Solar in Egypt:
New feed-in-tariff scheme to develop PV

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In association with MENASOL 2015 (13 & 14th May, Dubai), PV Insider brings you an exclusive guide on the new feed-in-tariff scheme to develop PV plants in Egypt. It includes analysis of the tendering process currently in place, prospects for PV manufacturing in the country along with an overview of finance opportunities.

The aim of this guide is to help you maximize the opportunities in Egypt by understating the new framework and identifying your key partners. In the following pages you will discover where is the PV industry heading in Egypt so you can build your market strategy for 2015 and beyond.

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Solar in Egypt: New feed-in-tariff scheme to develop PV

Amid recurring power outages that forced Egypt to order an additional six million tons of oil equivalent last August, the government recently adopted a feed-in-tariff (FiT) scheme for solar PV that has attracted international attention. PV Insider takes a closer look at where opportunities lie in this colossal market of 87 million people.

In September 2014, a target of 2,300 MW solar PV was set by the Ministry of Electricity and Renewable Energy (MoERE), including 300 MW of projects below 500kW, and 2,000 MW for projects between 500kW and 50MW.

The FiTs were divided into five categories: $0.117/kWh for capacities up to 10kW; $0.125/kWh for those up to 200kW; $0.136/kWh when between 200kW and 500kW; and $0.136/kWh when between 500kW to 20 MW. As for projects between 20 MW to 50 MW, the tariff is $0.143/kWh.

“If implemented well, the FiTs will allow us to recover the wasted time during the past years, although the current tariff is not attractive for projects below 500kW and the government is looking into this issue”, says Khaled Gasser, chairman of Egypt’s Solar Energy Development Association (SEDA).

Egypt’s adoption of a solar incentive scheme was predominantly driven by natural gas shortages and capacity constraints; the country produces around 28 GW but needs more than 32 GW. As a result, Egypt has been seeking to increase capacity through various routes.

According to Tim Armsby, who leads energy and infrastructure projects in the Middle East at international law firm Eversheds, these routes include traditional EPC procurement, conventional IPPs, renewable IPPs for which the tenders are in process, and efficiency programs for existing plants.

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Lessons from mature markets

Drawing from the experience of more mature solar markets was a crucial element of preliminary FiT discussions in Egypt, and the industry agreed that upcoming solar capacities should not exceed or fall below the target capacity of 2,300 MW.

Vahid Fotuhi, president and founder of the Middle East Solar Industry Association, elaborates: “They are putting a cap on the current FiT; 2 years or 2,300MW of solar capacity; whichever comes first. So their exposure is capped, unlike Spain.”

Some experts also believe that the FiT program could have been better rolled out to achieve faster results. “Anywhere in the world, when you look at the structure of a PV programme, you’ll find it based on scattered power stations rather than power plants. In Germany or the U.S. for example, you’ll see about 60-70% based on residential – small capacities from 10-30kW, and the remainder as utility-scale,” says Wael El Nashar, CEO of Onera Systems, an Egypt-based renewable energy developer.
However, when structuring the program in Egypt, it was done the other way around, according to him. “They focused on large power plants, not smaller ones, but the country needs substantial power, which means they need smaller, scattered capacities, especially if they were to move quickly as they want to.”

Such mass deployment would eliminate the logistical and technical complexities associated with larger plants. And because 70% of the energy needed in Egypt is required on low voltage, energy produced from larger plants would have to be transported from high to low voltage, meaning more losses in the system.

**Tendering process currently taking place**

As many as 175 companies submitted prequalification bids by the closing date of 26th November 2014. These proposals will now be evaluated based on their previous experience, financial resources and understanding of project execution in Egypt.

“Most tier-1 solar PV companies will get a piece of this pie. The pie is quite large (2000MW) so there will be plenty for everyone to share,” says Fotuhi. “We expect them to release the list of qualifying companies that pass their requirements by end of 2014 or latest in January 2105. They have received huge interest from the private sector.”

Although no local content requirements were specified for this round, partnering with local businesses was encouraged. Onera, for instance, submitted their offer for 50 MW in a consortium consisting of two Egyptian companies, two international, three local banks and one international. While Onera will work on the engineering, logistics, and project development, the international partner will supply the equipment.

Similarly, Rodosol, a Cairo-based solar PV developer, submitted proposals with an international company, for two rooftop projects, each under 500kW. “Most consortia comprised local and international developers. We partnered with a company from Spain and are looking for additional partners to diversify,” says Rodosol cofounder Ahmed Moukhtar.
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Furthermore, to support developers, the government plans to allocate state-owned land through a usufruct agreement in exchange of 2% of the produced energy, and sign a 25-year Power Purchase Agreement.

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A one-stop Central Unit for renewable energy projects has now been set up at the MoERE’s premises to assist with procedures and qualify investors. The first point of contact, however, will be the General Authority for Investment, which is in charge of establishing project companies, after which the Egyptian Electricity Regulatory Agency would issue a temporary generation license.

“Once the interim licence is issued for a project, the investor has two years to complete the project. As such, the expectation is that the first round will be complete during 2016-2017,” says Armsby.

**Finance opportunities: reduced interest rates**

Meanwhile, financing seems to be the least of the industry’s worries, as the Ministry of Finance is said to be facilitating soft loans with interest rates of 4% for projects up to 200kW, and 8% for projects between 200kW and 500kW.

Interest rates are generally quite high in Egypt, ranging from 7% to 15%; therefore, the decision has been well received by the industry,

One of the first banks to support PV development was the Bank of Egypt, having signed an agreement with Onera Systems last month to support its purchase of PV equipment. A funding boost of 106 million euros followed from the European Union to support renewable energy development in the country.

“We would expect a range of entities to be involved depending on the size of the facility,” says Armsby. “Egypt has a good track record of privately financed projects in the energy sector, but there are issues with availability and transfer of foreign currency and the ability to guarantee the off-taker. The government is aware of these issues and seeking to deal with them.”

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PV manufacturing in Egypt - prospects
The current developments naturally sparked interest among companies to manufacture domestically, one of which is Onera Systems, whose plans for a PV assembly line were put on hold during the Egyptian revolution. These plans have now been revived, and will depend on the outcome of phase one of the FiT projects.

Meanwhile, Moukhtar claims that several firms have approached him asking for advice on whether they should start with solar panels or cells. So far, the ones interested in setting up factories have not been looking at producing the whole module but rather specific parts.

“Each company wants to concentrate on something,” he says, adding that producing the cells themselves might prove difficult in Egypt as it would needs large investments. “I think we will see the manufacture of modules, frames, and other final products.”

SEDA chairman Gasser also believes the FiT scheme will drive local manufacture of PV components, especially cables, steel structures and inverters.

Nationwide appetite for solar
Various governorates in Egypt are now considering their own solar power plants. In the west of Egypt, Siwa, one of Egypt’s most isolated settlements, will see Abu Dhabi’s Enviromena build a $20 million, 10 MW solar plant to be financed by the UAE and carried out with Masdar.

And in Qalyubiya governorate in northern Egypt is in discussion with local and foreign investors to build a solar power plant and factory to manufacture panels.

Luxor, too, in the south of Egypt, is preparing to build a 2MW solar plant through $3 million in investments, and in Wadi Gedid, Egypt’s largest governorate, the financing of a $6 billion solar project is under planning by a South Korean-Saudi partnership.

In fact, visits by foreign investors to Cairo have noticeably increased in recent months. Among them was the largest U.S. delegation ever to visit Egypt last November; Yemen’s Hayel Saeed Anam Group, which said it would be investing $4 million in solar panel production; and US-based Consilio with their plan to invest up to $100 million in solar projects across the country.

The Egyptian solar PV market is clearly on an upward trend, and the industry is optimistic that projects will be announced sooner than expected. As Moukhtar concludes, “I think we will see projects come up every month or maybe more often.”

We hope that the complimentary guide was useful, providing insight into the opportunities for PV development in Egypt.

At the 7th Middle East and North Africa Conference & Expo (MENASOL 2015) these opportunities will be discussed by leading PV companies in the region including Martifer Solar, Gestamp Solar, Masdar and Onera Systems among others.

Off-takers from across the region will also present their schemes for PV development including ONEE from Morocco, the Kuwait Oil Company, Dubai Electricity and Water Authority (DEWA) and the Electricity Regulatory Commission from Jordan.

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