progress on the project.

However, earlier this year Germany's Enerparc and local firm Rodina Energy Group succeeded in commissioning a 1MW PV power plant next to the defunct reactor, the first of up to 100MW the two partners hope to build in the area. The plan forms part of a wider objective by Ukrainian authorities to bring back into productive use the contaminated land around the old nuclear plant, which cannot be farmed or inhabited.



One of the utility solar plants built in Crimea before its annexation by Russia

Credit: Activ Solar