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# SOLAR PV OPPORTUNITIES: FIT FOR PURPOSE?

## Introduction

Since the introduction of the Feed In Tariff (FiT) for solar photovoltaic (PV) installation in February of this year, the viability of on site, renewable generation using solar PV technology has improved considerably. The aim of this article is to give a brief overview of the opportunities and what to look for from the myriad of organisations offering solar PV installations.

## The basics

The reason why a solar PV installation did not add up financially until the introduction of the FiT regime was because the capital required far exceeded the reduction in electricity costs for the majority of building types. Hence the payback period and ROI never made sense until now.

In terms of the FiTs available these are split between domestic (residential) and commercial opportunities. For domestic installation the maximum generating capacity is 4kW and the FiT available is 41.3p/kWh. Whereas for commercial installations, the maximum generating capacity is 5MW with the FiT is 29.3p/kWh. These FiT rates are valid until 31 March 2012. The rate achievable is determined by when the generating plant is certified and connected.

In addition to the FiTs an export tariff can be earned by selling spare capacity to the grid, which is fixed at 3p/kWh, less the operating costs. FiTs are index linked so in nominal terms the rate of return can be expected at approximately 7-10%. A net income will be received from the generation tariff, plus the costs which have been avoided from importing electricity from their normal provider, less the operating costs of the system.

For the purposes of this article, we will discuss the complexities and opportunities around commercial installations. In this context, there are two options, namely roof mounted PV installations and ground mounted PV installations.

## Key investment drivers

Regardless of whether the installation is on a roof or on the ground, the critical drivers are as follows:

- Number of solar irradiation hours - impacts the amount of energy generated by the installed plant. Location is a key variable in determining this.
- Installation cost - priced at £/kWh installed this is driven by the panel price and any 'wrapper' around the installation and design the Engineering Procurement Construction (EPC) contractor is providing.
- Investment model - based on the degree of leverage, the capital cost and who takes it on, the energy generated and whether it is given for free or not and finally, whether a roof rent/land lease is offered. These all determine the IRR and the revenue streams possible.
- Legal contracts - specifically focused on the length of the roof/land lease. Ideally, 25 years is desired, but how one deals with break clauses due to redevelopment etc. can often determine whether a deal is done or not.
- Operation and maintenance - it is vital to have an O&M provider that is able to perform the task for the duration and is willing to take the works on for the duration of the lease.
- Bankability - All of the above contribute to the viability of the deal and whether debt can be secured at an attractive rate. The use of experienced organisations with significant balance sheets helps to improve the overall credibility of the deal.

## Key development drivers - roof mounted

Roof mounted installations incur a number of additional risks that need to be verified before a deal can be done namely:

- Roof structure integrity - PV installations create additional loads to the roof that it may not have been designed for. This is particularly relevant for building types where the construction is lightweight such as warehouses.
- Electrical system condition - the condition of the electrical system and its capacity to take additional load needs to be verified, but this is a risk that is often passed down to the EPC contractor.

- Building orientation - the optimal orientation is to have the largest area facing south. This impacts the size of the PV plant installed due to the orientation of the plant against the footprint of the building.
- Planning constraints - the basic guidance from Government is to encourage planners to allow PV installations, however, height and heritage may require permission and are dealt on a case by case basis.

## Key development drivers - ground mounted

These are sub divided into that of 'solar farm' and 'solar park'. Essentially the two are the same, however, how the energy generated is consumed and hence the revenue streams available, is the key difference. A solar farm is one where the energy generated is fed back to the grid, whilst the solar park feeds the majority of its energy generated into built assets. The risks associated with this typology of installation are as follows:

- Flood risk - rather obvious, but can be missed nonetheless. Planning policy 25 provides guidance as to which areas are considered flood risk.
- Grid connection - perhaps the most significant driver for ground mounted. The connection needs to be able to take on the additional capacity of the plant, as well as within close proximity to prevent the capital costs spiralling and hence threatening the viability of the deal.
- Ground conditions - if the land is designated brownfield, remediation maybe required which will add to capital costs.
- Planning constraints - if the land is designated greenfield, planning may not be forthcoming.

## Current propositions

For owners of land and/or roof portfolios there is clearly opportunity to generate a revenue from having PV installations. The degree of revenue depends largely on whether one self develops or engages with a solar developer.

The former option requires significant capital, but by having ownership of the asset allows one to claim 100% of the FiT revenue for the 25 year duration. The latter option is significantly less risky and capital intensive with an additional revenue still possible either through a share of the FiT revenue, or a reduction in OpEx through lower electricity bills or a rent/lease of some sort associated with the asset.

There are offers that can be considered too good to be true, but until they are interrogated through full due diligence it is difficult to establish what the risk profile of the various options are. Perhaps the greatest unknown is the fact that the UK Solar PV market is still in 'creation' mode. There has yet to be a completed installation delivering expectations of both electricity and revenue for investor, developer and owner.

## Conclusions

There is clearly currently a gold rush to secure pipeline of roofs and/or land. For clients with such portfolios the decision to go it alone or engage with a solar developer is driven by their risk appetite and access to capital.

Credibility of solar developers can be determined by the partnerships they have across the value chain, whether these have previous experience of solar installations from other territories and if there is a balance sheet behind them.

There are upsides that go beyond the financial such as the 'eco-bling' factor, with Solar PV's representing a visible form of displaying green credentials. Additionally, an onsite renewable generation plant can improve the BREEAM rating of the building, as well as its energy performance certification. This can help to attract tenants for whom their corporate responsibility obligations drive their occupation strategies.

Regardless of which side of the coin you are looking at, the Davis Langdon Banking, Tax & Finance team, along with our energy sector team are able to advise on how best to navigate the risks and create a structure that allows for an equitable split of risk and reward.

For further advice concerning any of the issues raised in this briefing, please contact Neal Kalita at [neal.kalita@davislangdon.com](mailto:neal.kalita@davislangdon.com), or alternatively one of our other contacts shown overleaf. Information on other property tax related topics can also be found on our website at <http://www.bankingtaxfinance.com/banking/renewable-energy-investment.aspx>.

