

Emerging market briefing

Tom Kenning and Ben Willis look at the latest developments in some of the most promising emerging PV markets worldwide. This issue features Pakistan, Tunisia and Uzbekistan

Pakistan's Sindh details 400MW solar parks and 250,000 solar homes plan

The government of the Pakistani state of Sindh has made clear its intentions to boost solar by launching a framework to address the potential environmental, resettlement, and social impacts associated with its major solar initiative, for which it is seeking World Bank funding.

The Sindh Solar Energy Programme (SSEP), a pioneering scheme in Pakistan, aims to support solar deployment in the province across utility-scale, distributed generation and residential segments.

This includes up to 400MW of solar park capacity (50-200MW per park), starting with 50MW that will see the first competitive tariff-based auctions in Pakistan – the plans for which were announced last December. The Solar Park concept aims to help to reduce the risk profile for private sector developers by ensuring that land is secured, permits obtained and power off-take is pre-arranged.

The first 50MW site near Manjhand, Jamshoro District, has already been identified with land secured, and the aim is to complete this pilot solar auction by the end of 2018, allowing the project to be operational by 2020. When first announced, a formal procurement process was scheduled to take place in Q2 this year.

The programme also aims for 15MW of distributed PV on rooftops of public sector buildings and others in the cities of Karachi and Hyderabad as well as a target of bringing solar home systems to a quarter of a million households in areas of Sindh with poor access to electricity.

Electricity generated from distributed solar in Sindh is expected to have tariffs of around US\$0.06-0.10/kWh, lower than the retail tariff charged by utilities.

The project is not entirely Sindh focused as the aim is to spur on other Pakistani provinces through example. With this in mind, Pakistan could soon see a widespread focus on PV as long as other states take note and start to implement their own policies.

The new 'Environmental and Social Management Framework' (ESMF) released by the Sindh government is in line with the national and provincial regulatory as well as World Bank safeguard requirements. While the location of most projects under the solar programme are yet to be decided, the ESMF aims to identify generic environmental and social impacts of the projects.

The 209-page document details how to mitigate these impacts and details a Grievance Address Mechanism, consultations and a host of other processes. The main concerns for the three segments, which were all deemed 'low to moderate' in significance, were also laid out in detail.

Also this year, another solar firm Siachen Energy has submitted a tariff petition for a 100MW solar project at Gharo, District Thatta, Sindh, with another tariff well below grid parity (US\$6.2939), but the developer must now wait for the regulator to respond with its tariff determination.

In separate news, EcoEnergy, a solar energy provider in Pakistan, has secured US\$600,000 in debt finance to help it provide off-grid solar energy to 10,000 of

the poorest rural households in the country.

EcoEnergy struck the deal with SIMA, a social investment advisor and manager backed by the Dutch and Belgian government development banks, AXA, MetLife, USAID and the pension fund of the Episcopalian and Lutheran churches.

EcoEnergy will use the capital to purchase products, technology and services from UK-based BBOX, which is active in off-grid services in Africa among other destinations. BBOX will provide its cloud-based task management software, Pulse. EcoEnergy will then scale up its operations and extend distribution of smart solar home systems across the country, having been constrained until now by a lack of access to working capital.

The state of Sindh is leading the way on solar deployment in Pakistan



Credit: Paul Keller/Flickr

Tunisia eyes 1GW solar and wind

Tunisia has its eye on 1GW of solar and wind projects worth US\$1 billion in investment, and has now released a tender for 500MW in each technology.

Prime Minister Youssef Chahed announced the news at an energy conference in April.

The Tunisian Ministry of Energy, Mines and Renewable Energy later issued the tender for 500MW of PV projects within the country in May. Within this tender, the Tunisian government plans to develop five different projects, headlined by a 200MW power station that will be developed in the Tataouine governorate. Other planned projects include 100MW PV projects in the governorates of Kaouar and Gafsa, along with 50MW projects in Tozeur and Sidi Bouzid governorates.

These five projects will all be developed under a build, own and operate (BOO) model, with interested developers now asked to issue pre-qualification applications as part of the tender.

The country is close to building a 2.25GW concentrated solar power (CSP)

export project in the Sahara Desert in south-west Tunisia, which is believed to be the largest solar power plant in the world. The aim is to provide power to Europe. British company Nur Energie is waiting for an authorisation approval from the Tunisian Ministry of Energy, Mines and Renewable Energy, before it can start exporting electricity to major European markets.

Tunisia's Ministry of Energy, Mines and Renewable Energies has also recently published the list of the winning projects selected in the 70 MW solar tender it issued in May. It awarded capacity mainly to local firms or consortia involving both domestic and international companies.

The projects, which were preliminarily approved by the Tunisian government at the beginning of May, include six 10MW solar parks and four 1MW ground-mount PV systems. This left 6MW unallocated.

Other news includes the Tunisian power state-owned utility, Société Tunisienne de l'Electricité et du Gaz (STEG), issuing a tender for the construction of a second 10MW solar park in Tozeur, in the south of the country.

Uzbekistan calls on IFC to push forward solar plans

Uzbekistan has sought assistance from the International Finance Corporation (IFC), part of the World Bank Group, to drive forward its solar plans. In mid-May the Central Asian state announced that the IFC would help it realise its solar ambitions by encouraging private sector investment in its nascent renewable energy sector.

The IFC will operate as 'transaction adviser' to the government Uzbekistan, supporting the state-owned national power utility, Uzbekenergo, on structuring a public-private partnership aimed at bringing private sector experience and capital to construct a 100MW solar plant. This project will form part of a larger programme that ultimately aims to see up to 1GW of solar installed in the country.

"Developing renewable energy in Uzbekistan is crucial to diversify our power supply," said Sukhrob Kholmurodov, Uzbekistan's deputy prime minister. "The joint work of IFC, the State Investment Committee and Uzbekenergo could bring up to US\$1 billion in private investment to develop solar photovoltaic plants that will not only improve the supply, but also create a transparent mechanism to attract more private sector investment, which could be successfully replicated in other energy spheres."

Uzbekistan currently relies largely on fossil fuels, notably natural gas, to meet its energy needs, with hydro-power – currently the country's only source of renewable energy – accounting for only around 2% of primary energy supply. But with significant solar resources at its disposal, the Uzbek government is looking to develop the renewable energy sector to diversify the country's energy mix and attract private investment.

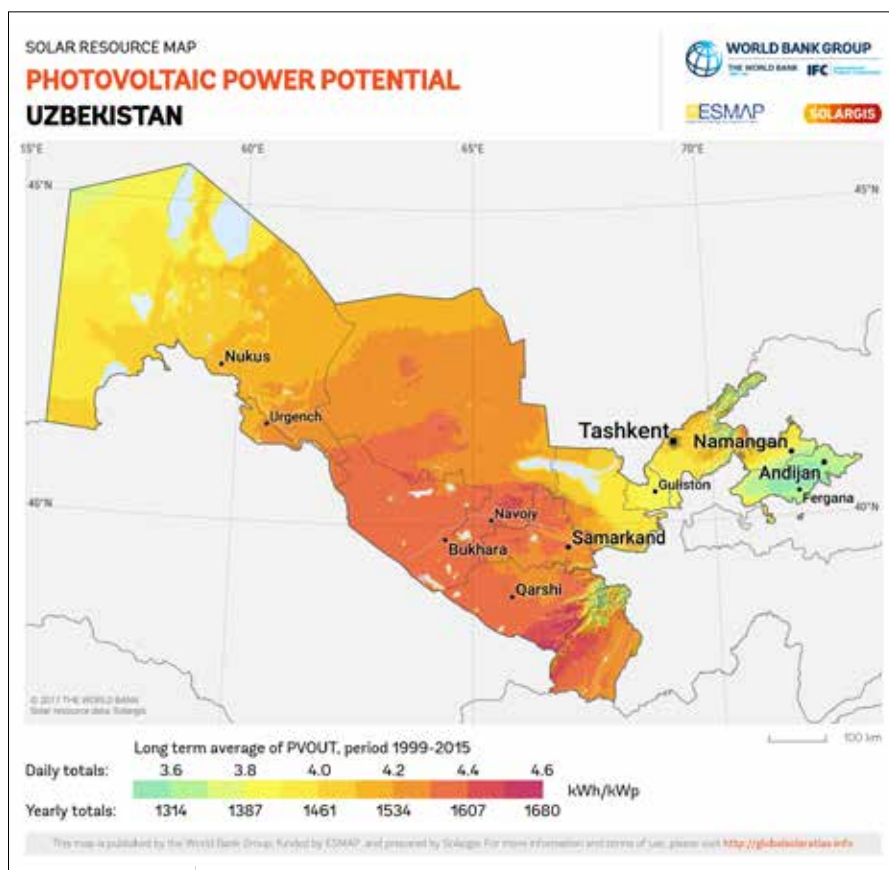
"The agreement demonstrates the strong partnership between IFC and Uzbekistan," said Georgina Baker, IFC Vice President for Latin America and the Caribbean, Europe, and Central Asia. "We are committed to creating markets and crowding-in private investment to help unlock and scale up renewable energy in Uzbekistan, and provide clean, reliable energy to its citizens."

It is unclear how – or if – Uzbekistan's tie-up with the IFC and ambitions for 1GW of solar relate to plans unveiled earlier in May by the Canadian solar developer SkyPower. On 7 May the company released a statement saying it had signed a power purchase agreement with

the government of Uzbekistan for 1GW of PV, a deal it claimed to be both the largest foreign direct investment ever made in Uzbekistan and the country's first independent power producer project.

Commenting on the estimated US\$1.3 billion deal, SkyPower's CEO Kerry Adler, said: "This is a historic partnership that will benefit both the Government of Uzbekistan and SkyPower, and we are happy to be building Uzbekistan's first solar power installation."

However, no further details were provided on the location or estimated timeline for building out this capacity. In 2015 SkyPower announced plans to build 1GW of PV in Kenya over five years, but has since made no further public statements on how these proposals will be executed.



Uzbekistan is targeting its first solar projects